

Campagne d'évaluation 2012/2013 – Vague D

CEREMADE – UMR 7534

CNRS & Université Paris-Dauphine

Rapport scientifique – Auto-évaluation
Self-evaluation of the Unit

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Contents

Fiche résumé – Some key facts	5
1 Scientific Report – Activities and results	9
1.1 General presentation	9
1.2 Scientific results: output 2007-2012	11
1.2.1 Group “Mathematics for Economics and Finance”	11
1.2.2 Group “Nonlinear analysis, image processing and scientific computation”	15
1.2.3 Group “Probability and Statistics”	19
1.3 Analysis of the means of the unit	21
2 Rules of the unit, functional organization chart, health and safety	24
2.1 Rules of the unit	24
2.2 Functional organization chart	28
2.3 Health and safety	31
3 Publications of the unit	32
3.1 Articles published in peer-reviewed journals indexed by the AERES, ISI, etc.	32
3.2 Articles published in peer-reviewed journals not indexed in international databases	65
3.3 Articles published in non peer-reviewed journals	65
3.4 Proceedings in an International Conference	65
3.5 Edition of a book or a review	74
3.6 Scientific books (or chapters)	74
3.7 Popularizing books (or chapters)	75
3.8 Other productions (databases, patents, softwares, expert reports, etc)	75
3.9 Unpublished papers (preprints)	76
3.10 Articles published prior to the arrival at CEREMADE	82
4 Scientific productions other than publications	90
5 Appendix. Scientific influence	123
5.1 Some key facts	123
5.2 Individual contributions	124
5.3 List of invited researchers during the period 2007-2012	149
6 Appendix. Interactions with social, economic and cultural environment	156
6.1 Some key facts	156
6.2 Individual contributions	156
7 Appendix. PhD supervisions and doctoral activities	163
7.1 Some key facts	163
7.2 Individual contributions	163
7.3 Doctoral school courses	177

**Vague D :
Campagne d'évaluation 2012 - 2013**

Unité de recherche

Fiche-résumé de l'entité
(dans le cas d'unités subdivisées en équipes
internes, on donnera une fiche-résumé par
équipe)

CEREMADE -UMR 7534

Intitulé de l'unité : CEREMADE
Nom du Directeur de l'unité : Olivier Glass

Effectifs de l'entité (au début du contrat en cours) :

40 enseignants-chercheurs ; 7 chercheurs ; 7 techniciens, ingénieurs et autres personnels ; 8 post docs et 31 doctorants.

Personnels ayant quitté l'entité pendant le contrat en cours (et nombre de mois cumulés passés dans l'entité au cours de cette période)

954 statutaires (x mois) ; 993 doctorants (x mois) ; 231 post-docs (x mois).

Nombre de recrutements réalisés au cours de la période considérée et origine des personnels (Préciser l'affiliation et le statut précédent.) 6 Professeurs (5 anciens MCF et 1 mutation) ; 18 MCF (dont 1 mutation) ; 1 DR (ancien MCF) ; 3 CR. Aucun recrutement local.

Production scientifique au cours de la période écoulée (1^{er} janvier 2007 - 30 juin 2012) :

Indiquer les résultats majeurs obtenus par l'entité

1) Dans le cadre de la théorie de Mather cadre, P. Bernard (avec G. Contreras) a prouvé que le simplexe des mesures minimales est génériquement de dimension finie. Ce résultat clé a des conséquences très importantes dans la dynamique des orbites de diffusion. Il a été publié dans *Annals of Mathematics*.

2) Dans un article publié dans *Inventiones Mathematicae*, M. Gubinelli et ses co-auteurs ont prouvé qu'une perturbation multiplicative stochastique de type brownien est suffisante pour rendre une équation de transport linéaire bien posée alors que l'unicité peut ne pas être vraie pour l'EDP déterministe.

3) P.-L. Lions et J.-M Lasry ont étudié le comportement des équilibres de Nash pour les jeux différentiels à grand nombre de joueurs. Le modèle qui en résulte est un nouveau couplage entre une équation de Hamilton-Jacobi et une équation de transport. Les applications de résultat sont nombreuses en Economie et en Finance.

4) E. Jouini et ses co-auteurs ont caractérisé le taux d'actualisation à l'équilibre pour un groupe d'agents hétérogènes et prouvé qu'il est inférieur à la moyenne du taux d'actualisation d'équilibre des agents pris individuellement. Les bénéfices à long terme et les coûts doivent être actualisés à un taux plus faible et ceux à très long terme à un taux proche de zéro.

5) F. Balabdaoui et J. Wellner tentent d'unifier la théorie asymptotique de l'estimateur de maximum de vraisemblance nonparamétrique pour les classes dites k-monotones. Modulo une conjecture concernant un

problème d'interpolation, ils généralisent des lois limites déjà établies pour les classes des densités monotones ($k=1$) et des densités monotones et convexes ($k=2$).

Bilan quantitatif des publications de l'entité

Environ 550 articles publiés dans des revues internationales à comité de lecture, 110 communications avec actes, 29 ouvrages ou chapitres d'ouvrages, 130 pré-publications.

Indiquer les **5 publications majeures** de l'entité :

- 1) P. Bernard et Contreras, A generic property of families of Lagrangian systems, Ann. of Math. 167(2), 2008, pp. 1099–1108
- 2) F. Flandoli, M. Gubinelli et E. Priola, Well-posedness of the transport equation by stochastic perturbation. Invent. Math. 180(1), 2010, pp. 1--53.
- 3) J.-M. Lasry et P.-L. Lions, Mean field games, Jpn. J. Math. 2(1), 2007, pp. 229--260.
- 4) E. Jouini, J.-M. Marin et C. Napp, Discounting and Divergence of Opinion, Journal of Economic Theory 145, 2010, pp. 830-859.
- 5) F. Balabdaoui et J. Wellner, Estimation of a k -monotone density: limit distribution theory and the Spline connection, Annals of Statistics 35, 2007, pp. 2536--2564.

Indiquer au maximum **5 documents majeurs** (autres que publications) produits par l'entité :

- 1) Projet INFOMAGIC dans le cadre des Pôles de compétitivité de la Région Ile-de-France : IMAGE, MULTIMEDIA ET VIE NUMERIQUE (L. Cohen). Indexation par le contenu.
- 2) Rapports d'expertise pour AXA (R.A. Dana).
- 3) Un brevet CNSIF (co-auteur M. Summa) vendu par l'Université Paris-Dauphine en 2009 à la société Isthma, start-up du CEREMADE

Indiquer au maximum **5 faits illustrant le rayonnement ou l'attractivité académiques** de l'entité :

- 1) Conférence invitée de P. Bernard au Congrès International des mathématiciens (2010)
- 2) Prix obtenus par des membres du CEREMADE : Grand prix de l'INRIA (P.-L. Lions, 2012), Médaille d'Argent du CNRS (F. Forges, 2009), Grand prix de l'Académie des Sciences (L. Cohen, 2009)
- 3) 4 membres de l'IUF : 2 junior P. Bernard (2007), S. Mischler (2010) et 2 senior C. Robert (2010), F. Forges (2011) ; 3 ERC Grants : S. Olla (2010), P. Bernard (2012), G. Peyré (2012)
- 3) 15 ANR sont gérées au CEREMADE, 11 sont coordonnées par des membres du CEREMADE.
- 4) E. Jouini est directeur scientifique de l'Institut Europlace de Finance et Vice-Président du Conseil Scientifique de l'Université Paris-Dauphine ; M. J. Esteban a été présidente de la SMAI (2009-2012) et est présidente du comité pour les mathématiques appliquées à l'EMS ; E. Jouini et P.-L. Lions ont été membres du Haut Conseil de la Science et de la Technologie ; J. Dolbeault est président de la Fondation des Sciences Mathématiques de Paris ; P.-L. Lions est professeur au Collège de France et membre de l'Académie des Sciences

Indiquer au maximum **5 faits illustrant les interactions de l'entité avec son environnement socio-économique ou culturel** :

- 1) L. Cohen, Portrait de chercheur. Film réalisé par la Fondation EADS (2009).
- 2) E. Jouini est titulaire de la chaire Groupama « les particuliers face au risque » et président de la Fondation Dauphine
- 3) P.-L. Lions est président du conseil scientifique de France Telecom et de dXO Labs, et directeur scientifique de la Chaire Calyon-EDF « Finance quantitative et développement durable »

Indiquer les **principales contributions de l'entité à des actions de formation** :

- les membres du CEREMADE ont une grande part d'enseignement au département MIDO (Mathématiques/Informatiques); les 5 spécialités du M2 MMD-MA (Mathématiques), dont 3 recherche, sont dirigées par des membres du laboratoire ;
- S. Mischler et G. Turinici ont dirigé le département MIDO
- E. Jouini est responsable du Master Pro « Gestion d'actifs » (département de gestion)
- M. J. Esteban a publié un Livre Blanc sur l'accueil du doctorat de mathématiques appliquées dans les entreprises
- I. Catto est vice-doyenne de la formation du PRES PSL.
- M. Gubinelli est responsable du programme doctoral pour les mathématiques et l'informatique dans l'ED de Dauphine

**Vague D :
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Research unit

Fact sheet of the unit

CEREMADE -UMR 7534

Name of the Research Unit (UMR): CEREMADE
Unit's Supervisor : Olivier Glass

Workforce of the UMR (when the current contract started) :

40 academic teachers ; 7 CNRS resarchers ; 7 staff ; 8 post docs et 31 PhD students.

Workforce who left the UMR during the term corresponding to the current contract (number of cumulative monthes spent in the UMR during this period)

954 permanent members (x month) ; 993 PhD students (x month) ; 231 post-docs (x month).

Number of newly hired academic staff during the aforementioned period and their origin (with former affiliation and status) 6 PR (5 former MCF, one transfer) ; 18 MCF (including one transfer) ; 1 DR (former MCF) ; 3 CR. No local recruitment.

Scientific production during the term (1st January 2007 - 30th June 2012) :

Point out the most important results obtained in the UMR (one to three lines per result, up to five results).

- 1) In the Mather theory framework, P. Bernard (with G. Contreras) proved that the simplex of minimal measures is generically of finite dimension. This key result has very important consequences in the dynamics of diffusing orbits. It has been published in *Annals of Mathematics*.
 - 2) M. Gubinelli with co-authors proved that a multiplicative stochastic perturbation of Brownian type is enough to render a linear transport equation well-posed whereas uniqueness may fail for the deterministic PDE. It has been published in *Inventiones Mathematicae*.
 - 3) P.-L. Lions (with J.M. Lasry) investigated the behavior of Nash equilibria for differential games with a large number of players. The resulting model is a new coupling between a Hamilton-Jacobi equation and a transport equation. Applications of this approach are numerous in Economics and Finance.
 - 4) E. Jouini and co-authors characterized the equilibrium discount rate for a group of heterogeneous agents and proved that it is lower than the mean-value of equilibrium discount rates of agents taken individually. Long-term benefits and costs must be updated at a lower rate and those at very long-term ones at a rate close to zero.
 - 5) F. Balabdoui and co-authors attempt to unify the asymptotic theory of non parametric maximum likelihood estimation for the k-monotone classes. Up to a conjecture on some interpolation problem, they give a generalization of known limit laws for classes of monotone densities (k=1) and of monotone and convex densities (k=2).
-

Quantitative assessment of the UMR's publications.

Around 550 articles in international peer-reviewed journals, 110 proceedings, 29 books or book chapters, 130 preprints.

Point out the **5 most important publications** of the unit:

1. P. Bernard and Contreras, A generic property of families of Lagrangian systems, *Ann. of Math.* 167(2), 2008, pp. 1099–1108
 2. F. Flandoli, M. Gubinelli and E. Priola, Well-posedness of the transport equation by stochastic perturbation. *Invent. Math.* 180(1), 2010, pp. 1--53.
 3. J.-M. Lasry and P.-L. Lions, Mean field games, *Jpn. J. Math.* 2(1), 2007, pp. 229--260.
 4. E. Jouini, J.-M. Marin and C. Napp, Discounting and Divergence of Opinion, *Journal of Economic Theory* 145, 2010, pp. 830-859.
 5. F. Balabdaoui and J. Wellner, Estimation of a k-monotone density: limit distribution theory and the Spline connection, *Annals of Statistics* 35, 2007, pp. 2536--2564.
-

Point out **up to 5 prominent documents** (other than publications) generated by the unit (e.g. : experts report, software, corpus, protocole, patent with operating license, etc.)

1. INFOMAGIC project in the framework of Pôles de compétitivité de la Région Ile-de-France : IMAGE, MULTIMEDIA ET VIE NUMERIQUE (L. Cohen). Indexing by content.
 2. Expert report for AXA company (R.A. Dana).
 3. One patent CNSIF (co-authored by M. Summa) sold in 2009 by the University of Paris-Dauphine to the CEREMADE start-up Isthma
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Point out **up to five 5 facts that illustrates the academic radiance and attractivity** of the unit :

1. Plenary lecture by P. Bernard at the International Congress of Mathematicians (2010)
 2. Prizes : INRIA Grand prix (P.-L. Lions, 2012), CNRS Silver Medal (F. Forges, 2009), Grand prix EADS of the french Academy of Sciences (L. Cohen, 2009)
 3. 4 members of IUF : 2 junior P. Bernard (2007), S. Mischler (2010) et 2 senior C. Robert (2010), F. Forges (2011) ; 3 ERC Grants : S. Olla (2010), P. Bernard (2012) , G. Peyré (2012)
 4. 15 ANR in CEREMADE, 11 of which are coordinated by CEREMADE members
 5. E. Jouini is scientific director of Institut Europlace de Finance and Research Vice-President at the University Paris-Dauphine ; M. J. Esteban was President of SMAI (2009-2012) and is Chairperson of the committee of applied mathematics at EMS ; E. Jouini and P.-L. Lions were members of the Haut Conseil de la Science et de la Technologie ; J. Dolbeault is the director of the Fondation des Sciences Mathématiques de Paris ; P.-L. Lions is professor at Collège de France and member of the french Academy of Sciences.
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Point out **up to five 5 facts that illustrates the interactions of the unit with its socio-economic and cultural environment:**

1. L. Cohen, Portrait de chercheur. Movie realized by the EADS Foundation (2009)
 2. E. Jouini holds the Groupama Chair « les particuliers face au risque » and is President of the Fondation Dauphine
 3. P.-L. Lions is heading the scientific council of France Telecom and dXO Labs. He is also scientific director of the Calyon-EDF Chair « Finance quantitative et développement durable »
-

Point out **the principal contributions of the unit to training actions:**

- A large part of the training of CEREMADE members occur in the MIDO Mathematics and Computer Sciences department ; 5 specialized masters, 3 of them research-oriented, are headed by members of the lab ;
- S. Mischler, next G. Turinici, have headed the MIDO department,
- E. Jouini is in charge of the professional Master « Asset management » (Management department)
- M.J. Esteban published a White Paper on the welcome of holders of a PhD in applied mathematics in private companies
- I. Catto is vice-dean of education at PSL Research University.
- M. Gubinelli is heading the PhD program in applied mathematics in Dauphine Doctoral School

1 Scientific Report – Activities and results

1.1 General presentation

The CEREMADE is a research center in applied mathematics where applications of mathematics to areas of scientific activity as diverse as economics, finance, image and signal processing, data analysis and classification theory, mathematical physics, mechanics, epidemiology and astronomy are studied. Our main goal is the mathematical analysis of these problems, but also the numerical approach and the support to practical implementation in interaction with industry. The applications to economics and finance are of course very important for the insertion of CEREMADE at Université Paris-Dauphine, and the much larger diversity of applications covered is crucial in order to maintain the position of CEREMADE as a center of excellence in applied mathematics.

The center has about 60 permanent academics and is structured into 3 main research axes (in alphabetical order): (1) Mathematics applied to economics and finance, (2) Nonlinear analysis, image processing and scientific computation (3) Probability and Statistics. These research axes are strongly tied one to another and several members belong to more than one of these research groups. These axes do not at all constitute separate entities. We can give as an example the synergies between calculus of variations and mathematics applied to economics or between probability or statistics and finance. Other examples of such interactions between axes are given by the Analysis and Probability Seminar, which meets weekly or the Master 2 on both Analysis and Probability.

The first research area is the one closest to the traditional themes of Université Paris-Dauphine, that is to say, economics, mathematical finance, insurance, risk and game theory. It is through this team that a privileged relationship has grown between the CEREMADE, the Institute of Finance, the Europlace Institute of Finance, the Risk Foundation and the various professional oriented courses and research oriented courses proposed in the Master's of Actuarial Science (supported by the Institute of Actuaries), and in the Master 2 MASEF (jointly accredited with ENSAE).

The second research area is specialized in the study of partial differential equations from a theoretical standpoint, but also in their applications. Members of this team thus address issues appearing in different branches of mechanics (fluid mechanics, celestial mechanics), physics and chemistry (atomic and molecular physics, quantum chemistry) and optimization. Assorted tools and equations are used and studied: variational methods, methods of optimal transport, transport equations (kinetic equations), classical methods of analysis of partial differential equations (functional analysis, asymptotic methods, a priori estimates, etc.). Some researchers in this research axis conduct research in very sophisticated image and general signal processing. This team is in charge, together with the Probability and Statistics team, of the Master 2 Analysis and Probability of Dauphine, jointly accredited with ENS Ulm, Université de Versailles and INRIA.

The probability and statistics group also develops research in various directions, ranging from Bayesian statistics and MCMC methods to the study of models of statistical physics. Probabilistic methods are also present in some research projects in finance and insurance. This team is in charge of a Master in the context of statistical signal processing, jointly accredited with ENSAE and ENST.

CEREMADE members include an academician and professor at the *Collège de France* (P.-L. Lions), two junior members (P. Bernard, S. Mischler) of the IUF (Institut Universitaire de France), two senior members (F. Forges, C. Robert) of the IUF, and the Director of the Institute of Finance of Paris-Dauphine University and Scientific Director of the Europlace Institute of Finance (E. Jouini). The center members manage or participate in industrial contracts, european contracts, actions of bilateral international cooperation, 18 ANR (Agence Nationale de la Recherche) projects over the five-year period (including 15 still in progress). In particular, 11 ANR projects are being coordinated by members of CEREMADE: CBDiF (J. Dolbeault), Natimages (G. Peyre), MESANGE (L. Cohen), ArDyPitEq (P. Gravejat), ECRU (M. Gubinelli), Banhdit (J. Rousseau), RISK (R.-A. Dana), Chamu (V. Vargas), LIQUIRISK (R. Elijah), EMAQS (G. Turinici), Calibration (V. Rivoirard). The CEREMADE is also a member of the

Foundation “Sciences Mathématiques de Paris” (FSMP, “Foundation Mathematical Sciences of Paris”, regrouping many Parisian laboratories of mathematics and theoretical computer science). Many members of CEREMADE participate in the Chair “Finance quantitative et développement durable” (“Quantitative Finance and Sustainable Development”) set up in Paris-Dauphine with the support of Calyon and EDF, with P.-L. Lions as chief scientist, and in the Chair “Les particuliers face au risque” (“Individual investors facing financial risk”) set-up with the support of Groupama, with E. Jouini as chief scientist.

Several members of the CEREMADE were distinguished during the last five years: L. Cohen has received the Grand Prix EADS of the Academy of Sciences, F. Forges received the CNRS Silver Medal, S. Olla, G. Peyré and P. Bernard each received a scholarship from the ERC and P.-L. Lions just received the Grand Prix INRIA. Several members took important responsibilities: M. Esteban was President of the SMAI and is Chairperson of the committee of applied mathematics of the EMS, E. Jouini is Research Vice President at the University of Paris-Dauphine, J. Dolbeault is the director of FSMP and I. Catto is vice-dean of education of “Paris Sciences et Lettres” (PSL), the newly founded “Research University” in which Université Paris-Dauphine participates together with ENS, Collège de France, Observatoire de Paris, etc.

In terms of research valorization, and beyond the aforementioned activities, the CEREMADE has participated, with the help of ANVAR, in the creation of the “start-up” ISTHMA, specialized in data mining and data processing. This company has obtained the status of Young Innovative Company in 2004. Other interactions with the economic, social and cultural environment have been put in an appendix.

Around 110 papers are published each year by members of the CEREMADE, both in mathematics journals, and in journals of economics, finance, physics, chemistry, image processing and signal processing, etc. The list of publications of the unit for the five-year previous period accompanies this document. They have also an important production other than publications (see the corresponding appendix).

All aspects cited above are described more precisely in the specific activity reports of each of the three groups.

Life and management of the laboratory. E. Séré directed the center until August 2010, followed by J. Dolbeault, from September 2010 to August 2011. The direction was then entrusted to O. Glass.

The laboratory board was renewed in 2011. It is regularly consulted and advises on matters concerning the life of the laboratory. It gathers formally three times a year, but an email alias allows to consult it more often and quickly. The presence of two representatives of PhD students among this board is particularly important to us.

A general assembly is gathered for what concerns recruitments. In particular, it elects the *Commission Consultative Représentative* (CCR), which is in charge of the link between central councils and the researchers in mathematics, on every account that was previously devoted to the *Commission de spécialistes*. In particular, the CCR proposes to the President of the University, a list of experts for the recruitment, after consultation of the researchers in mathematics. It proposes also to the Scientific Council, a list of invited professors and a ranked list of candidates to ATER positions. The composition of the CCR has to satisfy a rank A-B parity and has to be representative of every research axis of the associated research center.

The presence in the unit of competent ITA and IATOSS (engineers, technical and administrative staff) within the unit is crucial to the functioning of the laboratory.

Demands of funding of lab members by the unit are directly addressed to the direction, regardless of the research axis. The laboratory provides to all its members (including the PhD students) a computer and furniture, and finances many missions (with an emphasis on missions of students and young researchers). A web application developed by the secretariat and G. Barès allows the direction to easily view the expenses of the current year, in order to distribute as fairly as possible the budget.

Members of the CEREMADE are involved in the organization of about ten regular seminars : CEREMADE seminar “Analyse-Probabilités” (N. Forcadel, M. Hillairet, R. Rhodes), working group “Stochastic Control” (R. Elie, A. Réveillac), working group “Calculus of variations” (B. Nazaret, P. Cardaliaguet,

R. Tahraoui), seminar “Économie du risque” of the Chair “des particuliers face aux risques”, at Université Paris-Dauphine ; Bachelier seminar (B. Bouchard, R. Elie), Séminaire de Statistique Parisien (J. Rousseau, V. Rivoirard), Séminaire Parisien d’Optimisation (P. Cardialaguet), Séminaire parisien de théorie des jeux (G. Viger), seminar of the laboratory Finance des Marchés d’Énergies, at the Institut Henri Poincaré , and Collège de France seminar on Partial Differential Equations and Applications (P.-L. Lions), at Collège de France. They co-organize many national and international scientific meetings. Moreover, the CEREMADE welcomes every year a large number of foreign visiting colleagues (professors invited to Paris-Dauphine, invited researchers on ANR contracts and other fundings). The PhD students organize all alone a working group, which allows them to present and share their results in a relaxed atmosphere.

Training and doctoral studies.

A large part of the training of CEREMADE members occur in the MIDO department (Mathematics and Computer Sciences). In particular there are 5 specialized masters (M2) in mathematics, 3 of them research-oriented: EDPMAD, TSI and MASEF, respectively centered on partial differential equations and probabilistic modeling (EDPMAD), statistics (TSI) and financial mathematics and quantitative methods in economics (MASEF), and two professional-oriented masters: ISF (Statistics and Finance) and Acturiat (Insurance). These five Masters are headed by members of the lab. Certain CEREMADE members also have training in the management departments.

The Graduate School to which the CEREMADE is directly related is the graduate school of Paris-Dauphine. Within the school, the mathematics program is overseen by M. Gubinelli. The Graduate School of Paris-Dauphine was created in 2011, by merging the different schools which preexisted in Dauphine. The CEREMADE was previously bound to the Graduate School of Mathematics and Computer Science, called the EDDIMO. The mathematics program organizes doctoral students conducting thesis in Mathematics at Dauphine, mainly in CEREMADE, but to a minor extent also at INRIA and at CREST (ENSAE).

The natural pool for PhD students is formed by the three Research Masters in Applied Mathematics from Université Paris-Dauphine. Part of the doctoral students also come from Grandes Ecoles, mainly ENS and ENSAE, or from Master 2 of other universities, and to some minor extent from Masters level training abroad. Some theses are conducted jointly supervised between Dauphine and a foreign university (within the last year we had different joint PhDs with Italy and we just started a joint PhD with Australia).

PhD students of the CEREMADE are invited to participate in the numerous seminars and doctoral school courses that take place at Dauphine or at IHP, some of which are in common with other universities: the Bachelier seminar and courses of finance, or the seminars of game theory, optimization, statistics and statistical mechanics. Together they organize a working group of doctoral students, encouraged by the laboratory. The flow of theses defended under the supervision of a CEREMADE member in the mathematics doctoral program at Dauphine is about 10 per year. We also emphasize that all former PhD students of the CEREMADE quickly found employment either in academia, or in other professions (industry, finance, insurance, etc.). The other involvements of CEREMADE members with doctoral studies are described in an appendix.

1.2 Scientific results: output 2007-2012

1.2.1 Group “Mathematics for Economics and Finance”

Mathematical finance. During the period 2007-2012, the first part of B. Bouchard’s work concerns the regularity of BSDEs, which is crucial to establish convergence speeds for Euler type discrete time approximation schemes: BSDEs with jumps with R. Elie (arrived in 2007), reflected BSDEs with J.-F. Chassagneux (Imperial College London), BSDEs with random time horizons with S. Menozzi (Université Paris Diderot). The design of (practical) efficient numerical schemes for BSDEs has also been studied, in collaboration with X. Warin (EDF). The second part of B. Bouchard’s work concerns stochastic control problems. The first result in this field is the development of a weak version of the dynamic programming

principle based on test functions, with N. Touzi (Ecole Polytechnique) and then with M. Nutz (Columbia University) for the state constraints problems. It turns out to be easy to use and to avoid most regularity issues usually encountered. The second result, obtained with R. Elie and N. Touzi, is a version of the geometric dynamic programming principle for stochastic target problems in which the terminal condition takes the form of a constraint in expectation (or probability), as opposed to an a.s. constraint. Several meaningful examples of applications to risk control in mathematical finance have then been developed with B. Bouchard's PhD students. Optimal control problems under a constraint in expectation on the terminal value of the controlled process has been studied with C. Imbert and R. Elie. Again, the direct PDE characterization they obtained is new in the optimal control literature, and of importance in mathematical finance. The last part of B. Bouchard's research concerns various theoretical results in mathematical finance. He has gone on working on the no-arbitrage conditions for financial markets with proportional transaction costs (models with production or infinitely many assets) and studied for the first time theoretical convergence results for utility indifference prices of derivatives products mixing pure financial and pure insurancial risks (with R. Elie). Bouchard also supervised five PhD students L. Moreau, L. Wang, M. Ngoc Dan, V. Thanh Nam and A. Nguyen Huu. All of them have now defended their PhD, or will defend it before October 2012.

The calibration of the local volatility in terms of local and implied instantaneous variances was explored in a series of papers of G. Turinici. It was seen that this choice of variables leads to better theoretical properties; the procedure developed in this work performs well on benchmarks from the literature and on FOREX data. It has also been implemented by Thomson-Reuters and is available to all its trading platforms using Adfin library. One of its main impacts is to propose a pricing framework for options on illiquid cross-currency pairs.

I. Kharroubi (who arrived at the CEREMADE in 2010) studied the financial modeling of processes with jumps. With Y. Jiao (Université Paris Diderot) and H. Pham, he considered a new approach for the analysis of utility maximization in a market with jumps. They used the progressive enlargement theory to characterize the optimal solution via a system of BSDEs. This approach was used in a static way, and it was generalized to a dynamic setting with T. Lim (Université d'Evry). This generalization allows to get some new existence and uniqueness results for quadratic BSDEs with jumps and to characterize optimal solutions to utility maximization problems. Concerning numerical probability, I. Kharroubi obtained with P. Gassiat (Université Paris Diderot) and H. Pham discrete time approximation results for optimal switching problems. They described an approximation algorithm using quantization theory and provided a speed of convergence. Finally, I. Kharroubi is currently working with J.-F. Chassagneux and R. Elie on the problem of the exact replication of contingent claims in the case where the investors are subjects to portfolio constraints. They intend to provide a necessary and sufficient condition on the model parameters to ensure for a class of contingent claims that the replication strategies satisfy the constraints imposed to the investors by using viability results for BSDEs.

I. Ben Tahar and E. Lépinette-Denis (arrived in 2009) have worked on multivariate risk measures in a dynamic setting. Interestingly, the framework adapted to the multivariate case (a domain in which only few results are available) involves the use of random partial orders. I. Ben Tahar also worked on vector-valued risk measures related to BSDE's. E. Lépinette-Denis also studied approximate hedging in the presence of transaction costs. In this field, he obtained, in collaboration with Y. Kabanov (Université de Besançon), a functional limit theorem giving the convergence in law of the approximation error. He extended recently with R. Elie these results to the consideration of realistic transaction costs induced by high frequency trading via order books on a financial market. More generally, E. Lépinette-Denis has contributions to arbitrage and pricing theory under transaction costs such as a dual characterization of super-replication prices for American options, general characterization results for absence of arbitrage opportunity for abstract continuous-time models.

During the years he worked at CEREMADE, L. Campi's research essentially focused on financial markets with transaction costs (with M. Owen, E. Jouini and V. Portes, and his PhD student G. Benedetti), information asymmetry in equilibrium models (with U. Cetin and A. Danilova) and energy derivatives

pricing and hedging (with R. Aid, N. Touzi and others). The latter research topic was part of the research activity of the Chair EDF-CACIB “Finance and sustainable development”.

Since he has joined the CEREMADE in September 2011, A. Réveillac has prepared his *Habilitation à diriger des recherches*, defended in Berlin in January 2012 on utility maximization problems in Finance with Backward Stochastic Differential Equations (BSDE). Then, he has continued works initiated during his PostDoc in Berlin on utility maximization. This has led to the preprint *Forward-backward systems for expected utility maximization* in collaboration with U. Horst (Humboldt Berlin), Y. Hu (Rennes), P. Imkeller (Humboldt Berlin) and J. Zhang (WIAS Berlin).

Mathematical Economics. R.-A. Dana has been working on the themes of the chair *les particuliers face au risque* developing models with risk or ambiguity, in general equilibrium theory, financial economics and insurance. In particular she studied with G. Carlier a number of quantile based models and developed tools to study the qualitative properties of their solutions. Similar tools were presented at the last world congress in financial mathematics by X. Zhou. Along the same line of research, using rearrangement methods and dependence techniques, R.-A. Dana and M. Scarsini studied the effect of uninsurable background risk on insurance policies. As most of the work on economics of uncertainty, R.-A. Dana’s work with G. Carlier and M. Scarsini is based on the hypothesis that risks can be aggregated into a unique univariate risk. This led R.-A. Dana and G. Carlier to address, with A. Galichon, efficiency issues for the concave order in the multivariate case. They showed that the results obtained are more intricate and technically much more difficult than in the univariate case. It also lead R.-A. Dana and G. Carlier to characterize incomplete preferences defined by families of concave utilities for which *undominated* elements could easily be handled and characterized. R.-A. Dana has also been working on issues of existence of efficient allocations and equilibria when shortselling is allowed. With C. Le Van, she discussed the case of risk measures and that of economic models with risk and ambiguity for finite states of the world.

G. Carlier and F. Santambrogio (who obtained a full professor position at Orsay in 2010) developed a new theory of continuous Wardrop equilibria in the context of traffic congestion; with L. Brasco (who did his PhD between the CEREMADE and Pisa) they showed that the continuous problem roughly amounts to solving some degenerate elliptic PDEs for which they established regularity properties, this is a significant simplification with respect to discrete congestion games which typically involve one decision variable per path of the road network. G. Carlier and R. Tahraoui studied the optimal control of various systems with memory. F. Santambrogio and A. Lachapelle (PhD student of G. Carlier) studied multidimensional screening models and showed that the principal may have an interest in strategically using undesirable attributes of goods. A. Lachapelle also worked on numerical methods for mean-field games (with G. Turinici and J. Salomon) and risk-sharing (with G. Carlier). Finally, G. Carlier, I. Ekeland and F. Santambrogio worked on various aspects of optimal transport theory and their applications to equilibrium problems, matching and hedonic pricing.

E. Jouini’s research focuses on issues that lie at the interplay between mathematics, finance and economics. Over the past 4 years, he worked first on agents’ expectations (beliefs) both from a theoretical and an empirical point of view with a specific focus on issues related to beliefs heterogeneity. More generally, his research program aimed at taking into account the fact that agents differ not only by their expectations but also by their preferences, their level of impatience, etc... Once released the assumption of agents’ homogeneity, many questions emerge: the aggregation of individual characteristics into a consensus characteristic, the impact of heterogeneity on the consensus characteristics, measurement and comparison of aggregate risk aversion and prudence of a group (of heterogeneous agents), relationship between individual characteristics of agents: for example, are the most pessimistic agents the most patient? What happens when some agents (gurus) can influence the beliefs of other agents? May strategic manipulation of beliefs be the cause of beliefs heterogeneity? Which characteristics persist and/or impact the consensus characteristics in the long run and which characteristics are eliminated by the market? Which discount rate to apply in the long run?

V.F. Martins-da-Rocha came back to the CEREMADE in January 2012 as directeur de recherches. He

has been working on three projects in collaboration with Y. Vailakis (U. of Exeter, UK) dealing with bankruptcy and collateral in Economic Theory. In the first one, entitled *Harsh default penalties lead to Ponzi schemes: A counterexample* and recently accepted for publication in *Games and Economic Behavior*, it is shown that, even under harsh default penalties, a competitive equilibrium with no trade can be supported due to unduly pessimistic expectations on asset deliveries. In a subsequent work, the standard competitive equilibrium concept has been refined to eliminate the undesirable equilibria with unduly pessimistic expectations. A counter-example is provided to the existence result in A. Páscoa and M.R.Seghir (2009) showing that even with moderate default penalties, Ponzi schemes can reappear preventing existence of an equilibrium. To overcome such Ponzi schemes problem, in a third paper, F.Martins-da-Rocha and Y. Vailakis introduce endogenous debt constraints that rule out Ponzi schemes and ensure the existence of equilibria. The constraints are based on an appropriate modification of the definition of finitely effective debt constraints, introduced by D.K. Levine and W. Zame (1996 and 2002).

Game theory, decision theory. P. Cardaliaguet has investigated differential games with information issues: with C. Rainer, he has adapted to stochastic differential games the Aumann-Maschler theory, in which at least one of the players has a private knowledge on the structure of the game. He has also investigated (with M. Quincampoix) differential games in which the initial position is not known by at least one of the players: the value is characterized as the unique solution of a Hamilton-Jacobi equation on the Wasserstein space of probability measures.

P.-L. Lions (with J.M. Lasry, and then with O. Guéant) investigates the behavior of Nash equilibria for differential games with a large number of players. The resulting model (Mean Field Games) is a new coupling between a Hamilton-Jacobi equation and a transport equation. Applications of this approach are numerous: for instance, it is used to explain the formation of prices in some economic models, or to derive models of volatility in mathematical finance. Another important issue where the MFG approach has proven very useful as shown by G.Turinici and M. Shen concerns liquidity, defined as the size of the trading volume, in a situation where an infinite number of agents with heterogeneous beliefs reach a trade-off between the cost of a precise estimation (variable depending on the agent) and the expected wealth from trading.

F. Forges proposed a solution to the problem of implementing communication equilibria by correlated cheap talk in two-person games with incomplete information (with P. Vida). As a first step toward the study of semi-cooperative games with incomplete information, she studied the stability of cartels in two specific auction models (with O. Biran, and R. Orzach, respectively) by assuming that players can commit themselves before they learn their private information. With V. Iehlé (arrived in 2008), she built on a generalization of Afriat's theorem (previously obtained with E. Minelli) by characterizing consumer's rational choices when budget sets are partially known by the analyst. Two other publications of V. Iehlé deal with the nonemptiness of the core in cooperative games, in the framework of non convex games without side payments, and of simple coalition formation games. He also studied strategic two-sided matching (with G. Haeringer).

J.-P. Lefort arrived in 2012. His research is related to risk and information. He mostly focused on the consequences of the arrival of new information and on nonexpected utility models. He studied dynamic axioms under ambiguity models and their consequences as updating rules for those models. With J. Eichberger and S. Grant, he characterized the class of capacities that fits with the Conditional Certainty equivalent consistency axiom. With A. Dominiak, he characterized the filtration that fits with dynamic consistency under Choquet Expected utility model.

Since he joined the CEREMADE in september 2010, G. Vigeral finished an article with M. Oliu Barton on Tauberian theorems in optimal control. He also continued to study properties of non expansive mappings in metric spaces and their consequences on the asymptotics of games finitely repeated in discrete time. With S. Gaubert, he intends to extend their previous work in a continuous time setting, studying semi-groups of contractions. He also worked on the asymptotics of discounted games. With S. Sorin, they devised a new method, via comparison theorems, to establish the convergence of discounted values, as

well as identifying the limit, for some classes of zero-sum stochastic games with compact actions spaces. In the same time, he constructed an example in which the discounted values do not converge. The properties of this example motivated a current work with J. Bolte and S. Gaubert in which the authors study games where the parameters are semi-algebraic (or more generally definable in o-minimal structures). Finally, S. Sorin and G. Vigeral are currently studying properties of optimal trajectories in absorbing games. Y. Viossat studied whether the set of games with a given number of equilibria is open. With E. Lehrer and E. Solan, he characterized the joint structure of the set of Nash and correlated equilibrium payoffs of finite games. In evolutionary game theory, he showed that evolutionary dynamics do not converge to the set of correlated equilibria and studied elimination of dominated strategies. With J. Hofbauer and S. Sorin, he proved that the time-average of the replicator dynamics is a perturbed solution of the best-reply dynamics.

1.2.2 Group “Nonlinear analysis, image processing and scientific computation”

Calculus of Variations. J. Dolbeault and M.J. Esteban have devoted several papers to the symmetry of extremal functions in Caffarelli-Kohn-Nirenberg type inequalities, extending the domain of parameters where symmetry occurs and discovering cases where symmetry is broken even if the symmetric extremal function is stable (with M. Loss, G. Tarantello, A. Tertikas). J. Dolbeault used various methods (spectral analysis, symmetrization, concentration-compactness) to get sharp or refined version of several functional inequalities (with A. Laptev, B. Volzone, M. Del Pino, S. Filippas, A. Tertikas), to study brownian ratchets using homogenization techniques with A. Blanchet (with M. Kowalczyk), and various problems of mathematical physics, such as Hartree-Fock models (with G. Aki, C. Sparber, P. Felmer, M. Lewin, J. Mayorga-Zambrano) or continuous stellar dynamics with J. Campos (with M. Del Pino).

In connection with optimal transportation, G. Carlier and F. Santambrogio (arrived in 2007 and left in 2010) developed a theory of optimal transport with congestion. With L. Brasco, they established regularity results for very degenerate elliptic PDEs that naturally appear in this framework and with G. Peyré and F. Benmansour, they developed efficient numerical methods. More traditional optimal transport problems have been investigated as well: regularity of transport density (F. Santambrogio), continuation methods for optimal transport (G. Carlier, A. Galichon, F. Santambrogio), and multi-marginals optimal transport (M. Agueh, G. Carlier, B. Nazaret), as well as gradient flow theory in the space of measures (J. Dolbeault, B. Nazaret, G. Savaré) based on an extension of the Bakry-Emery method and on distances built using a least action principle. R. Tahraoui and G. Carlier worked on the optimal control of dynamics with memory. They also considered the case where the memory can be controlled (with G. Buttazzo).

J. Lambolley (arrived in 2009) is studying the geometric properties of optimizers in various shape optimization problems, such as regularity of optimal sets (with T. Briane), convexity constraint (with A. Novruzzi, M. Pierre), problems with concave structure (with D. Bucur, I. Fragalà), further applied to the Mahler problem (with E. Harrell et A. Henrot). He also established new isoperimetric inequalities on the p -torsion (with I. Fragalà, F. Gazzola).

P. Gravejat (with F. Béthuel, J.-C. Saut) constructed travelling wave solutions to the Gross-Pitaevskii equation and derived in dimension two their convergence in the transonic limit towards the solitary wave solutions to the KP 1 equation. He next analyzed the corresponding one-dimensional time-dependent limit, namely the KDV long-wave regime (with F. Béthuel, J.-C. Saut, D. Smets) and established the orbital stability of the black soliton in dimension one.

Evolution problems and large time behaviour. Estimating rates of convergence to equilibrium in kinetic equations is a major issue. An exponential rate has been shown using the Wasserstein distance for granular media by F. Bolley, I. Gentil and A. Guillin and for the space inhomogeneous Vlasov-Fokker-Planck by F. Bolley, A. Guillin and F. Malrieu. With L^2 norms involving weights based on entropy methods, micro/macro decompositions and diffusion limits, hypocoercivity results have been obtained by J. Dolbeault and C. Mouhot with applications to fiber lay-down industrial processes (with C. Schmeiser, A.

Klar). Diffusion limits have been established for nonlinear BGK type kernels (J. Dolbeault, P. Markowich, D. Oelz, and C. Schmeiser). A fractional diffusion equation has been obtained as an anomalous diffusion limit of a linear Boltzmann equation with heavy-tail equilibria by S. Mischler and C. Mouhot (with A. Mellet).

S. Mischler and C. Mouhot (with M. Rodriguez Ricard) have proved Haff's law of cooling for an inelastic Boltzmann equation and established the asymptotic behavior in the weak inelastic regime, using a space enlarging method for semi-groups and a factorization technique adapted by S. Mischler and C. Mouhot (with M.P. Gualdani) to handle non-symmetric operators. Notions of chaos and the propagation of chaos in Boltzmann's equation have been studied by S. Mischler (with M. Hauray) and C. Mouhot. S. Mischler and C. Mouhot (with B. Wennberg) have obtained a characterization of the space homogeneous Boltzmann equation as a limit of a system of particles undergoing collisions and a microscopic derivation of the H-theorem.

Diffusion processes have been tackled by various methods, including semi-group and probabilistic methods, or capacity estimates. Generalized or weak Poincaré inequalities have been studied by F. Bolley, I. Gentil, J. Dolbeault (with A. Guillin, and F.-Y. Wang). For fast diffusion equations, entropy methods and regularity estimates have been exploited to characterize asymptotic rates of convergence as spectral gaps in Hardy-Poincaré inequalities (with A. Blanchet, M. Bonforte, J. Dolbeault, G. Grillo, and J. L. Vázquez). A global best matching approach has been used for improving rates of convergence by J. Dolbeault (with G. Toscani). As a by-product, improved interpolation inequalities have been established. Nonlinear flows have also been used to investigate various functional inequalities by J. Dolbeault, with applications to the Keller-Segel evolution problem (with C. Schmeiser, A. Blanchet, J. Campos, M. Escobedo, and J. Fernández, P. Biler and L. Corrias). Singularity formation has been studied by N. Nouaili (arrived in 2009) in nonlinear heat and Ginzburg-Landau equations (with H. Zaag) and in semilinear wave equations by M. Hillairet (arrived in 2010), who also worked on existence of weak solutions for degenerate parabolic systems for biology.

Image Processing. L. Cohen has been working for a long time on deformable models and minimal paths using variational methods and PDEs, for many problems like segmentation of biomedical images (in collaboration with hospitals, companies, and the biology department of ENS), multiview 3D reconstruction (PhD of A. Auclair), similarity measure between shapes, etc. With Y. Rouchdy and F. Benmansour, the new concepts of Geodesic voting and keypoint method were introduced to segment, with only one click, a tubular tree structure (like vessels) or a contour. Anisotropic geodesics are a powerful tool for segmentation, perceptual grouping or image compression (with F. Benmansour, G. Peyré and S. Boughleux). "Non local Active Contours" enable to perform efficiently segmentation of colors or textures, for a model based on a nonlocal estimate (with M. Y. Jung and G. Peyré).

G. Peyré focussed on the mathematical modeling of images and texture, with applications in image processing, numerical analysis and biological vision. A framework based on optimal transport to perform a realistic synthesis of learned textures was proposed (with J. Rabin). A novel algorithm was introduced to solve efficiently convex optimization programs such as super-resolution (with H. Raguét). With N. Schmidt and Y. Fregnac, Peyré proposed a model of the primary visual cortex that can be fitted to observed recordings in the living animal.

The image group has grown recently with the arrival in 2011 of J.-M. Mirebeau (numerical methods for mathematical problems involving Anisotropy, including PDEs, mesh generation and non-linear approximation) and F.-X. Vialard (geometrical methods and diffeomorphic image registration applied to biomedical imaging, like on spatiotemporal 3D brain image classification, with L. Cohen and J.-B. Fiot).

Scientific computing and numerical analysis. J. Salomon and G. Turinici worked on algorithms for nonlinear optimal control. A general algorithm, called "monotonic algorithm", which includes many algorithms proposed in the literature as particular cases, was formulated and its convergence was proved in general abstract settings. Its applications involve techniques of quantum control (in collaboration

with a group of chemists at Princeton University), optimal transport and also “mean field game”-type modeling in economics. They also studied parallel in time algorithms applied to problems for which the time parallelization achieved by the so-called “parareal” technique is relevant, among which one may cite the control of the Schrödinger equation or the elasto-dynamical control. Finally, they provided a complete numerical analysis of the so-called “toolkit” method used by the team of H. Rabitz to solve quantum control problems.

J. Salomon tackled some topics in optimal transport. He proposed two original algorithms to solve problems involving respectively a transport plan on a circle for a convex cost or a one-dimensional concave setting, and tailored a third one to address high dimensional settings.

G. Turinici investigated the controllability of quantum systems and feedback, as numerical implementations of quantum control generally start from the basic question of controllability. Several settings were addressed and controllability criteria were formulated, notably for the simultaneous control by a unique laser and for the control of the rotational motion. Another set of applications studied concerned the Lyapunov control of high-order control settings.

A code was written in FORTRAN 95/2003 (approx. 5500 lines) by G. Legendre for the study of models and algorithms to compute the electronic states of atoms or molecules. The goal is to test several new algorithms (work in progress, with E. Séré and A. Levitt).

G. Legendre (arrived in 2007) also worked on the improvement of transparent or absorbing boundary conditions in waveguides based on a modal analysis. More particularly, a method was proposed to address the failure of perfectly matched layers in the presence of backward waves (with A.-S. Bonnet-Ben Dhia). Recently, he investigated a numerical approach to the approximate lagrangian controllability for the two-dimensional Euler equation (with T. Horsin).

Classical and quantum mechanics. P. Bernard has studied the structures linked to the instability of Hamiltonian dynamical systems, from the variational and geometric points of view. On the variational side, he obtained results on the fine structure of Mather sets, notably in the generic case, and described abstract mechanisms of instability. On the geometric side, he proved the existence, in the “a priori stable” case, of normally hyperbolic invariant cylinders. The combination of these works just led to a proof of the generic existence of Arnold’s diffusion in arbitrary dimension (with V. Kaloshin and K. Zang).

Since his arrival in September 2011, J. Féjoz has published a very simple and general proof of Kolmogorov’s invariant tori theorem and has completed the first proof of Arnold-Mather diffusion in a realistic three-body problem (with M. Guardia, V. Kaloshin and P. Roldan).

J. Dolbeault and M.J. Esteban studied the effect of an exterior magnetic field on a relativistic electron (with M. Loss; with J. Duoandikoetxea, and L. Vega) or in case of general potentials (with J. Duoandikoetxea and L. Vega; with R. Bosi) and have given theoretical and numerical results on the stability threshold. M.J. Esteban developed new methods for the construction of self-adjoint extension of operators with spectral gap, applied to the Coulomb-Dirac operator, with a coupling constant equal to 1 (with M. Loss), in connexion with optimal Hardy inequalities for the Dirac operator. E. Séré (with M. Lewin) gave general criteria for the appearance of spectral pollution in certain discretization schemes of operators with spectral gaps.

P. Gravejat and E. Séré (with J. P. Solovej, C. Hainzl and M. Lewin) studied a mean field approximation of Quantum Electrodynamics, with applications to the electron cloud in heavy atoms. Energy minimizers were found, with rigorous formulas for the charge renormalization.

I. Catto (with C. Bardos, N. Mauser, S. Trabelsi) completed the mathematical analysis of the multi-configuration time-dependent Hartree-Fock system. The local (in time) existence and uniqueness of the solution to the initial value problem is proved and the first result ever on global existence under a condition on the initial datum is established.

Fluid Mechanics: control, fluid-structure interaction, non-newtonian fluids. The control of a fluid (for instance, putting it to rest by relevant boundary conditions) has been studied by O. Glass

(arrived in 2009) for different models (KDV, 1D compressible Navier-Stokes). Also the control of the flow rather than the state of the solid has been considered (connected with the inviscid Euler model).

The model of a solid embedded in a perfect incompressible fluid has been considered by O. Glass. In this model, the solid body evolves under the influence of the pressure on its boundary. Various properties of this model have been studied: regularity in time of the trajectories associated to this model (as for the Euler equation alone), Cauchy problem for weak solutions, limit of a vanishing body to obtain a simplified model.

M. Hillairet worked mostly on fluid-structure interactions problems. In the time-dependent case he derived mathematical criteria deciding whether the incompressible Navier-Stokes equations coupled to Newton laws are able to predict contact between solids or not. In the stationary version, he obtained existence of solutions vanishing at infinity and computed their decay rate.

B. Haspot (arrived in 2011) studied existence of global strong solutions to the compressible Navier-Stokes system in $N \geq 2$ dimension with large data. He has also investigated the global exact non controllability of compressible Navier-Stokes equations by developing a notion of quasi-solution.

I. Catto has completed the analysis of the Hébraud-Lequeux model for some non-newtonian fluids: asymptotic behaviour of solutions, existence of attractors (with J. M. Amigó, A. Giménez, J. Valero).

Hamilton-Jacobi equations, fully nonlinear PDEs. C. Imbert studied uniqueness of solutions of HJ equations on singular domains with discontinuous coefficients (with R. Monneau, H. Zidani). He constructed with S. Serfaty repeated games approximating the integral curvature flows and general parabolic non-local equations. G. Carlier and R. Tahraoui derived the HJB equation for a control problem with non local state equation. P. Cardaliaguet arrived in 2010 ; with P. Cannarsa, C. Rainer and L. Silvestre, he studied Hamilton-Jacobi equations with super-quadratic growth in the gradient variable: he shows that the modulus of Hölder continuity of the solution depends only on its L^∞ norm and the growth rate.

C. Imbert studied the level set approach to integral curvature flows (existence, uniqueness, stability). N. Forcadel (arrived in 2008) proved (with F. Da Lio, R. Monneau) that solutions of a non-local first order equation modeling dislocation dynamics converge to solutions of mean curvature motion. N. Forcadel (with A. Monteillet) studied existence/uniqueness of fronts with a velocity composed of a mean curvature term and of a non-local term. This was also done by P. Cardaliaguet (with G. Barles, O. Ley, R. Monneau, A. Monteillet) with velocity depending in a nonlocal, non monotone way of the set.

P.-L. Lions (with P. Souganidis) found a new proof for stochastic homogenization of Hamilton-Jacobi equations in random environment. In periodic environment, P.-L. Lions (with F. Da Lio and P. Souganidis) shows that homogenization holds for Neumann oscillating boundary condition when the boundary is a hyperspace with a rational normal. N. Forcadel (with C. Imbert and R. Monneau) studied homogenization for non-local Hamilton-Jacobi equations and for some particles systems like the Frenkel-Kontorova model. To homogenize Hamilton-Jacobi equations, coercivity seemed to be mandatory; but this is not always the case, as explained by P. Cardaliaguet and P.-L. Lions (with P. Souganidis) for some front propagation problems, by P. Cardaliaguet for the G-equation (with J. Nolen and P. Souganidis) and under a non-resonance condition in the plane.

N. Forcadel (with E. Carlini, M. Falcone and R. Monneau) has proposed a generalization of the fast marching method to treat the case of non-local and changing sign velocity.

C. Imbert studied the Hölder regularity of viscosity solutions of second-order, fully non-linear elliptic integro-differential equations (with G. Barles and E. Chasseigne). He also established an Alexandroff-Bakelman-Pucci estimate and a Harnack inequality for fully non-linear elliptic equations in non-divergence form which can be degenerate when “the gradient is small”. Typical examples are either equations involving the m -Laplace operator or Bellman-Isaacs equations from stochastic control problems.

M.J. Esteban studied the existence of solutions for a certain family of fully nonlinear problems based on Pucci-type operators (with P. Felmer and A. Quaas).

1.2.3 Group “Probability and Statistics”

Probability. The research activities of the probability group concern various applications of probability to non-equilibrium statistical mechanics, random walks and polymers in random environments, random trees, self similar Markov processes and fragmentation, log-correlated fields, rough paths and stochastic regularization, functional inequalities.

S. Olla’s work is mainly directed on the study of macroscopic energy diffusion and thermal conductivities in mechanical system perturbed by conservative stochastic dynamics. His work is supported by the European Research Council Advanced Grant Macroscopic Laws and Dynamical Systems (MALADY) (ERC AdG 246953). His main achievements are the weak coupling limit for energy behaviour (with C. Liverani), the heat equation for the macroscopic evolution of the energy fluctuations under hydrodynamic scaling limit (with M. Sasada), and the superdiffusion of energy in one dimensional systems (a series of works with G. Basile, C. Bernardin, H. Spohn, M. Jara, T. Komorowski, L. Ryznik). During his permanence at CEREMADE (2008-2010), M. Jara also worked on other scaling limits for interacting particle systems, in particular connected to subdiffusion in random environments. He is now détaché at IMPA, Rio de Janeiro. F. Huveneers arrived at CEREMADE as a postdoc, supported by the ERC MALADY, in 2010. He has worked on the thermal transport in disordered harmonic chains, deriving sharp asymptotic bounds on the heat current in the Casher-Lebowitz model, and he analyzed the effect of a small energy preserving noise on a disordered harmonic chain (in collaboration with C. Bernardin), as well as the effect of non-quadratic potentials. He has been hired as Maître de Conférences (lecturer) in 2012 and will continue to be part of this research group.

F. Simenhaus’ and H. Lacoïn’s (both at CEREMADE from 2010) work is mainly concerned with two topics : statistical mechanics and random walks in random environments. One of the main achievements is that the stochastic Ising model in dimension 2 at zero temperature follows the mean curvature flow if correctly renormalized. They also proved an upper bound for the mixing time of the polymer dynamics in the repulsive case. Simenhaus also studied the stochastic Ising model in dimension 3 at zero temperature. Some of this work had been in collaboration with a group of researchers in Rome 3 (P. Caputo, F. Martinelli) and Lyon (F.L. Toninelli). H. Lacoïn also studied the surdiffusivity of the trajectories of Brownian motion in Poissonian random environments.

J. Trashorras studied Large Deviations for symmetrical and bootstrapped empirical measures. He established a Large Deviations Principle for the infinite Wasserstein distance between two independent empirical measures. In the field of multi-scale modeling he defined Monte-Carlo algorithms that lead to parallel computations for spin systems.

M. Mariani has been postdoc at CEREMADE from March 2008 till September 2009, with the support of the ANR LHMSHE and supervision of S. Olla. One of his main contributions is a large deviation principle for hyperbolic scalar laws.

B. Haas works on discrete and continuous random trees, self-similar Markov processes and fragmentation processes. About the first subject she obtained: (1) a description of scaling limits of a large family of discrete random trees (the so-called Markov branching trees) in terms of self-similar continuous random trees, (2) a study of geometric and fractal properties of the limiting continuous trees, (3) the development of various applications: to population dynamic genealogical trees (Galton-Watson trees, phylogenetic trees), to combinatorial trees (in particular Polya trees) and to recursive trees; about the self-similar Markov processes: (1) a detailed study of quasi-stationary distributions and Yaglom limits of all positive self-similar Markov processes that reach 0 in finite time, applications to continuous state branching processes, all continuous self-similar diffusions, asymptotic behavior of solutions to the deterministic fragmentation equation with dust, (2) scaling limits of decreasing integer valued Markov chains with rare macroscopic jumps, the limits being decreasing self-similar Markov processes and applications. About fragmentation processes that lose mass to dust: the behavior near the extinction time.

V. Vargas and R. Rhodes (both arrived in 2007) are working on log-correlated fields. These have many applications in fully developed turbulence, Liouville quantum gravity, as well as finance. They have

introduced a continuous analogue of the Mandelbrot's star equation and solved it in sub-critical regime. In the context of Liouville quantum gravity (LQG), they have established the KPZ formula, explained the duality in LQG and investigated the phase transition. In turbulence, they have developed a matrix valued theory of Gaussian multiplicative chaos.

F. Bolley works on qualitative properties of semigroups, such as smoothing properties or their long time behavior; he uses functional inequalities, such as the logarithmic Sobolev or Poincaré inequalities, and in particular, in collaboration with D. Bakry and I. Gentil, has shown the efficiency of weighted Nash inequalities and dimension dependent functional inequalities when seeking bounds on the Markov kernel of the semigroup; he has also shown how adapted optimal transport techniques could be useful in the study of the long time behavior of degenerately diffusive stochastic processes.

J. Lehec (arrived at CEREMADE in 2009) has written an article on a stochastic variational formula for the Gaussian relative entropy, in the spirit of the work of C. Borell on the Laplace transform. He showed several applications to functional inequalities.

M. Gubinelli arrived at CEREMADE in 2008 as professor. He is mainly interested in developments in the theory of rough paths and in the properties of noise which allow to regularize the behavior of non-linear systems. He also works on the regularization by noise phenomenon: an equation which is deterministically non well-posed (the simplest example being an ODE with non-Lipshitz or even distributional vector-fields) can behave better when sufficiently irregular noise is added. With some collaborators he has studied these phenomena in the context of ODEs with additive Brownian noise, for the stochastic transport equation and for a system of vortices in a two-dimensional periodic domain.

Statistics. The activity in statistics is distributed within two themes, which are relatively independent, namely Mathematical Statistics on the one hand and computational Bayesian methods on the other. The junction between both themes focuses on the Bayesian approach, which is a specificity of the group within France.

The first theme concentrates on non-parametric estimation. First, F. Balabdaoui just defended her habilitation on asymptotic results in nonparametric estimation under constraints, which can be used for instance to estimate the mode of a density in an automated manner (without having to choose a bandwidth) or to calculate asymptotic confidence bands of a discrete probability. Similarly, V. Rivoirard was recruited in 2010 to reinforce the group on this topic, already represented by J. Rousseau. They now work in a Bayesian framework, concentrating on speed and Bernstein–von Mises theorems, in particular on the linear functionals of the density, on processes for regularity classes containing the function to estimate, nonparametric Bayesian procedures based on mixture models, and the consistency of Bayesian testing procedures. As in the case of F. Balabdaoui, they are interested in empirical processes, but in the setup of the asymptotic behavior of Bayesian a posteriori empirical estimators based on the maximum marginal likelihood. In a more frequentist setting, V. Rivoirard is also exploring Lasso type estimators (mixed effects models, inverse problems, intensity point processes). Following the launch of the ANR bandhit (2008-2012) on the theme of Bayesian nonparametric Statistics, chaired by J. Rousseau, V. Rivoirard started an ANR on the theme of statistical calibration, which was accepted in 2011. K. Meziani (arrived in 2009) develops her own nonparametric themes, which are more related to machine learning techniques for the study of penalization and projection. O. Wintenberger (arrived in 2008) also works on semi-parametric methods for weakly dependent time series. In particular, he obtained consistency results for pseudo maximum likelihood estimators in these models. He is also interested in the dependence of extreme values for time series and by concentration measurement and large deviations, in collaboration with probabilists of CEREMADE. He further works on oracle inequalities for wavelet sparse estimators.

The second theme of the group focus on the problems of calculation of statistical procedures and complex data analysis, mainly in terms of simulation and Monte Carlo methods. There, S. Donnet (arrived in 2007) works on mixed effects models defined by ordinary differential equations and stochastic algorithms using Expectation-Maximization techniques combined with more involved simulation methods. She also collaborated with J.-M. Marin (a former member of CEREMADE) on empirical Bayesian methodology for

the analysis of Gaussian graphical models. She further collaborated with J. Rousseau on the elicitation of priors by combining expert opinions. This is also the main research topic of C. Robert. His major achievements over the period were in obtaining advanced methodological and computational algorithms on ABC (Approximate Bayesian Computation), connected with his participation in two ANR that are joint with biologists at CBGP, INRA, Montpellier. In collaboration with J.-M. Marin and J. Rousseau, he obtained convergence results for new versions of the algorithm, continued his study of the relationship between ABC and Bayesian model selection, and contributed to discussions on the defense of the method by biologists. C. Robert also participated in several invited discussions on recent particle algorithms. His most important outcome over the period, in collaboration with J.-M. Marin and J. Rousseau, is the characterization of summary statistics validating the use of the algorithm ABC model selection. (This stemmed from a counter-example exposed in an earlier article by A. Grelaud, then a PhD student at CEREMADE, J.-M. Marin and C. Robert.) He has also written several articles on historical aspects and philosophy of Bayesian statistics and publishes a regular column in the statistics magazine *CHANCE* about books related to statistics. He also continued to work on MCMC and particle methods, in collaboration with members of the laboratory (A. Iacobucci, P. Jacob, J.-M. Marin, R. Ryder, J. Rousseau). Being in charge of the local ANR Ecosstat in collaboration with astronomers from the AIP, he supervised the post-doctoral year of D. Wraith and collaborated with him on several articles. In 2009 he published with G. Casella a book which is an introduction to Monte Carlo methods based on the R language, whose translation into French was published in 2010 (and in Japanese is close to completion). R. Ryder, first as a postdoc funded by the Mathematics Science Foundation in Paris, then as a Maître de Conférences (since 2011), has, in the continuity of his thesis, continued to develop the TraitLab software and analysed the history of the semitic language family. He joined a group working on the application of ABC algorithms to models of recombination in genetics, including the question of estimating the topology of phylogenetic trees of evolution of bacterial RNA. He also worked on the Wang-Landau algorithm, determining (with P. Jacob) the conditions under which this algorithm converges and is currently analysing (with P. Jacob and P. del Moral) this algorithm in the setting of Feynman-Kac semi-groups.

The field of applied statistics is represented by M. Summa and P. Bertrand, following the retirement of B. Goldfarb and C. Pardoux in 2011. P. Bertrand developed methods for unsupervised classification. M. Summa worked on the modeling of multiway data tables. She co-authored a patent on the platform DelataMetrics for multidimensional data processing that was sold to the company ISTHMA.

1.3 Analysis of the means of the unit

Staff and recruitments over the last five years. The number of permanent academics (researchers or teacher-researchers) has increased by about 25% in the last five years. Note that, during the previous four-year period, the increase had been roughly of the same order of magnitude. This is mainly due to a wave of retirements of Paris-Dauphine teacher-researchers in mathematics who were not members of the CEREMADE (mainly Maître de Conférences). All newly recruited faculty members have asked to join the CEREMADE. In 2003, the Laboratory Board had wished the recruitment to be respectful of the equilibrium among the three major CEREMADE teams; this was acknowledged in our Declaration of Scientific Policy 2009–2012. The open Maître de Conférences positions have been pre-assigned to the various teams actually abiding by this request. Concerning the recruitment of full professors, the positions have not been pre-assigned, but the overall balance between the disciplines has been nonetheless respected. The following Maîtres de Conférences have left the unit: L. Campi, I. Gentil, B. Nazaret, J. Renault and F. Santambrogio (recruited as Professors), C. Imbert (recruited as CNRS Research Director), P. Gravejat (having a temporary “Hadamard” position at Polytechnique), M. Jara-Valenzuela (Researcher in Brazil), F. Martins da Rocha (for a position in Brazil, and then back to CEREMADE as a CNRS research director), B. Goldfarb, F. Goupil and C. Pardoux (retirements). The following Professors have left the unit: P. Cazes, R.-A. Dana (2012), E. Diday, D. Florens, R. Tahraoui. Most of them have asked and obtained emeritus. The present list of emeritus Professors at CEREMADE is the following: P. Cazes,

R.-A. Dana, E. Diday, I. Ekeland, D. Florens.

During the same period the following Maîtres de Conférences have been recruited: S. Donnet, R. Elie, N. Forcadel, B. Haspot, M. Hillairet, M. Jara-Valenzuela, I. Kharroubi, J. Lamboley, G. Legendre, J. Lehec, E. Lépinette-Denis, K. Meziani, N. Nouaili, A. Réveillac, R. Rhodes, R. Ryder, F. Santambrogio, F. Simenhaus, F.-X. Vialard, G. Vigerat, O. Winterberger. V. Iehlé and J.-P. Lefort were recruited at LEDa (Laboratory of Economics of Dauphine) and joined the CEREMADE part-time. The following Professeurs have been recruited: P. Cardaliaguet, B. Bouchard, J. Féjóz, O. Glass, M. Gubinelli, V. Rivoirard. D. Ettinger is a Professor at LEDa who joined part-time the CEREMADE.

During the period spanned by the five-year contract, C. Mouhot, CNRS researcher (CR) has left the CEREMADE, while F. Martins Da Rocha, CNRS research director (DR) and Vincent Vargas (CR), Hubert Lacoïn (CR), and J.-M. Mirebeau (CR) have joined the unit. In september 2012, three Maître de Conférences (A. Frouvelle, F. Huveneers and D. Possamaï), a full professor (M. Hoffmann) and a CNRS researcher (S. Armstrong) have joined the CEREMADE. In september 2012, the CEREMADE has 51 Maître de Conférences and Professors and 9 CNRS researchers.

Regarding ITA and IATOSS (Administration, IT, research support), we have some serious concerns: on the one hand, M. Touati (IE1, research support and PC fleet management) has not been replaced yet after her retirement, and we hope this can be done soon. On the other hand, M. Vanbreugel (IR1) will soon retire. M. Vanbreugel currently manages our computer network. The solution that we propose for the replacement would be to entrust our network to G. Barès, who is currently technician in charge of the Apple computer equipment and of our numerous databases. This can only be realized if another technician is recruited to assist him. We will **absolutely** need to hire a technician to assist G. Barès when M. Vanbreugel retires.

Budget and funding utilization. Since 2005, the CEREMADE has been associated with a significant number of projects financed by the ANR, fifteen at present. These projects constituted an important source of funding. Eleven of these contracts, which are listed in the first section, are coordinated by researchers of the center, who also participate as partners in the remaining four. Moreover, three projects in CEREMADE are financed by the ERC, and four members of CEREMADE are members of the IUF. All these projects allow us to hire a large number of postdoctoral researchers, in addition to the recruitments on individual contracts (e.g. CNRS). The corresponding funding also enable CEREMADE researchers and PhD students to organize or participate in international conferences.

The new policy of Paris-Dauphine University on the use of BQR (*Bonus Qualité Recherche*), aiming to promote the quality of scientific publications, has worked in favor of CEREMADE. This policy has given researchers additional means to travel for attending conferences or for research collaborations. It has also allowed to invite French and foreign high-level scientists, in the context of either existing collaborations or new research projects.

Some CEREMADE members have also developed research through industrial contracts, and six of the laboratory doctorates are currently CIFRE contracts.

Finally, we point out that the CEREMADE was awarded during the last five-year period (2007–2011) the following average annual amounts: 123,000 Euros (incl. tax) in annual funding from the University, plus 24,500 euros from the BQR (these two resources have increased significantly over the last two years), 25,000 Euros from the CNRS (not including specific action credits, such as some workshops, long-time missions, etc.), and 14,000 euros from MIDO (Mathematics and Computer Science Department).

The largest budget item, not taking the contracts such as ANR into account, concerns the missions (more than 50%), in particular for PhD students and young researchers who have not yet a grant such as an ANR project, and investments in computers (approx. 30 %). The installed base of computers is rather large: around 80 personal computers, and several servers (mail, web, databases and three servers for computations).

Year	2007	2008	2009	2010	2011
Credits from Dauphine	90950	90950	90950	164248	180220
Credits from CNRS ¹	21500	21268	21268	34000	27700
BQR	19000	19000	22000	31000	31000
MIDO	10000	15000	15000	15000	15000
Total	141450	146218	149218	244248	253920
Number of CNRS researchers	6	7	7	6	7
Dauphine faculty	40	43	47	48	51
Total of permanent members	46	50	54	54	58

Figure 1: Summary of the means of the unit (not counting ANR, ERC, etc.)

Finally, the total area occupied by members of CEREMADE is of 924 square meters (June 2012). The CEREMADE manages directly offices for a total of 731 square meters; the rest consists mainly in offices managed by the MIDO department (and occupied by members of CEREMADE having a responsibility in this department). As outlined in the SWOT analysis in the project document, the lack of space is an important issue for the laboratory.

¹not including credits for specific actions (aid to some workshops, long-time missions for researchers in a CNRS international unit, etc.)

2 Rules of the unit, functional organization chart, health and safety

2.1 Rules of the unit

We put here the project for a “Règlement intérieur” of CEREMADE (in French). It has been approved in a general assembly of the unit, and has to be approved by the CNRS and the University. We also put the decision of creation of the laboratory board and the Functional organization chart of the unit.

REGLEMENT INTERIEUR DU CEREMADE

1 – Les instances consultatives du laboratoire sont au nombre de deux : le conseil et l’assemblée générale. L’assemblée générale comprend tous les personnels du laboratoire. Elle est réunie sur l’initiative du directeur au moins une fois par an. Le conseil de laboratoire est présidé par le directeur du laboratoire. Il exerce un rôle consultatif. Il se réunit au moins deux fois par an.

2 – Le directeur du CEREMADE veille au bon usage des ressources propres de l’unité, en prenant en compte notamment les contributions des membres de l’unité aux activités de recherche et d’animation communes.

3 – La qualité de membre du CEREMADE est décernée par le conseil de l’unité. Elle doit refléter une réelle participation à des projets scientifiques, d’animation de la recherche et de publication scientifique.

4 – Les membres du CEREMADE ne peuvent pas cumuler leur appartenance au CEREMADE avec un rattachement à un autre laboratoire du CNRS ou d’une université publique française, sans en demander l’autorisation au conseil de l’unité ; ils doivent alors préciser quel pourcentage de leur activité de recherche relève du CEREMADE.

5 – Toute demande d’aide ou réponse à un appel d’offres sera faite après en avoir informé et le directeur du CEREMADE, qui a le droit d’accepter ou de refuser une demande. Une fois la demande acceptée, le directeur a le devoir d’aider le chercheur dans sa démarche en vue de faire aboutir la demande.

6 - Il est attendu des membres du CEREMADE qu’ils participent de façon active et par leur présence aux diverses activités collectives mises sur pied par le CEREMADE telles que les colloques, séminaires, assemblées générales, conseils de laboratoire.

7 – Il est attendu des membres du CEREMADE qu’ils développent un certain nombre d’initiatives scientifiques dans le cadre ou sous le label du CEREMADE.

8 – Il est attendu que chaque enseignant - chercheur et chercheur du CEREMADE manifeste une activité de publication compatible avec le statut de publiant selon les critères en vigueur.

9 – Tout membre du CEREMADE est tenu de rédiger un rapport sur ses activités scientifiques (livres, articles dans des revues à comité de lecture, chapitres dans des ouvrages collectifs répondant à des critères scientifiques, communications à des colloques de recherche, organisation de colloques, projets de recherche, direction de thèses, participation à des comités de revues et à des instances d'évaluation, etc.) lorsque les instances de l'Université Paris-Dauphine ou le CNRS en font la demande.

10 - Les publications scientifiques et professionnelles des membres du CEREMADE doivent faire apparaître l'appartenance au CEREMADE selon les règles établies par le conseil scientifique de l'Université Paris-Dauphine et telles qu'elles sont définies dans le contrat liant avec l'Université et le CNRS. Les publications doivent être déposées selon les règles définies en Conseil de l'unité.

11 - D'une manière plus large, tout membre du CEREMADE tiendra informé en temps réel le directeur du CEREMADE de toute initiative prise ou considérée (réponse à un appel d'offres, lancement de nouveaux projets, organisation de colloques, etc) qui implique le CEREMADE.

12 – Tout membre du Ceremade s'engage à respecter les règles en vigueur, en matière de déontologie, en particulier dans le cadre des missions d'expertise, et à prévenir de sa propre initiative d'éventuels conflits d'intérêt. Il est tenu de respecter la réglementation en matière d'hygiène et de sécurité, de s'informer des procédures en vigueur et est encouragé à participer aux actions de prévention. Pour les questions liées aux systèmes d'information et en l'absence de dispositions particulières, il est tenu de respecter les dispositions contenues dans la charte informatique de l'Université Paris-Dauphine.

13 - Ce règlement entre en vigueur le *** après avoir été soumis aux membres du conseil de laboratoire, à l'assemblée générale des personnels, à la présidence de l'Université Paris-Dauphine et aux instances compétentes du CNRS. Toute modification ultérieure serait soumise à la même procédure.

Il est entendu que toute clause du règlement qui deviendrait contraire aux dispositions légales, réglementaires ou conventionnelles applicables au C.N.R.S et à l'université Paris Dauphine, du fait de leur évolution, serait nulle de plein droit.

DEC

Portant création d'un conseil de laboratoire au sein de l'UMR 7534 du CNRS dénommée « Centre de recherches en mathématiques de la décision » (CEREMADE)

Le président du CNRS

Vu le décret n° 82-993 du 24 novembre 1982 modifié portant organisation et fonctionnement du Centre national de la recherche scientifique et notamment son article 3 ;

Vu le décret du 21 janvier 2010 portant nomination de M. Alain FUCHS aux fonctions de président du Centre national de la recherche scientifique ;

Vu la décision n° 920368SOSI du 28 octobre 1992 modifiée relative à la constitution, la composition, la compétence et au fonctionnement des conseils de laboratoire des structures opérationnelles de recherche et des structures opérationnelles de service du Centre national de la recherche scientifique ;

Vu la décision n° 080145DAJ du 12 décembre 2008 donnant délégation de signature à M. Alain Mangeol, délégué régional pour la circonscription Paris A notamment en matière d'organisation et de fonctionnement des services ;

Vu la décision n° 08A012DSI du 19 décembre 2008 portant renouvellement de l'UMR 7534 du CNRS dénommée «Centre de recherches en mathématiques de la décision »

Décide

Article 1er : Création

Il est créé un conseil de laboratoire au sein de l'unité mixte de recherche 7534 du CNRS dénommée « Centre de recherches en mathématiques de la décision ».

Article 2 : Composition

Le conseil de laboratoire comprend 18 membres :

- le directeur de l'unité ;
- 11 membres élus :
 - 10 pour le Collège des chercheurs, des enseignants-chercheurs et des doctorants avec 2 sous-collèges :
 - Chercheurs et enseignants-chercheurs : 8 élus
 - Doctorants : 2 élus
 - 1 pour le Collège des personnels techniques et administratifs

- 6 membres nommés par le directeur de l'unité

Le mandat des membres du conseil de laboratoire prendra fin avec le prochain renouvellement du laboratoire. La durée du mandat peut être réduite ou prorogée, notamment dans le cas où la structure de l'unité est modifiée.

Article 3 : Compétences

Ce conseil de laboratoire exerce les compétences fixées au Titre III de la décision du 28 octobre 1992 susvisée.

Article 4 : Publication

La présente décision sera publiée au Bulletin officiel du Centre national de la recherche scientifique.

Fait à Ivry-sur-Seine, le

Pour le président du CNRS
et par délégation,

Le Délégué Régional

2.2 Functional organization chart

The functional organization chart, with the percentage of participation of each member of the unit to each of the groups, is given on the next page. We also add a second organization chart, classified according to the personnel's status.

Organigramme du CEREMADE (UMR7534)

Octobre 2012

Master 2ème année EDPMAD

J. FEJOZ : Directeur

Groupe Mathématiques de l'économie et de la finance

Enseignants Chercheurs permanents

I. BEN TAHAR MDC (100%)
B. BOUCHARD PR (100%)
P. CARDALIAGUET PR (50%)
G. CARLIER PR (70%)
E. DENIS MDC (100%)
R. ELIE MDC (100%)
D. ETTINGER PR (25%)
F. FORGES PR (50%)
M. HOFFMANN PR (50%)
V. IEHLE MDC (25%)
E. JOUINI PR (100%)
I. KHARROUBI MDC (100%)
P. L. LIONS PR Collège de France (20%)
V. F. MARTINS DA ROCHA DR (100%)
D. POSSAMAI MDC (100%)
A. REVEILLAC MDC (100%)
G. TURINICI PR (25%)
G. VIGERAL MDC + Chaire CNRS (100%)
Y. VIOSSAT MDC (100%)

Chercheurs non-permanents

(nombre moyen par an)
3 ATER, 2 post-doctorants
et 10 étudiants en thèse

Groupe Analyse non-linéaire

Chercheurs CNRS

S. ARMSTRONG CR (100%)
I. CATTO CR (100%)
L. COHEN DR (100%)
J. DOLBEAULT DR (100%)
M. J. ESTEBAN DR (100%)
J. M. MIREBEAU CR (100%)
G. PEYRÉ CR (100%)

Enseignants Chercheurs permanents

P. BERNARD PR (100%)
F. BOLLEY MDC (60%)
P. CARDALIAGUET PR (50%)
G. CARLIER PR (30%)
J. FEJOZ PR (100%)
N. FORCADEL MDC (100%)
A. FROUVILLE MDC (100%)
O. GLASS PR (100%)
B. HASPOT MDC (100%)
M. HILLAIRET MDC (100%)
J. LAMBOLEY MDC (100%)
P. L. LIONS PR Collège de France (80%)
G. LEGENDRE MDC (100%)
S. MISCHLER PR (70%)
N. NOUAILI MDC (100%)
J. SALOMON MDC (100%)
É. SÉRÉ PR (100%)
G. TURINICI PR (75%)
F. X. VIALARD MDC (100%)

3 ATER, 2 post-doctorants
et 15 étudiants en thèse

O. GLASS
Directeur

Programme doctoral de mathématiques

M. GUBINELLI : Directeur

Master 2ème année TSI

C. P. ROBERT : Directeur

Master 2ème année MASEF

P. CARDALIAGUET : Directeur

APPUI A LA RECHERCHE

INFORMATIQUE

G. BARÈS AI (100%) :
Responsable du parc micro-informatique
Apple, base de données, Site WEB

M. VANBREUGEL IR1 (100%) :
Responsable réseau, serveurs

CELLULE ADMINISTRATIVE

I. BELLIER TCE (100%) Responsable

M. BELLE IATOS (100%)
C. FAIVRE IATOS (100%)

Groupe Probabilités et statistiques

Chercheurs CNRS

V. VARGAS (CR 100%)
H. LACOIN (CR 100%)

Enseignants Chercheurs permanents

F. BALABDAOUI (MDC 100%)
P. BERTRAND MDC (100%)
F. BOLLEY MDC (40%)
S. DONNET MDC (100%)
H. DOSS PR (100%)
M. GETTLER-SUMMA MDC (100%)
M. GUBINELLI PR (100%)
B. HAAS MDC (100%)
M. HOFFMANN PR (50%)
F. HUVENEERS MDC (100%)
J. LEHEC MDC (100%)
K. MEZIANI MDC (100%)
S. MISCHLER PR (30%)
S. OLLA PR (100%)
R. RHODES MDC (100%)
V. RIVOIRARD PR (100%)
C. P. ROBERT PR (100%)
J. ROUSSEAU PR (100%)
R. RYDER MDC (100%)
F. SIMENHAUS MDC (100%)
J. TRASHORRAS MDC (100%)
O. WINTERBERGER MDC (100%)

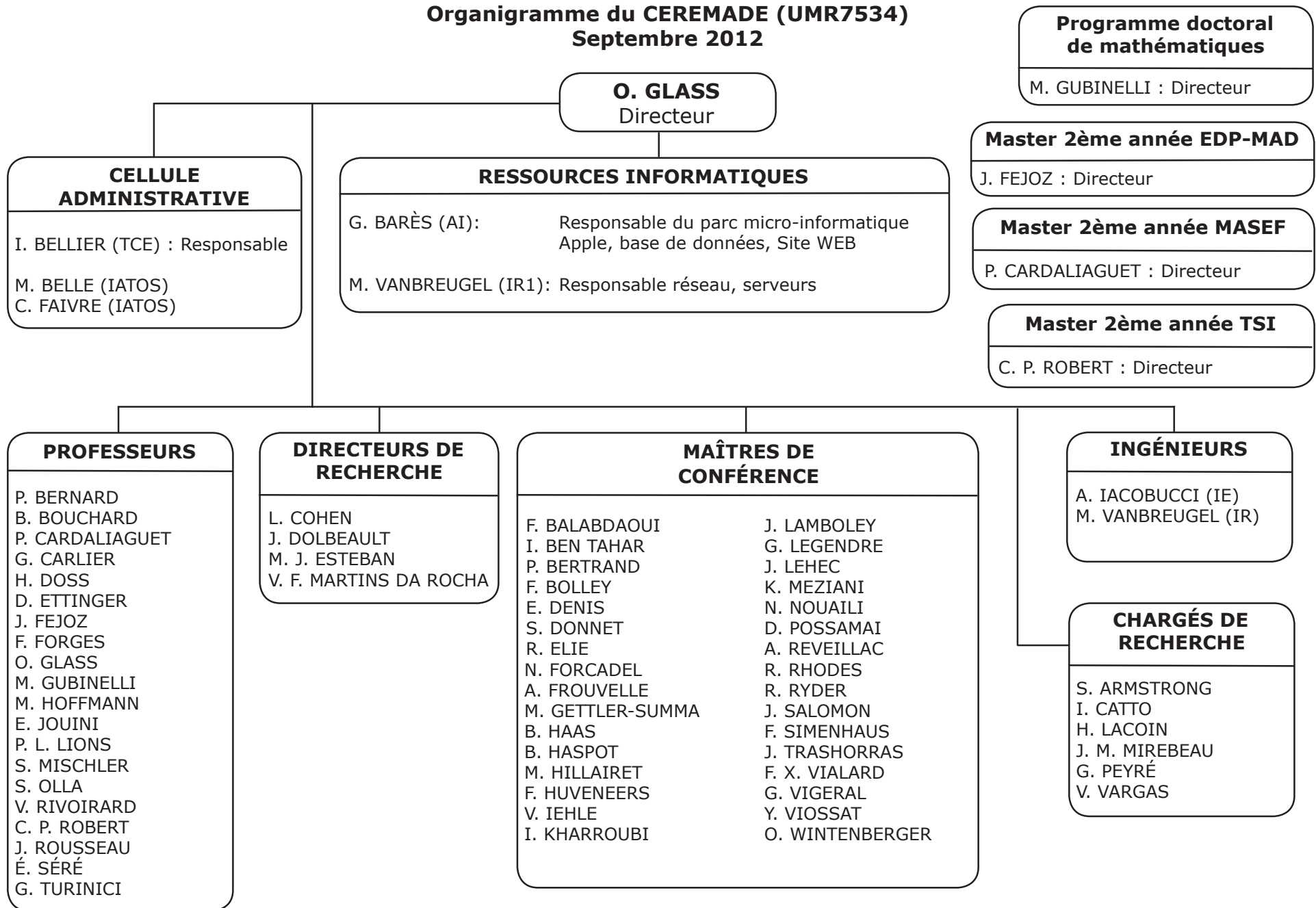
ACCOMPAGNEMENT DE LA RECHERCHE Informatique de recherche/Statistiques

A. IACOBUCCI IE (100%)

Chercheurs non-permanents

(nombre moyen par an)
3 ATER, 2 post-doctorants
et 10 étudiants en thèse

**Organigramme du CEREMADE (UMR7534)
Septembre 2012**



2.3 Health and safety

Great efforts have been made by the University on health and safety. Nevertheless, improvements can be made particularly with regard to the deplorable state of hygiene in general and those of the sixth floor of B wing in particular (several complaints have also been entered in the register on this matter). The deposition of garbage containers in the afternoon on each floor stairs corridors B and P is also a problem of hygiene (malodour) and especially security (in case of evacuation).

Regarding the CEREMADE, the provision of health and safety record and the introduction of the "document unique" represent a major advance over the previous five-year plan.

Moreover, the laboratory now has an ACMO (CNRS Agent in Charge of Implementation, Gilles Barès) and an agent who sits as a member elected to the CHS (César Faivre). These two persons each have had training on health and safety; C. Faivre is also SST (Sauveteur Secouriste du Travail – rescuer) and was trained in fire risk and handling of fire extinguishers on real fires. Both agents work together to information and monitoring of compliance with health and safety by all lab members, especially with new members of CEREMADE.

Thus, the corridors have been cleared of the cabinets which encumbered and almost all offices are now equipped with table signage indicating the general safety instructions to follow (to prevent persons, evacuation routes, etc.). In addition, all offices were equipped with surge protector power strips secured to mitigate the lack of wall outlets.

Finally, two of the laboratory personnel have been designated as "floor leaders" and two other have been designated as guide after being trained as "responsible for evacuation".

3 Publications of the unit

3.1 Articles published in peer-reviewed journals indexed by the AERES, ISI, etc.

- [1] Martial Agueh and Guillaume Carlier. Barycenters in the Wasserstein space. *SIAM Journal on Mathematical Analysis*, 43(2):904–924, 2011.
- [2] René Aid, Luciano Campi, and Nicolas Langrené. A structural risk-neutral model for pricing and hedging power derivatives. *Mathematical Finance*, (published online DOI: 10.1111/j.1467-9965.2011.00507.x), 2012.
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- [AP43] Paul Doukhan and Olivier Wintenberger. An invariance principle for weakly dependent stationary general models. *Probab. Math. Statist.*, 27(1):45–73, 2007.
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- [AP48] N. Forcadel. An error estimate for a new scheme for mean curvature motion. *SIAM J. Numer. Anal.*, 46(5):2715–2741, 2008.
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- [AP50] Ilaria Fragalà, Filippo Gazzola, Jimmy Lamboley, and Michel Pierre. Counterexamples to symmetry for partially overdetermined elliptic problems. *Analysis (Munich)*, 29(1):85–93, 2009.
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- [AP56] Olivier Glass. An extension of Oleinik’s inequality for general 1D scalar conservation laws. *J. Hyperbolic Differ. Equ.*, 5(1):113–165, 2008.
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- [AP59] David Gérard-Varet and Matthieu Hillairet. Regularity issues in the problem of fluid structure interaction. *Arch. Ration. Mech. Anal.*, 195(2):375–407, 2010.
- [AP60] Boris Haspot. Existence of strong solutions for nonisothermal Korteweg system. *Ann. Math. Blaise Pascal*, 16(2):431–481, 2009.
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- [AP106] Patricia Reynaud-Bouret, Vincent Rivoirard, and Christine Tuleau-Malot. Adaptive density estimation: a curse of support? *J. Statist. Plann. Inference*, 141(1):115–139, 2011.
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- [AP108] Vincent Rivoirard and Gilles Stoltz. *Statistique en action*. Vuibert, 2009.
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- [AP110] R.J. Ryder and G.K. Nicholls. Missing data in a stochastic dollo model for binary trait data, and its application to the dating of proto-indo-european. *Journal of the Royal Statistical Society: Series C (Applied Statistics)*, 60(1):71–92, 2011.
- [AP111] Filippo Santambrogio. Transport and concentration problems with interaction effects. *J. Global Optim.*, 38(1):129–141, 2007.
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- [AP113] François Simenhaus. Asymptotic direction for random walks in random environments. *Annales de l'Institut Henri Poincaré (B) Probabilités et Statistiques*, 43(6):751–761, 2007.
- [AP114] Sylvain Sorin, Xavier Venel, and Guillaume Vigeral. Asymptotic Properties of Optimal Trajectories in Dynamic Programming. *Sankhya: The Indian Journal of Statistics*, 72-A:237–245, 2010.
- [AP115] Guillaume Vigeral. Evolution equations in discrete and continuous time for nonexpansive operators in Banach spaces. *ESAIM - Control Optimisation and Calculus of Variations*, 16:809–832, 2010.

4 Scientific productions other than publications

• Fadoua Balabdaoui

**C-INV : Invited Conferences in a national or international congress :*

- International Society for NonParametric Statistics, Hakidiki, Grece (2012)
- Joint Statistical Meeting, Vancouver, Canada (2010).
- Joint Statistical Meeting, Minneapolis, Minnesota (2009).

• Ibtihel Ben Gharbia

**C-INV : Invited Conferences in a national or international congress :*

- Gas Phase Appearance and Disappearance as a Problem with Complementarity Constraints.
- The International Conference on Approximation Methods and Numerical Modelling in Environment and Natural Resources (MAMERN). Saidia, Marroco, 23-26 May 2011.
- MiniSymposia : Numerical Treatment of Flow and Transport in Porous Media. Applications to Energy and Environmental Studies (Organizer: Brahim Amaziane)

**C-COM : Lecture without proceeding in a national or international congress:*

- Formulation avec contraintes de complémentarité pour un modèle diphasique en milieux poreux avec échange entre les phases. Journée scientifique du GNR MOMAS. Paris, France, 3 décembre 2010.

**C-AFF : Poster in a national or international congress::*

- Benchmark 3D : a Composite Hexahedral Mixed Finite Element. The International Symposium on Finite Volumes for Complex Applications 6 (FVCA 6) Prague, June
- Complementarity problem for hydrogen-water flow with hydrogen dissolution (Poster).
- A Composite Hexahedral Mixed Finite Element (Poster). Journées scientifiques du GNR MOMAS. CIRM, Marseille, France, 02-04 novembre 2011.
- Liquid-gas system with hydrogen dissolution formulated as a complementarity problem (Poster). Journées scientifiques du GNR MOMAS. CIRM, Marseille, France, 23-25 novembre 2009

• Imen Ben Tahar

**C-INV : Invited Conferences in a national or international congress :*

- The 21st International Symposium on Mathematical Programming (ISMP) Berlin, Germany, August 19 - 24, 2012.

• Giuseppe Benedetti

**C-INV : Invited Conferences in a national or international congress :*

- MAF 2012 (Venice)
- SIAM FM12 (Minneapolis)

• Fethallah Benmansour

**C-INV : Invited Conferences in a national or international congress :*

- SIAM-IS 2010.

- **Patrick Bernard**

**C-INV : Invited Conferences in a national or international congress :*

- 2008: Congrès Canada-France, Montreal
- 2009: “Progress in dynamics”, Paris
- 2011: Colab summer school, Lisbon
- 2010: ICM, Hyderabad
- 2012: Mather 70’s, Lyon.

**C-COM : Lecture without proceeding in a national or international congress:*

- 2007 Lille, France, Workshop on symplectic geometry.
- 2008 Montreal, Canada, Second Franco-Canadian congress of mathematics.
- 2008 Montpellier, France, Mathematical colloquium.
- 2009 Paris, France, Progress in dynamics, 65th birthday of Anatole Katok.
- 2010 Cambridge, UK, Geometry seminar.
- 2010 Lyon, France, Mathematical colloquium.

- **Patrice Bertrand**

**C-INV : Invited Conferences in a national or international congress :*

- P. Bertrand. On using criteria of cohesion and isolation to evaluate clustering stability. One-day statistical workshop - Statistical approaches and validation in clustering : mixture models and nonparametric methods. University of Caen, Department STID, Lisieux, 29 juin 2007.
- P. Bertrand. Stabilité et validité d’un partitionnement. 14e Rencontre de la Société francophone de classification (SFC 2007), ENST, Paris, France, 5-7 septembre 2007.
- P. Bertrand. Cluster stability analysis based on the assesment of individual clusters? Workshop on Stability and Resampling Methods for Clustering. Max Planck Institute for Biological Cybernetics, Tübingen, Germany, July 16-18, 2007.
- P. Bertrand. Stabilité et instabilité en classification non supervisée. Journée Apprentissage Statistique (2008), Orléans, France.
- P. Bertrand. La stabilité en classification non supervisée. Conférence Francophone sur l’Apprentissage Automatique CAP 2009 (25-29 mai 2009), Hammamet, Tunisia
- P. Bertrand. Cluster stability measures for data partitioning evaluation. Second Meeting on Statistics and Data Mining MSDM 11-12 mars 2010, Hammamet, Tunisia.
- P. Bertrand. Clustering systems with or without overlapping clusters and their dissimilarities. JOCLAD 2011, XVIII Annual Conference of the CLAD, UTAD, Portugal, April 6-9, 2011.

**C-COM : Lecture without proceeding in a national or international congress:*

- Communications orales dans les conférences nationales : SFC 2007, SFC 2009, SFC 2011.
- Communications orales dans les conférences internationales: IFCS 2009, IFCS 2011.

- **Solène Bienaise**

**C-COM : Lecture without proceeding in a national or international congress:*

- S. Bienaise et B. Le Roux, Inférence Combinatoire en Analyse Géométrique des Données, tests de typicité, Journées francophones de Statistique, Bruxelles, Belgique, 2012.
- S. Bienaise, M. Gettler Summa, C. Godard et N. Hafner, Multiple Small and Graphical Validation for Visual Decision Aid, Symposium Statistical Learning and Data Science, Florence, Italie, 2012.

- S. Bienaise et M. Gettler Summa, Validations of Trajectories on Factorial Plans after a Tandem Clustering Approach. International Classification Conference, Saint-Andrews, Ecosse, 2011.
- S. Bienaise et B. Le Roux, Combinatorial Inference in Geometric Data Analysis. CARME conference (international conference on Correspondence Analysis and Related Methods), Rennes, France, 2011.

- **François Bolley**

**C-INV : Invited Conferences in a national or international congress :*

- Congrès “Concentration inequalities”, CIRM, Marseille, 2012
- Semestre thématique cinétique, ICERM, Providence, 2011
- Semestre thématique cinétique, Isaac Newton Institute, Cambridge, 2010
- Ecole d’été de transport optimal, Institut Fourier, Grenoble, 2009
- Semestre thématique cinétique, IPAM, Los Angeles, 2009
- Ecole d’été du réseau européen PHD, Lancaster, 2008
- Congrès “Optimal transportation structures”, Institut W. Pauli, Vienne, 2007

- **Bruno Bouchard**

**C-INV : Invited Conferences in a national or international congress :*

- International Conference on Controlled Deterministic and Stochastic Systems, Lasi, 2012.
 - Franco-Thai conference in mathematics, Bangkok, 2012.
 - Stochastic Analysis, Levy Processes and BSDEs, Innsbruck, 2011.
 - 6th International Symposium on Backward SDEs and Applications, University of Southern California, 2011.
 - Seventh Seminar on Stochastic Analysis, Random Fields and Applications, Ascona, 2011.
 - Oberwolfach Meeting, Stochastic Analysis in Finance and Insurance, 2011.
 - Workshop on Mathematical Finance and Related Issues, Kyoto 2010.
 - Conference MCQMC, Warsaw, 2010.
 - Invitation au Thematic Program on Mathematics on Quantitative Finance : Foundations and Applications, par Thomas Hurd, 2010.
 - Workshop on “Liquidity risk and market imperfections”, Istanbul, 2009.
 - Special Semester on Stochastics with Emphasis on Finance, RICAM, oct. et nov. 2008.
 - 5th Colloquium on BSDEs, Finance and Applications, 2008.
 - Third Bachelier Colloquium, meeting in Mathematical Finance, 2008.
 - Oberwolfach meeting in Stochastic Analysis in Finance and Insurance, 2008.
- Organisation de sessions dans des colloques :
- “Mathematical Finance” SMAI congress 2007.
 - “Non-linear BSDEs and viscosity solutions of PDEs” Equadiff 2007.
 - “Mathematical Finance” SPA congress 2010.
 - “Optimal Control” ICIAM congress 2011.

- **Luciano Campi**

**C-INV : Invited Conferences in a national or international congress :*

- October 2007: 14th Workshop in Mathematics and Economics: Insider and Asymmetric Information in Financial Trading. Oslo University. Invited talk. Kyle-Back equilibrium model with insider trading and default risk.

- May 2008: Workshop “New Directions in Quantitative Finance”, Paris. Invited talk.
- June 2008: International Workshop: CREDIT RISK, Evry (France). Invited talk.
- June 2008: 14th International Conference on Computing in Economics and Finance, University of Sorbonne (Paris). Invited talk.
- July 2008: Summer School in Perceiving, measuring and managing risk: Illiquidity, long-term risk, natural resources, University of British Columbia (Vancouver).
- Invited talk. Risk-neutral dynamics of spot and forward electricity prices.
- August 2008: Journées MAS de la SMAI, Rennes (France). Invited talk.
- May 2009: Istanbul Workshop on Mathematical Finance. Invited talk.
- June 2009: Conference in honour of Marc Yor, Paris. Invited talk.
- January 2010: Workshop on Foundations of Mathematical Finance, Fields Institute, Toronto (Canada). Invited talk.
- July 2010: Analysis, Stochastics, and Applications - A conference in Honour of Walter Schachermayer, Vienna University (Austria). Invited talk.
- September 2010: Workshop on Advanced Mathematical Methods for Finance, Berlin. Invited talk.
- January 2011: Oberwolfach workshop “Stochastic Analysis in Finance and Insurance”. Invited talk.
- March 2011: JAROS Workshop and Young Researchers Workshop on Finance 2011, Tokyo Metropolitan University. Invited talks.
- August 2011: 58th World Statistics Congress of the International Statistical Institute (ISI), Dublin. Invited talk.
- **C-COM : Lecture without proceeding in a national or international congress:*
- July 2009: The 33rd Conference on Stochastic Processes and their Applications, Berlin (Germany). Contributed talk.
- June 2011: The 4th Western Conference on Mathematical Finance, USC, Los Angeles. Contributed talk.

• Pierre Cardaliaguet

- **C-INV : Invited Conferences in a national or international congress :*
- “ERC Workshop on Optimal Transportation and Applications” (Pisa, nov. 2012)
- “ERC Workshop on Geometric Partial Differential Equations” (Pisa, sept 2012)
- “International Conference on Game Theory” (Stony-Brook, Juil. 2012)
- “Nonlocal PDEs, Variational Problems and their Applications” (Los Angeles, Mars 2012)
- “Mathematical Aspects of Game Theory and Applications” (Toulouse, sept. 2011)
- “Front propagation, biological problems and related topics:viscosity solution methods for asymptotic analysis” (Hokaido, sept. 2011)
- “New Trends in Analysis and Control of Nonlinear PDEs” (Roma, Juin 2011)
- “Mean field games and related topics” (Rome, Mai 2011)
- “Analysis of nonlinear PDEs and free boundary problems; Applications to homogenization” (Vancouver, Juillet 2009)
- “Workshop on nonlocal equations” (Madrid, Juillet 2009)
- “Nonsmooth Analysis, Control Theory and Differential Equations” (Rome, Juin 2009)
- “Journées Franco-Chiliennes d’optimisation” (Toulon, Mai 2008)
- “Nonlocal operators and applications” (Banff Avril 2008)
- “Non linear PDEs and Applications” (Kobe, Janvier 2008)
- “5th Symposium on Nonlinear Analysis” (Torun, Septembre 2007)
- “6th ICIAM” : conférencier invité dans 3 sessions (Zürick, Juillet 2007)

- **Guillaume Carlier**

**C-INV : Invited Conferences in a national or international congress :*

- Conférence inaugurale de laboratoire Fibonacci (mars 2012)
- Conférence Transport Optimal (Pise, novembre 2010)
- Calculus of Variations (Oberwolfach, juillet 2010)
- Conférence pour les 60 ans d’Hedy Attouch (Octobre 2009)
- ...

- **Kleber Carrapatoso**

**C-COM : Lecture without proceeding in a national or international congress:*

- Mai 2011 : Workshop ”Probabilistic methods in kinetic theory”, CIRM, Marseille.

- **Isabelle Catto**

**C-INV : Invited Conferences in a national or international congress :*

- Mai 2009: 2009 International Conference on Scientific Computation and Differential Equations (SciCAD09), Beijing, China.

**C-COM : Lecture without proceeding in a national or international congress:*

- Juillet 2011 : Journée en l’honneur de Claude Bardos, Université de Paris 6, laboratoire J.-L. Lions
- Avril 2009 : Workshop “Quantum Systems and Semiconductor Devices: Analysis, Simulations, Applications”, Beijing, China
- Février 2009 : WPI Workshop on Quantum Control, Vienne, Autriche
- Octobre 2007 : Workshop on Mathematical Issues in Complex Fluids”, Beijing International Center for Mathematical Research (BICMR), Beijing, China
- Juillet 2007 : One day workshop on nonlinear PDE’s and applications to Biology and Physics, Centro de Modelamiento Matemático, Universidad de Chile, Santiago de Chile
- Mars 2007 : Minisymposium DMV-GDM-2007 on “Mathematical Models of Complex Quantum Systems”, Berlin

- **Pierre Cazes**

**C-INV : Invited Conferences in a national or international congress :*

- Correspondence Analysis and Related Methods 2011 (CARME 2011)

- **Laurent Cohen**

**C-INV : Invited Conferences in a national or international congress :*

- Fast Marching and Minimal paths for Curve and Surface Segmentation. Conférence invitée. In *Journées de Metz 2007*, PDE and variational methods in image analysis, Metz, May 3-4-5, 2007.
- Front Propagation and Minimal paths for Image Segmentation. Conférence invitée. In *RIMA ’07*, Rencontres MIP-LAMSIN en Imagerie Mathématique, Institut de Mathématiques de Toulouse, France, 11 et 12 Juin 2007.
- Geodesic Remeshing using front propagation. Conférence invitée. In *Summer Mathematical Research Center on Scientific Computing and Its Applications.*, Cemracs’07, Pre and Post Processing in Scientific

Computing, Luminy, France, 23rd July-31st August 2007.

– Fast Curve and Surface Segmentation by finding geodesics. Invited Keynote. Conférence invitée. In *VipIMAGE 2007*, International ECCOMAS Thematic Conference on computational vision and medical image processing, FEUP, Porto, Portugal, 17-19th October 2007.

– Front propagation and Fast Marching for fast segmentation of objects in 2D and 3D images. Invited Keynote. Conférence invitée. In *Joint International Meeting of the AMS and Sociedade Brasileira de Matematica*, Special session on Mathematical Methods in Image Processing, IMPA, Rio de Janeiro, Brazil, June 4-7th 2008.

– Curve and Surface Segmentation Using Minimal Paths. In *2008 SIAM Annual Meeting*. Invited to Minisymposium on Segmentation and Data Mining, San Diego, California, USA, July 7-11, 2008.

– Curve and Surface Segmentation using Fast Marching approaches for medical images. Conférence invitée. In *Imaging and Measurements in Biomedical Engineering* Paris, France October 2-3, 2008.

– Lignes géodésiques et segmentation d'images. Conférence invitée. In *SMAI-AFA Approximation, Modélisation Géométrique et Applications*., CIRM, Luminy, France, 24-28 novembre 2008.

– Lignes géodésiques et analyse d'images médicales. Conférence invitée. In *1ère Journée de la Recherche à Dauphine* Paris, France 12 mai 2009.

– Modèles Déformables et Chemins Minimaux, Applications en analyse d'images médicales. Conférence invitée. In *Cérémonie SMAI en l'honneur des lauréats des prix de Mathématiques Appliquées de l'Académie des Sciences IHP*, Paris, France, 18 Novembre 2009.

– Invited to organize the minisymposium on Anisotropic Fast Marching and Applications. In *2010 SIAM Conference on Imaging Science.*, Chicago, Illinois, USA, 14 April 2010.

– Extraction of tubular and tree structures in biomedical images using minimal paths and tubular models. Conférence invitée. in *Ill-posed Problems*, Rome, Italy. November 29-30, 2010.

– Geodesic Methods for Biomedical Image Segmentation. Keynote. in *1st Technion Computer Engineering (TCE) Conference*, Technion, Haifa, Israel. June 1-5, 2011.

– Geodesic Methods for Biomedical Image Segmentation. Conférence invitée. in *Analytic and Geometric Methods in Medical Imaging*, Cambridge, UK. August 22-26, 2011.

• Rose-Anne Dana

**C-COM : Lecture without proceeding in a national or international congress:*

– Congrès d'équilibre général Européen, Paestum juin 08

– Barcelone Juin 09

– Cracovie Juin 10

– Exeter juin 12

– Congrès SAET, Economic theory, trends in Economic Theory, Espagne 07

– Ischia, Italie, juil 09

– Faro juin 11 organisatrice de session

– RUD, juin 2010

• Ngoc Minh Dang

**C-COM : Lecture without proceeding in a national or international congress:*

– 6th World Congress of the Bachelier Finance Society, Toronto, 2011

– 34th Conference on Stochastic Processes and Their Applications, Osaka, 2011

– Quantitative Methods in Finance Conference, Sydney, 2011

– Modeling and managing financial risks, Paris, 2012

• **Emmanuel Denis-Lépinette**

**C-INV : Invited Conferences in a national or international congress :*

- 2008: Bachelier Colloquium Metabief
- 2008: Daiwa International Workshop on Financial Engineering Tokyo
- 2008: Séminaire QPL Berlin
- 2008-2009: Boston University
- 2010: Séminaire IHP Paris
- 2010: Bachelier Colloquium Metabief
- 2010: Mai Séminaire Angers
- 2010: Mai Talk University of Vienna
- 2010: July KIER-TMU International Workshop of Financial Engineering
- 2010: August-TMU Talk.
- 2010: september, Paris-Dauphine Workshop.
- 2011: January Bachelier Colloquium Metabief.
- 2011: June University of Vienna
- 2011: August: ISI Dublin.
- 2012: January Bachelier Colloquium Metabief.

• **Jean Dolbeault**

**C-INV : Invited Conferences in a national or international congress :*

- 31/10/2008: "A weighted Moser-Trudinger inequality and its relation to the Caffarelli-Kohn-Nirenberg inequalities in two space dimensions", IFO workshop Toulouse (31/10-2/11/2008)
- 17/12/2008: "Multiplicity results for the assigned Gauss curvature problem in the plane", Conference sur les "Equations elliptiques non-linéaires : symétrie, singularités et classification", (17/12/2008), Lamfa, Amiens
- 26/9/2009: "Une approche hypocoercive L^2 pour l'équation de Vlasov-Fokker-Planck", workshop Evol, Toulouse (25-26/9/2009)
- 17/3/2011: Entropy methods in kinetic equations, parabolic equations and quantum models, Kinetic models of classical and quantum particle systems, a conference in the memory of Naoufel Ben Abdallah (Toulouse, 14-18/3/2011)
- 21/9/2007: Slovak-Austrian Mathematics Meeting: "Entropy methods in partial differential equations: fast diffusion equations"
- 26/11/2007 Institute of Mathematics, Wroclaw, Poland: "The two-dimensional Keller-Segel model after blow-up"
- 10/12/2007: Linz (RICAM): workshop on biomechanics and chemotaxis: "The two-dimensional Keller-Segel model after blow-up"
- 17/12/2007: Erwin Schrödinger Institute, Spectral Theory and Partial Differential Equations, "Characterization of the critical magnetic field in the Dirac-Coulomb equation"
- 25-29/2/2008: La Havane, Conference on Operations Research, PDE session: "EDP y aplicaciones": "The two-dimensional Keller-Segel model after blow-up"
- 1/5/2008, Workshop on Nonlocal operators and applications, Banff: "Mean field models in gravitation and chemotaxis"
- 18-25/5/2008: meeting on "Liouville theorems and detours", Cortona, Italie: "A weighted Moser-Trudinger inequality and its relation to the Caffarelli-Kohn-Nirenberg inequalities in two space dimensions"
- 27/1/2008: "Asymptotic behaviour for small mass in the two-dimensional parabolic-elliptic Keller-Segel

- model”, Second workshop EDPs UAM - Paris-Dauphine (27-28/1/2009), Madrid
- 13/2/2009: ”Asymptotic behaviour for small mass in the two-dimensional parabolic-elliptic Keller-Segel model”, CRM Barcelona ”Conference on Mathematical Biology: Modeling and Differential Equations” (9-13/2/2009), Barcelone
 - 21/4/2009: ”Hypocoercivity for kinetic equations with linear relaxation terms”, workshop on ”Modern topics in nonlinear kinetic equations” Department of Applied Mathematics and Theoretical Physics at the University of Cambridge, (20-22/4/2009), Cambridge
 - 30/6/2009: ”Hypocoercivity for kinetic equations with linear relaxation terms”, workshop and summer school on ”Topics in Kinetic Theory” (29/6-7/7/2009) Victoria, PIMS, Canada
 - 9/7/2009: ”Travelling fronts in stochastic Stokes’ drifts and Brownian ratchets: homogenized functional inequalities and large time behaviour of the solutions”, Workshop on Asymptotic analysis in the calculus of variations and PDEs (6-10/7/2009), PIMS, Vancouver, Canada
 - 29/9/2009: ”Optimal functions and symmetry breaking in functional inequalities”, Madrid Autonoma - Math Cambridge CMS Applied PDEs Days, Cambridge (28-29/9/2009)
 - ”Multiple components configurations in continuous stellar dynamics”, Saarbrücken, Theory and Numerics for kinetic equations (16-18/11/2009)
 - 8/2/2010: ”Optimal functions and symmetry breaking in Caffarelli-Kohn-Nirenberg inequalities”, Oberwolfach workshop on Optimal Constants in the Theory of Sobolev Spaces and PDEs (7-12/2/2010)
 - 3/5/2010: ”Sharp rates of decay of solutions to the nonlinear fast diffusion equation via functional inequalities”, Evolution equations and functional inequalities, Hammamet (3-7/5/2010)
 - 3/6/2010: ”Relative entropy methods for nonlinear diffusion models”, conférence plénière du SIAM-RSME-SCM meeting ”Emerging Topics in Dynamical Systems and Partial Differential Equations, DSPDEs’10”, Barcelona, Spain (31/5-4/6/2010)
 - 28/6/2010: ”Mean-field attractive models: existence of stationary states and time-periodic solutions, orbital stability and symmetry issues”, Nonlocal operators and partial differential equations, Bedlewo, Poland (26/6-2/7/2010)
 - 2/11/2010 : Fast diffusion equations: matching large time asymptotics by relative entropy methods, Exploratory Workshop (European Science Foundation) on Dissipative Systems: Entropy Methods, Classical and Quantum Probability (1-3/11/2010) at Vienna Univ. of Technology, Austria
 - 9/12/2010: Relative equilibria in continuous stellar dynamics, Classical and Quantum Mechanical Models of Many-Particle Systems (5-10/12/2010), Oberwolfach, Germany
 - 13/12/2010: Thermal effects in Hartree systems, PDE Models for Quantum Fluids (13-17/12/2010), Cambridge, UK
 - 20/5/2011: Symmetry and symmetry breaking of extremal functions in some interpolation inequalities, Calculus of Variations and Nonlinear PDEs, WIMCS-LMS Workshop, Swansea
 - 11/7/2011: Sobolev and Hardy-Littlewood-Sobolev inequalities: duality and fast diffusion, Asymptotic dynamics driven by solitons and traveling fronts in nonlinear PDE, Santiago, Chile (July 11-15, 2011)
 - 19/7/2011: Improved Sobolev inequalities, relative entropy and fast diffusion equations, Geometric properties of solutions of nonlinear PDEs and their applications, Banff, Canada (July 18-22/7/2011)
 - 28/8-3/9/2011: Improved Sobolev inequalities using nonlinear flows, workshop on Partial differential equations, Benasque, Spain
 - 21-23/11/2011: Transport equations in the life sciences, Vienna, Austria
 - 28-30/9/2011: Evol workshop, Toulouse
 - 4-9/12/2011: Oberwolfach workshop on Variational Methods for Evolution

- **Sophie Donnet**

**C-COM* : Lecture without proceeding in a national or international congress:

- Avril 2012. *Rencontres de Rochebrune* “Éstimation dans des processus de branchement observés par-

tiellement.”

- Mars 2011. *Journée de la recherche de l'Université Paris Dauphine. Thème : le Risque* “Risque alimentaire et élicitation de loi a priori par dire d’experts”
- Sept. 2010 . *Journées MAS de la SMAI, Bordeaux.* “Modélisation de pannes sur un réseau électrique. Construction de loi a priori sur un arbre aléatoire”
- Mai 2009. *Rencontres Applibugs, Paris.* “ Validation de modèles en statistique bayésienne”
- Mai 2009. *41es journées de la SFdS, Bordeaux.* “Analyse bayésienne de courbes de croissance par modèles à effets mixtes et équations différentielles stochastiques”
- Sept. 2008. *Journées MAS de la SMAI, Rennes.* “Elicitation de la loi a priori par combinaison de dires d’experts”
- Juin 2008. *Rencontres Applibugs, Paris.* “Estimation paramétrique dans des modèles définis par un système d’équations différentielles”
- Juin 2008. *Rencontres de Modélisation en Physiopathologie, Cachan.* “Estimation paramétrique de modèles physiologiques en IRMF”
- **C-AFF : Poster in a national or international congress:*
- Juin 2010. *10th World Conference of the International Society for Bayesian Analysis (ISBA) Benidorm, Espagne.* “Bayesian analysis of growth curves using mixed models defined by stochastic differential equations”
- Juillet 2008. *9th World Conference of the International Society for Bayesian Analysis (ISBA) Hamilton Island, Australie.* “An Empirical Bayes Procedure For The Selection of Gaussian Graphical Models”

• Lassad El Moubarki

- **C-COM : Lecture without proceeding in a national or international congress:*
- SFC 2007, Rencontres de la société francophone de classification, 2007, Paris.
- SFC 2009, Rencontres de la société francophone de classification, 2009, Grenoble.

• Romuald Elie

- **C-INV : Invited Conferences in a national or international congress :*
- Mathematical finance and stochastic control, Lisbonne, 2012;
- Workshop on Stochastic Control and Finance, Roscoff, France, 2012;
- Workshop on Numerical and statistical methods in Finance, Paris, France, 2012;
- Sixth Bachelier Colloquium, Métabief, France, 2012;
- Workshop on Optimal stopping and Stochastic control In finance, Toulouse, 2011;
- ICIAM 2011, Vancouver, Canada, 2011;
- Fifth Bachelier Colloquium, Métabief, France, 2011; New advances in Backward SDEs for financial engineering applications, Tamerza, Tunisia, 2010;
- Workshop on Stochastic Control and Finance, Roscoff, France, 2010;
- Fourth Bachelier Colloquium, Métabief, France, 2010;
- Workshop on Optimal stopping and stochastic control problems in finance, Singapore, 2009;
- Istanbul workshop on mathematical finance, Istanbul, Turkey, 2009;
- Workshop on control and finance, Linz, Autriche, 2008;
- New Directions in Quantitative Finance, Paris, France, 2008;
- Congrès SMAI, Praz sur Arly, France, 2007;
- **C-COM : Lecture without proceeding in a national or international congress:*
- 5th conference on Advanced Mathematical Methods in Finance, Bled, Slovenia, 2010;
- Stochastic processes and Applications congress, Berlin, Germany, 2009;

– Workshop on Advanced Mathematical Methods for Finance, Vienna, Austria, 2007;

• **Maria J. Esteban**

**C-INV : Invited Conferences in a national or international congress :*

- Mars 2007 : "Modélisation, asymptotique, dynamique non-linéaire", Journées du GDR CNRS 2948.
- Juillet 2007 : "Des équations aux dérivées partielles au calcul scientifique", Congrès en l'honneur de Luc Tartar, Paris.
- Juillet 2007 : ICIAM 2007, Minisymposium 'Computational issues in relativistic quantum chemistry', Zürich.
- Juillet 2007 : "VII Conferencia de las Américas en Ecuaciones Diferenciales y Análisis no lineal", Cartagena de Indias, Colombie.
- Septembre 2007 : "10th Quantum Mathematics International Conference", Moeciu (Roumanie).
- Décembre 2007 : "Spectral Theory and Partial Differential Equations" Vienna (Autriche).
- Février 2008 : "Ecuaciones en Derivadas Parciales y Aplicaciones", La Havana (Cuba).
- Mars 2008 : "Variational Methods for Nonlinear PDE and their Applications", Haifa (Israel).
- Mai 2008 : Colloque en l'honneur de Mikel Bilbao, Bilbao.
- Juin 2008 : 2ème Congrès franco-canadien de Mathématiques (session EDP), Montreal (Canada).
- Juin 2008 : Geometric Analysis, Elasticity and PDE, Edinburgh, Grande Bretagne.
- Juin 2008 : Equations de la Mécanique des fluides. Analyse, analyse spectrale, méthodes numériques, Paris.
- Juillet 2008 : Spectral and Scattering Theory for Quantum Magnetic Systems, CIRM, Luminy.
- Juillet 2008 : 5ème Congrès Européen de Mathématiques , minisymposium "théorie spectrale", Amsterdam (Hollande).
- Août 2008 : Workshop on Nonlinear Waves and Hyperbolic Equations, Oslo, Norvège.
- Décembre 2008 : Congrès franco-indien de mathématiques, Chennai, Inde.
- Janvier 2009 : Ecole CIMPA "Développements récents en théorie des EDP elliptiques", Alexandrie, Egypte.
- Septembre 2009 : Mathematics of Complex Quantum Systems, Oberwolfach, Germany.
- Septembre 2009 : Equations aux Dérivées Partielles et Physique Mathématique. Colloque en l'honneur de Bernard Helffer. Orsay.
- Septembre 2009 : International Conference Variational and Topological Methods in Nonlinear Analysis. San Antonio, U.S.A.
- Octobre 2009 : "Loss of compactness in nonlinear problems: new trends and applications", CIRM, Luminy, France.
- Octobre 2009 : "VIII Americas Conference on Differential Equations", Veracruz, Mexique.
- Février 2010 : "Complex Quantum Systems", Singapore National University, Singapour.
- Juillet 2010 : 2nd St.Petersburg Conference in Spectral Theory, dedicated to the memory of M.Sh.Birman. St. Petersburg, Russie.
- Septembre-Octobre 2010 : The Abel Symposium 2010, Oslo, Norvège.
- Octobre 2010 : Workshop on Variational Methods in Nonlinear Differential Equations, Oaxaca, Mexique.
- Janvier 2011 : Nonlinear Partial Differential Equations, Valparaiso, Chili.
- Janvier 2011 : Density Functional Theory: Fundamentals and Applications in Condensed Matter Physics, Banff (coordination d'une table ronde).
- Avril 2011 : Jornada Científica RSME-RSEQ, Matemática y Química, Sevilla, Espagne.
- Juin 2011 : Fronts et EDP non linéaires, Paris
- Juillet 2011 : Journées RSME de Transfert y Mathématiques Industrielles, Saint Jacques de Compostelle
- Septembre 2011 : Workshop to mark the 80th anniversary of M. Solomyak, Londres

- Octobre 2011 : conférence plénière dans le EMS-RESME joint Mathematical Weekend à Bilbao.
- Novembre 2011 : Workshop on Nonlinear Differential Equations, Pienza (Italie).
- Décembre 2012 : Nonlinear functional analysis, Chennai, Inde.

• **David Ettinger**

**C-COM : Lecture without proceeding in a national or international congress:*

- PET-Taïpei 2012
- Transatlantic Workshop, Paris 2011
- Game Theory Festival, Stony Brook 2011
- SCSE Conference, Québec 2010
- APESA Conference, Haïfa 2009
- JMA, Saint-Denis de la Réunion 2008

• **Jacques Fejoz**

**C-INV : Invited Conferences in a national or international congress :*

- Scuola Normale Superiore de Pise (3/2012)
- Fields Institute de Torino (2/2010)
- Naples (1/2010)
- Beijing (6/2010)
- Houston (3/2010)
- Oberwolfach (6/2009)
- Rome III (4/2009)
- Penn State (2/2009)
- Rome III (2/2008)
- Maryland (3/2008)
- Barcelone (3/2007)
- Otranto (3/2007)
- Penn State (1/2007)

**C-COM : Lecture without proceeding in a national or international congress:*

- Calvi (10/2010)
- Nice (2/2008)

• **Jean-Baptiste Fiot**

**C-COM : Lecture without proceeding in a national or international congress:*

- Présentation lors d'un groupe de travail du GDR ISIS

**C-AFF : Poster in a national or international congress::*

- VIPimage 2011
- ISBI 2012

• **Nicolas Forcadel**

**C-INV : Invited Conferences in a national or international congress :*

- Mini-cours sur la Méthode Fast Marching durant l'école CEA-EDF-INRIA : Méthodes numériques pour

les équations d'Hamilton-Jacobi et les lois de conservations hyperboliques, 15-19 Septembre 2008, INRIA Paris.

- Mini-cours sur la Méthode Fast Marching Généralisée durant l'école : Introduction to numerical methods for moving boundaries, 12-14 Novembre 2007, ENSTA.
- 18ème colloque de la société mathématiques de Tunisie, Mahdia, du 19 au 22 Mars 2012.
- Congrès ICIAM 2011, Session "Efficient Numerical Methods for Hamilton-Jacobi Equations", Vancouver, du 18 au 22 juillet 2011.
- Workshop Advancing numerical methods for viscosity solutions and applications, Banff, du 14 au 18 février 2011.
- Congrès SMAI 2009, La Colle sur loup, du 25 au 29 mai 2009.
- Workshop Singularities in nonlinear evolution phenomena and applications, Pise, du 26 au 30 mai 2008.
- Workshop Méthodes mathématiques pour l'image, Orléans, du 1er au 3 avril 2008.
- Mathematical models for dislocations, Rome, 13 Décembre 2007.
- Phase-field models for the evolution of complex structures, Paris, du 04 au 06 juin 2007. Slides
- Multivariate Approximation: Theory and Applications, Cancun, du 26 avril au 1er mai 2007. Slides

• Françoise Forges

**C-INV : Invited Conferences in a national or international congress :*

- 2008 : "Joint revelation of budget sets and preferences", First Transatlantic Theory Workshop (Northwestern University and Paris School of Economics), septembre 2008.
- 2009 : "Core-stable rings in auctions with independent private values", 20th International Conference on Game Theory, Stony Brook, U.S.A., juillet 2009 et Colloquium Collective choice and economic design, Leuven, Belgique, novembre 2009.
- 2010 : "Communication in Bayesian games: overview of work on implementing mediators in game theory", Decentralized Mechanism Design, Distributed Computing and Cryptography, Princeton, juin 2010 et Workshop on Information Transmission and Persuasion in Games, Paris School of Economics, décembre 2010.
- 2011 : "Implementation of communication equilibria by correlated cheap talk: the two-player case", Game Theory Workshop "Correlation and Coordination in Games", London School of Economics, and Choices, Games and Economic Organizations, a Tribute to Claude d'Aspremont and Jean-François Mertens, CORE, Belgique, juin 2011.
- 2012 : "Folk theorems for Bayesian (public good) games", Congrès PET (Public Economic Theory) 12, Taipei, Taiwan, juin 2012.

**C-COM : Lecture without proceeding in a national or international congress:*

- Society for the Advancement of Economic Theory (SAET) 8th International Conference, Kos, Grèce, juin 2007.
- 13th International Congress of LMPS (Logic, Methodology and Philosophy of Sciences), Pékin, Chine, août 2007.
- Workshop on strategic communication and networks II, Université de Valence, Espagne, septembre 2007.
- Journées de microéconomie appliquée, Saint Denis, La Réunion, mai 2008.
- Third International Conference on Game Theory and Management, Saint Petersburg, Russie, juin 2009.
- 20th International Conference on Game Theory, Stony Brook, U.S.A., juillet 2009 (conférencier invité).
- 15th Coalition Theory Network Workshop, Marseille, France, juin 2010.

• Ivan Gentil

**C-INV : Invited Conferences in a national or international congress :*

- Congrès de probabilité à Pékin, 2007
- Congrès franco-chinois de probabilités au CIRM, 2008
- Ecole d'été de transport optimal, Institut Fourier, Grenoble, 2009
- Cours post-doctoral à l'Imperial college, Londres , 2009
- Congrès à Bedlewo, Pologne 2010

• **Olivier Glass**

**C-INV : Invited Conferences in a national or international congress :*

- “Workshop on Control and Inverse Problems on PDE’s” CIPPDE-2012, Santiago, Chili, janvier 2012.
- Colloque “Control and Optimization of PDEs”, Graz, Autriche, octobre 2011.
- Colloque “Control of Dispersive Equations”, Maringá, Brésil, septembre 2011.
- INDAM Workshop: “New Trends in Analysis and Control of Nonlinear PDEs”, Rome, Juin 2011.
- Workshop “Modelling and Control of Nonlinear Evolution Equations”, Trieste, Mai 2011.
- CISA 09 (2nd Mediterranean Conference on Intelligent Systems and Automation), Zarzis (Tunisie), 24 mars 2009.
- Direct, Inverse and Control Problems for PDE’s, Cortona (Italie), 23 septembre 2008.
- French-Chinese Summer Institute on Applied Mathematics, Shanghai, 10 septembre 2008.
- Workshop “Dispersive long waves models: control theory and boundary value problems”, Wolfgang Pauli Institute, Vienne, 16 octobre 2007.
- Partial differential equations, optimal design and numerics, Benasque (Espagne), 6 septembre 2007.
- International Conference dedicated to 300th Birthday of Leonard Euler “Mathematical Hydrodynamics: Euler Equations and Related Topics”, Saint-Petersbourg, 8 juin 2007.

• **Bernard Goldfarb**

**C-INV : Invited Conferences in a national or international congress :*

- Clustering Trajectories of a three-way longitudinal data set (SLDS2009, Paris)

• **Philippe Gravejat**

**C-INV : Invited Conferences in a national or international congress :*

- Juil. 2012: Colloque “Dynamics of nonlinear dispersive and fluid mechanics equations” au Beijing International Center for Mathematical Research de Pékin.
- Nov. 2011: Colloque “Stability problems in nonlinear dispersive partial differential equations” au Laboratoire de Mathématiques Algèbre, Géométrie, Modélisation de l’Université de Cergy-Pontoise.
- Sep. 2010: Colloque “Recent progress and perspectives on the Gross-Pitaevskii equation with non zero boundary conditions” à l’Institut Wolfgang Pauli de Vienne.
- Sep. 2010: Colloque “Régimes asymptotiques pour l’équation de Schrödinger non linéaire” au Centre International de Rencontres Mathématiques de Marseille.
- Juin 2010: Colloque “Ondes nonlinéaires et dispersion” à l’Institut des Hautes Études Scientifiques.
- Avr. 2010: Colloque “Dispersion, concentration and blow-up in partial differential equations” à l’Institut Henri Poincaré.
- Nov. 2009: Demi-journées “Équations aux dérivées partielles et contrôle” du Laboratoire de Mathématiques de l’Université Versailles-Saint-Quentin-en-Yvelines.

- Nov. 2008: Journées “Étude qualitative des équations aux dérivées partielles dispersives” à l’Université de Lille.
- Oct. 2008: Colloque “The Gross-Pitaevskii equation and related topics” sur l’île de Porquerolles.
- Juil. 2008: Colloque “Quatre générations sous un même toit” à l’Université Pierre et Marie Curie de Paris.

• **Massimiliano Gubinelli**

**C-INV : Invited Conferences in a national or international congress :*

- Exposé “Controlled paths and regularization in (S)PDEs”. Workshop ”Stochastic systems in mathematics and mathematical physics”. Université de Cergy-Pontoise, France (Janv 2012).
- Exposé “Regularization by Oscillations”. Conference ” Evolution Equations: Randomness and Asymptotics”. Bad Herrenalb, Allemagne (Oct 2011)
- Exposé “A TeXmacs tutorial”, MaGix@LiX workshop. Ecole Polytechnique. Palaiseau, France (Sept 2011)
- Exposé “Regularization by Oscillations” Seventh Seminar on Stochastic Analysis, Random Fields and Applications, Ascona, Switzerland (May 2011).
- Exposé “Rough paths in Spain” Final conference of the semester COCO 2010 (Combinatorics and Control), Madrid (Juin 2010).
- Exposé “Some infinite dimensional rough paths”, Minisymposium on Rough Path Theory, European Congress of Mathematics, Amsterdam. (Jul 2008)
- Exposé “Gibbs measures on Brownian currents”, Oberwolfach Seminar *Large scale stochastic dynamics* (Aout 2007).
- Exposé “Gibbs measures on Brownian currents”, Conference *Stochastic Analysis and Related Fields*, Toulouse (Jun 2007).
- Exposé “Trees, rough integration and (infinite-dimensional) differential equations”, Conference on Combinatorics and Physics, Max-Planck Institute for Mathematics, Bonn (Mars 2007).

• **Bénédicte Haas**

**C-INV : Invited Conferences in a national or international congress :*

- conférencière plénière au Seminar on Stochastic Processes, University of Kansas, 2012
- SPA 2001, session d’E. Perkins sur les processus à valeurs mesures, Oaxaca 2011
- OK Easter probability meeting ”Random structures and dynamics”, Oxford, 2011
- Workshop ”Lévy processes and applications”, Zürich, 2010
- Workshop ”Branching random walks and searching in trees”, Banff, 2010
- Conférence ”Autosim09”, Angers, 2009
- Cours invité : ”Self-similar fragmentations and random real trees”, conférence YEP - Young European Probabilists, Eindhoven 2009
- Journées MAS, Rennes, 2008
- Workshop ”Coagulation and Fragmentation Models”, Oberwolfach, 2007

• **Boris Haspot**

**C-INV : Invited Conferences in a national or international congress :*

- Ecole d’été ”Fluids Mechanics” au Morningside Pékin 2010

- **Matthieu Hillairet**

**C-INV : Invited Conferences in a national or international congress :*

- Juin 2012 : "Workshop on Navier Stokes equations", Aachen.
- Septembre 2010 : "International Workshop in Fluid-Structure Interaction Problems", Foz do Arelho.
- Janvier 2010 : Chinese-French Summer school "Effects of the stress tensor on fluid mechanics", Pekin.
- Novembre 2007 : "International workshop on fluid-structure interaction problems," Prague.

**C-COM : Lecture without proceeding in a national or international congress:*

- Juin 2011 : ICIAM 2011, "Fluid solid interactions", Vancouver.
- Juin 2010 : Conférence "Mathematical fluid dynamics and its applications", Session "Recent developments in Navier-Stokes equations and associated models" Rennes.
- Juin 2008 : "Free Boundary Problems," Stockholm.

- **François Huveneers**

**C-INV : Invited Conferences in a national or international congress :*

- April 5, 2011, Workshop on the Fourier Law and Related Topics, Fields Institute, Toronto (Canada), Energy transport for a particle system interacting through rare collisions.

**C-COM : Lecture without proceeding in a national or international congress:*

- September 22, 2011, Mathematical Physics Seminar, Rutgers University (USA), Small perturbation of a disordered harmonic chain.
- January 28, 2010, Journées de Physique Statistique, Paris (France), Thermal conductivity of a disordered harmonic chain.

- **Alessandra Iacobucci**

**C-INV : Invited Conferences in a national or international congress :*

- "Thermal conductivity of the Toda chain", Congrès SMAI 2011, 5e Biennale Française des Mathématiques Appliquées, Guidel, Bretagne 23-27 mai 2011.

- **Rachid Id Brik**

**C-INV : Invited Conferences in a national or international congress :*

- Static Hedging of Multiplicative Risk, Quantitative Methods in Finance, Pauli Institute Vienna, July, 2011
- Does Commodity Model Framework Matter?, Quantitative Methods in Finance, Sydney, December, 2009
- A note of the Pricing of Spark spread Option with Co-Dependent Threshold Dynamics, NUS, Singapore, December, 2009
- A General Model for Commodity Price Dynamics, ESSEC, Paris, April 2009
- A Note of the Pricing of Spark Spread Option with Co-Dependent Threshold Dynamics, Quantitative Methods in Finance, Sydney, December 2008
- A new model for commodity price dynamics, Paris XIII University, Paris, June 2008
- A Comparison of Alternative Methods for Filtering Trend Out of Electricity Price data: The case of PUN, IV International Summer school in Risk Measurement and Control 2007, Rome, June 2007

- **Vincent Iehlé**

**C-COM : Lecture without proceeding in a national or international congress:*

- Iehlé, Vincent, 2007. "The core-partition of a hedonic game", Congrès CTN (Coalition Theory Network), Louvain-La-Neuve, Belgique, janvier 2007.
- Iehlé, Vincent, 2007. "Group economies", Congrès SAET (Society for the Advancement of Economic Theory), Kos, Grèce, juillet 2007.
- Iehlé, Vincent, 2009. "Market functioning in public good economies with (possibly) non-convex technologies", Congrès SAET (Society for the Advancement of Economic Theory), Ischia, Italie, juillet 2009.
- Iehlé, Vincent, 2010. "Market functioning in public good economies with (possibly) non-convex technologies", Congrès PET (Public Economic Theory) 10, Istanbul, Turquie, juin 2010.
- Iehlé, Vincent, 2011. "Core and convexity in partition function games", Congrès SAET (Society for the Advancement of Economic Theory), Faro, Portugal, juillet 2011.
- Iehlé, Vincent, 2012. "Two-sided matching with one-sided data", Congrès PET (Public Economic Theory) 12, Taipei, Taiwan, juin 2012.

- **Cyril Imbert**

**C-INV : Invited Conferences in a national or international congress :*

- Invité au colloque "PDE methods in Finance", Marne la Vallée, octobre 2007
- Invité au "Workshop on Viscosity Solutions and Related Topics", Tokyo, Janvier 2009
- Invité au Workshop INdAM "Nonsmooth Analysis, Control Theory and Differential Equations" (à l'occasion des 60 ans de F. Clarke), Rome, juin 2009
- Invité au colloque "Non-local equations", Université Carlos III de Madrid, 29-30 juin 2009
- Invité au workshop "Analysis of nonlinear PDEs and free boundary problems; Applications to homogenization", PIMS Vancouver, 20-24 juillet 2009
- Invité à la conférence "Motion of Interfaces and Nonlinear PDEs", Tours, février 2010
- Invité au workshop "Positivity: a key to fully-nonlinear equations", Italie, mai-juin 2010
- Invité au workshop "Recent Trends in Differential Equations: Analysis and Discretisation Methods", Bielefeld, novembre 2010
- Invité au PIRE-OxMOS workshop "Pattern formations and multiscale phenomena in materials", Oxford, septembre 2011

**C-COM : Lecture without proceeding in a national or international congress:*

- Séminaire au groupe de travail "Analyse non linéaire" du laboratoire Jacques-Louis Lions (Paris 6), novembre 2007
- Séminaire d'Analyse, ETH Zurich, avril 2008
- Séminaire d'analyse fonctionnelle de l'université Paris 7, avril 2008
- Mini-cours sur le lien entre solutions de viscosité et les solutions entropiques lors de l'Ecole CEA-EDF-INRIA "Numerical methods for Hamilton-Jacobi equations and hyperbolic conservation laws", septembre 2008
- Séminaire de l'université de Waseda, Tokyo, février 2009
- Séminaire d'analyse Calderón-Zygmund, Chicago, février 2009
- Séminaire d'analyse, Wrocław, octobre 2009
- Séminaire d'analyse, Rome, novembre 2009
- Colloquium de l'université Paris 12, décembre 2009
- Séminaire d'analyse, Clermont-Ferrand, mars 2010
- Séminaire d'analyse, Marseille, avril 2010

- Séminaire, Barcelone, UPC, décembre 2010
- Séminaire, Tours, mars 2011

• **Pierre Jacob**

- **C-COM : Lecture without proceeding in a national or international congress:*
- workshop "Confronting Intractability in Statistical Inference", organised by SuSTain, University of Bristol, UK, 16-19 April 2012
- MCQMC in Sydney, Australia, in February 2012
- GPU's in Computational Statistics Workshop, January 25th, 2012, Warwick, UK
- Bayesian Inference for Stochastic Processes 7, in Madrid, Spain on September 3rd 2011
- Greek Stochastics "gamma", May 30th 2011
- 2011 Adap'skiii and MCM'ski
- 2010 Valencia Meeting

• **Elyès Jouini**

- **C-INV : Invited Conferences in a national or international congress :*
- Hedging the Unhedgeable Conference, Cass Business School, London, 2010.
- Weather Derivatives and Risk Workshop, HU-Berlin, 2010.
- Analysis, Stochastics, and Applications, A Conference in Honour of Walter Schachermayer, Vienna University, 2010.
- Environment, Finance and Corporate Behavior Conference, Toulouse School of Economics, 2007.
- CIMPA-UNESCO-MOROCCO School on Stochastic Models in Mathematical Finance, Marrakesh, 2007.
- **C-COM : Lecture without proceeding in a national or international congress:*
- American Economic Association Annual Meeting, San Francisco, 2009.
- North American Summer Meetings of the Econometric Society, Boston, 2009.

• **Idris Kharroubi**

- **C-COM : Lecture without proceeding in a national or international congress:*
- Numerical Methods in Finance - AMAMEF Conference, Udine, June 2008.
- Workshop on Mathematical Finance for Young Researchers, Berlin, October 2008.
- BSDEs, Numerics and Finance, Oxford, July 2012.

• **Hubert Lacoïn**

- **C-INV : Invited Conferences in a national or international congress :*
- Rencontre "Déviations pour les temps locaux d'auto-intersections", CIRM Décembre 2010.
- Fields Workshop on Interacting Processes in Random Environments, Toronto février 2011.
- Disordered Media Workshop, Warwick 5-9 Sept 2011.
- Workshop on Stochastic Analysis, Oberwolfach juin 2011.
- ERPEN 2011, Buenos Aires.
- PASI 2012, Buenos Aires-Santiago.

• **Jimmy Lamboley**

**C-INV : Invited Conferences in a national or international congress :*

- XIème Colloque Franco-Roumain de Mathématiques Appliquées, Session spéciale "Analyse et Analyse des EDPs", Août 2012, Bucarest
 - New Trends in Shape Optimization, Juillet 2012, Centro Ennio de Giorgi, Pise
- **C-COM : Lecture without proceeding in a national or international congress:*
- Shape optimization problems and spectral theory, Mai 2012, CIRM Marseille
 - Geometrical Analysis and PDE, Novembre 2011, Grenade (Espagne)
 - Calculus of Variations and Applications, Septembre 2008, Lisbonne
 - Free Boundary Problems, Juin 2008, Stockholm
 - SMAI 2007

• **Joseph Lehec**

**C-INV : Invited Conferences in a national or international congress :*

- Mai 2010 : Conférence de l'ANR Evol, Hammamet, Tunisie
- Novembre 2010 : Geometric, Probability and Optimal Transportation, Fields Institute, Toronto

• **Pierre-Louis Lions**

**C-INV : Invited Conferences in a national or international congress :*

- Juin 2012 : Fourteenth International Conference devoted to Theory, Numerics and Applications of Hyperbolic Problems- HYP2012, Padova, Italy
- Octobre 2010 : "Sovereign Wealth Funds and Other Long-Term Investors: a New Form of Capitalism?", Columbia University
- Juin 2010 : MFD 2010, International Congress in Mathematical Fluid Mechanics and its applications, Rennes
- Mai 2010 : Congrès franco-égyptien de mathématiques
- Janvier 2010 : IPAM workshop "New Directions in Financial Mathematics"
- Septembre 2008 : Ikerbasque Foroa, Bilbao
- Juillet 2008 : Symposium in honor of Kiyosi Ito: Stochastic Analysis and Its impact in Mathematics and Science, Institute for Mathematical Sciences, National University of Singapore, Singapour
- Juillet 2009 : Workshop "Optimization, Transport and Equilibrium in Economics", Paris
- Mai 2009 : Majda 60th Festival, Courant Institute, New York
- Avril 2009 : Conférence à l'Institut de Mathématiques, Académie Tchèque des Sciences, Prague
- Avril 2009 : Workshop "Mathematical aspects of imaging, modeling and visualisation in multiscale Biology", Austin University
- Décembre 2008 : Congress "Future directions in nonlinear partial differential equations", Austin University
- Décembre 2008 : International Conference on Partial Differential Equations and Applications, City University of Hong-Kong
- Octobre 2008 : Amik lectures, Chicago University
- Septembre 2008 : Colloque en l'honneur d'Italo Capazzo Dolcetta, Rome
- Juin 2008 : Colloque "Chicago-Paris Workshop in Financial Mathematics", Château de la Princesse, Mello
- Février 2008 : 8th International Conference on Operations Research, La Havane, Cuba

- Mai 2008 : COPEA Conference, UFRJ, Rio de Janeiro
- Octobre 2007 : Conférence pour l'élection à l'Académie des Sciences d'Argentine, Rosario
- Octobre 2007 : Conférence à l'Académie des Sciences d'Autriche : Johann Radon Lectures, Vienne
- Octobre 2007 : Colloque "Geometric Function Theory and Nonlinear Analysis", on the occasion of the 60th birthday of Tadeusz Iwaniec, Ischia, Naples, Italie

- **Hassan Malongo Elouai**

**C-INV : Invited Conferences in a national or international congress :*

- International Conference on "Forecasting Financials Markets", Marseille (23,24,25 mai 2012)
- Journées des doctorants en Economie, Université Paris-Dauphine (13/12/2011)

- **Vito Mandorino**

**C-COM : Lecture without proceeding in a national or international congress:*

- "Sobolev Lagrangians" lors du "Rencontre KAM faible" à Calvi (France), Octobre 2010
- "Connecting orbits for families of Tonelli Hamiltonians" lors de la conférence "Weak KAM theory in Italy" à Cortona (Italie), Septembre 2011

- **Mauro Mariani**

**C-COM : Lecture without proceeding in a national or international congress:*

- 3rd LA PIETRA WEEK IN PROBABILITY, Florence, Juin 23-27 2008.
- Analytical and Numerical Aspects of Evolution equations, Berlin, Mars 2009.
- Rencontres de Probabilités 2009, Rouen, Mai 2009.

- **Victor Filipe Martins da Rocha**

**C-INV : Invited Conferences in a national or international congress :*

- 8th Annual Conference on General Equilibrium and its Applications, Cowles Foundation for Research in Economics, Yale University (USA)
- GEDays 2012 Workshop, University of York (UK)
- European Workshop on General Equilibrium Theory, University of Exeter (UK)

- **Katia Meziani**

**C-INV : Invited Conferences in a national or international congress :*

- Workshop international Empirical Processes and Asymptotic Statistics. Université Rennes 1 (2007).
- Journées MAS de la SMAI. Modélisation et Statistiques des Réseaux. Université Rennes 1 (2008).
- Huitième Colloque "Jeunes Probabilistes et Statisticiens". Aussois - Savoie (2008).
- 3èmes Journées Statistiques du Sud (2009).
- Workshop: Probability and Geometry in high dimensions (2010).
- Rencontres de Statistiques Mathématiques (2008,2011)
- **C-AFF : Poster in a national or international congress::*
- Workshop international Empirical Processes and Asymptotic Statistics. Université Rennes 1 (2007)

– Stats in the Château (2009).

• **Jean-Marie Mirebeau**

**C-INV : Invited Conferences in a national or international congress :*

- Conférence "Mathematics and Image Analysis", Paris, 16/01/2012
- Journées Lions Magenes, Paris, 14/12/2011
- Conférence "Imagerie, Contrôle et Probabilités en Méditerranée", Nice, 25/10/2011
- Conférence "SampTa", minisymposium Geometric multiscale analysis, 4/5/2011
- Conférence "Génération de maillages: théorie et applications", Paris, 26/11/2010
- Workshop "Wavelet and Multiscale Methods", Oberwolfach, Allemagne, 5/8/2010
- "13th international conference on approximation theory", Minisymposium "Adaptive and anisotropic multivariate approximation", Etats-Unis, 9/3/2010.
- Workshop "Geometrical methods in mathematical imaging", Allemagne, 9/10/2009
- "International conference on applied analysis and scientific computation", Minisymposium "Anisotropic finite element methods: analysis, refinement, and applications", Chine, 25/06/2009
- Conférence, "Approximation, Modélisation géométrique et Applications", Lumigny, 27/11/08.

**C-COM : Lecture without proceeding in a national or international congress:*

- "Seventh international conference on curves and surfaces", Mini-symposium "Approximation problems in image processing", Avignon, 24/6/2010
- "Seventh international conference on mathematical methods for curves and surfaces", Tonsberg, Norvège, 1/7/2008.

• **Stéphane Mischler**

**C-INV : Invited Conferences in a national or international congress :*

- Octobre 2007: Workshop "Boltzmann 2007 - Autour de l'équation de Boltzmann", à l'IHP Paris,
- Février 2009: Colloque "Equations cinétiques et applications", au CIRM Luminy,
- 13-24 Juillet 2009: Summer School & Workshop "Kinetics and statistical methods for complex particle systems", à Lisbonne (Portugal),
- 6-10 Décembre 2009: SIAM Mini-symposium on "Kinetics and statistical methods for complex particle systems", à Miami (Etats-Unis d'Amérique),
- 15-16 Mars 2010 : A Kaust Workshop on "Applied Differential Equations in Physics, Biology and Life Science", à Cambridge (Royaume-Uni),
- May 30th-June 4th, 2010: SIAM Conference on "Dynamical Systems and Partial Differential Equations", à Barcelona (Espagne)
- Oct 22th-Nov 4th, 2010: Program on "Partial Differential Equations in Kinetic Theories", Isaac Newton Institute for Mathematical Sciences, Cambridge (Royaume-Uni),
- 6-10 Décembre 2010: Workshop "Classical and Quantum Mechanical Models of Many-Particle Systems", à Oberwolfach-Walke (Allemagne),
- 9-11 Février 2011: Conférence "Boltzmann equation: mathematics, modeling and simulations: in memory of Carlo Cercignani", à l'IHP Paris
- 4-18 Mars, 2011: Conférence "Kinetic models of classical and quantum particle systems, in memory of Naoufel Ben Abdallah", IMT, Toulouse, 1
- 2-6 Mai et 4-15 juin 2011 : Workshop-meeting "Propagation of Chaos and Markov Processes", CIRM Luminy,
- 8-13 Septembre, 2011 : Workshop franco-russe "Mathematical hydrodynamics", lac Baikal, Irkutsk (Russie),

- 7-11 Novembre , 2011: Workshop on “Boltzmann Models in Kinetic Theory”, ICERM Semester Program, à l’Université de Brown (Etats-Unis d’Amérique),
- 14-17 Novembre 2011: SIAM Conference on “Analysis of Partial Differential Equations”, à San Diego (Etats-Unis d’Amérique),
- 9-13 Juillet 2012: Workshop “CNRS-PAN Mathematics Summer Institute”, Cracovie (Pologne),
- 10-14 Septembre 2012 : Ecole d’été “Modélisation en dynamique des populations et évolution”, La Londe les Maures (Var),

• **Ludovic Moreau**

**C-COM : Lecture without proceeding in a national or international congress:*

- Séminaire Bachelier, journée des doctorants, Paris, Octobre 2010
- New Advances un Backward SDEs for financial Engineering Application, Tamerza, Tunisia, Octobre 2010
- European Summer School in Financial Mathematics, Zurich, Septembre 2011
- Séminaire Bachelier, Journée des doctorants, Paris, Septembre 2011
- Journée de la chaire Finance et développement Durable, Clamart, Décembre 2011

• **Clément Mouhot**

**C-INV : Invited Conferences in a national or international congress :*

- Nov. 2011: Speaker at the “Bourbaki seminar” in Paris.
- Nov. 2011: Plenary talk SIAM Conference on Analysis of PDE’s, San Diego.
- June 2011: Conference Kinetic theory and related fields, POSTECH, Korea.
- April 2011: Conference Oxbridge PDE Days, Oxford.
- Dec. 2010: Workshops on many-particle systems, MFO, Oberwolfach.
- Nov-dec. 2010: Conference in the honor of Tai-Ping Lius 65th birthday, Singapore.
- Oct. 2010: Course on Landau damping, Isaac Newton Institute semester, Cambridge.
- July 2010: Workshop Singularity in PDE’s, IHES, Bures-sur-Yvette.
- June 2010: Conference Kinetic and hyperbolic equations, Stanford.
- Oct. 2009: Conference Mathematical challenges of ITER, CIRM, Marseille.
- May 2009: Workshop Hyperbolic equations and kinetic equations, Shanghai Jiao Tong U.
- March 2009: Workshop and Spring school Kinetic Theory, Academia Sinica, Taipei.
- Aprilmay 2008: Workshop Nonlocal operators and applications, Banff, Canada.
- Feb. 2008: 8th International Conference on Operational Research, La Habana, Cuba.
- Dec. 2007: Fourth Pacific Rim Conference on Mathematics, City University of Hong-Kong.
- June 2007: Journées Equations aux Dérivées Partielles, Evian (ex- Forges-les-Eaux).

• **Bruno Nazaret**

**C-COM : Lecture without proceeding in a national or international congress:*

- Juin 2011 : Workshop “Optimal Transport, algorithms and applications”, à l’IHP dans le cadre du projet ANR OTARIE. Conférence “Diffusion equations and entropies : a gradient flow approach”.
- Avril 2010 : Workshop “Nonlinear Diffusions and Entropy Dissipation: From Geometry to Biology”, a Banff, Canada. Conférence “Distances between measures induced by concave mobility : geodesics via PDE.
- Septembre 2008 : Conférence à la journée des Mathématiques franco-espagnoles au Collège d’Espagne

”Entropies, transport and distances between measures”.

– Juillet 2008 : Workshop ”Transport, optimization, equilibrium in economics” à Vancouver, Canada.
Conférence ”A new class of distances between measures”.

• Adrien Nguyen Huu

**C-COM : Lecture without proceeding in a national or international congress:*

- 1ere journée de Printemps de la chaire Finance et Développement Durable. A structural risk-neutral model of electricity prices, 6 mai 2009.
- 6th World Congress of the Bachelier Finance Society. Industrial arbitrage in markets with proportional transaction costs, 2010.
- Markets with frictions: transaction costs and liquidity risk, Paris Dauphine Workshop. No Arbitrage conditions with production and proportionnal transaction costs, 2010.
- FiME workshop. Arbitrage pricing on electricity markets, 2010.
- 4th European summerschool in Financial Mathematics, ETH Zurich. Arbitrage Pricing of Electricity Production, 2011.
- 3ème Journée des doctorants du groupe Bachelier, Paris, Arbitrage Pricing of Electricity Production, 2011.
- 3ème journée de la Chaire Finance et Développement Durable, Stochastic target approach to electricity future market cascading rule, 2011.

• Nejla Nouaili

**C-INV : Invited Conferences in a national or international congress :*

- The 8th AIMS Conference on Dynamical Systems, Differential Equations and Applications , Dresden , Germany, mai 2010.
- International Workshop on Biomathematics and Biomechanics, Tozeur, Tunisie, novembre 2009.
- Conférence franco-Japonaise, Readilab (Reaction-Diffusion Systems and Chemotaxis), université de Paris-Sud, Orsay, mars 2008.

**C-COM : Lecture without proceeding in a national or international congress:*

- A Liouville theorem for a heat equation and applications to quenching, Dresden , Germany, mai 2010.

**C-AFF : Poster in a national or international congress::*

- A Liouville theorem for vector valued semilinear heat equations with no gradient structure and applications to blow-up, Readilab (Reaction-Diffusion Systems and Chemotaxis), université de Paris-Sud, Orsay, mars 2008.

• Stefano Olla

**C-INV : Invited Conferences in a national or international congress :*

2012

- Weierstrass Institute, Berlin, minicourse on thermodynamics and statistical mechanics.
- Max Planck Institute, Leipzig (Germany).
- Courant Institute, New York University, USA.
- Rutgers University, USA.
- Università La Sapienza, Roma, Italy.
- Warwick University, UK, mai.

- Heraklion, Crete, Grece, juin.
- Mechanics: Classical, Statistical and Quantum, conference in Honor for G. Gallavotti. Roma, juillet 2011
- Kyoto University, Kyoto, Japan.
- Tokyo University, Tokyo, Japan.
- Field Institute, Toronto, Canada.
- CIRM, Luminy, France.
- Conference in Honor of S.R.S. Varadhan, Taipei, Taiwan.
- 11th workshop on Stochastic Analysis on Large Scale Interacting Systems, Kochi University, Japan.
- Tokyo University, Japan.

2010

- Pacific Rim Conference, Stanford, USA, june 28-juillet 2.
- WIMCS Colloquium, Swansea, UK, 26 Mars.
- Rutgers, USA
- Princeton, USA

2009

- University of Tokyo, Japan. Random processes and systems, University of Kyoto, Japan.
- Statistical Institute, Bangalore, India.
- Heat conduction in low dimensional systems, Bangalore, India.
- Tata Institute, Mumbai, India.
- ENS-Ulm, 26 mars 2009.
- University of Lublin, Poland. 101th Statistical Mechanics Meeting, Rutgers University, USA.
- Short course on non-equilibrium statistical mechanics, Polish Academy of Sciences, Warsaw.
- Interacting Stochastic Particle Systems, CRM, Montreal, Canada.
- Random walks in random environments, Vancouver, Canada.
- Krakow University, Poland.
- International Conference of Mathematical Physics, Prague, Czech Republic.
- Conference France-Brésil, IMPA, Rio de Janeiro, Brazil.
- University of Minnesota, Minneapolis, USA.
- University of Budapest, Hungary.
- Workshop on Atomistic Models of Solids, University of Oxford.
- Material Theories, Oberwolfach.

2008

- TU Berlin, Allemagne. Ecole Polytechnique.
- Warwick University, UK.
- Open Dynamical Systems III, Lille, France.
- Conference in Honor of J. Fritz, Budapest, Hungary.
- Rutgers University, USA,
- Courant Institute, New York, USA.
- Analysis seminar Paris-London, IHP , Paris.
- Ecole des Ponts, Paris.
- BICS Workshop 'Lattice Models', Bath, UK.
- Rutgers University, USA.
- Leuven University (Belgium). 2007
- Rutgers University, NJ, USA.
- INDAM-Rome, cours "Probabilistic approach to homogenization".
- "Stochastic Analysis on Large Scale Interacting Systems", Kyushu University, Japon.
- "Microscopic Origins of Dissipation and Noise", Max Planck Institute, Leipzig.
- "Entropy, transport and turbulence", IHP, Paris.
- "Particle systems, nonlinear diffusions, and equilibration", Hausdorff Research Institute for Mathemat-

ics, Bonn.

– College de France, Paris.

• **Catherine Pardoux**

**C-COM : Lecture without proceeding in a national or international congress:*

– Gettler-Summa M., Pardoux C., Delavelle C., Fayolle D. (2008) Modelling Times Series with Constraints : Search for Similarities, Validation. SSC, SFdS, Ottawa

• **Gabriel Peyré**

**C-INV : Invited Conferences in a national or international congress :*

– SIAM Imaging Science, San Diego, July 2008.

– Numerical Tour of Mesh Processing, Curves and Surfaces, Apr. 2010

– Sparse Representations and Efficient Sensing of Data Meeting, Dagstuhl, Jan. 2011

– NIPS Workshop Sparsity, 2011, Granada, Spain

**C-AFF : Poster in a national or international congress::*

– CVPR'10

– ICCV'09

• **Raphael PREVOST**

**C-AFF : Poster in a national or international congress::*

– Journées Françaises de Radiologie 2011

– International Symposium on Biomedical Imaging 2012

• **Hugo Raguet**

**C-COM : Lecture without proceeding in a national or international congress:*

– SMAI 2011

**C-AFF : Poster in a national or international congress::*

– PICO F 2012

• **Jérôme Renault**

**C-INV : Invited Conferences in a national or international congress :*

– Participation au 4ème congrès de la SMAI (Praz sur Arly, 4-8 juin 2007), à la demande de S. Sorin, organisateur d'un mini-symposium.

– Conférencier invité au congrès international de probabilités appliquées IWAP 2008 à Compiègne (7-10 Juillet 2008) et au “*Workshop on Recent Advances in Repeated Games*” de Stony Brook (USA) du 20 au 22 juillet 2008.

– Invité à la conférence “Dynamiques et Optimisation” de l'ANR “Optimisation, jeux et dynamique de la décision avec coût au changement : modélisation et algorithmes” du 9 au 11 juin 2008, à Paris 6.

- Participation (invité) au Second General Equilibrium Workshop à Rio, 28-30 janvier 2008.
- *Conférencier invité au “Workshop on Strategic Communication and Networks” à Valence (Espagne), 19-20 septembre 2007.*
- **C-COM : Lecture without proceeding in a national or international congress:*
- Participation à la 18ème Conférence Internationale de Théorie des jeux de Stony Brook (Etats-Unis, 9-13 Juillet 2007).
- Participation aux journées CODE 2007, organisées par le groupe MODE de la SMAI, à l’Institut Henri Poincaré, du 18 au 20 mars 2007.
- Participation au 13ème International Symposium on Dynamic Games and Applications du 30 juin au 3 juillet 2008 à Wroclaw (Pologne) et au 3ème congrès mondial de théorie des jeux à Northwestern University (Evanston, 13-17 juillet 2008).
- Participation aux journées MODE’08 de la SMAI à Clermont-Ferrand, du 26 au 26 février 2008.

• **Anthony REVEILLAC**

**C-INV : Invited Conferences in a national or international congress :*

- Convergence of the weighted quadratic variations of some fractional Brownian sheets (International conference on self-similar processes and their applications, Angers, July 20-24 2009);
- Convergence du processus des variations à poids pour certains draps brownness fractionnaires (Colloque franco-roumain, Brasov, August 2008);
- Hermite variations of the fractional Brownian sheet (International Conference on Malliavin Calculus and Stochastic in honor of Professor David Nualart, Kansas University, March 21th 2011).

• **Rémi Rhodes**

**C-INV : Invited Conferences in a national or international congress :*

- 2011: Moscou, Moscow center for continuous mathematical education, conférence internationale Random Processes, Conformal Field Theory and Integrable Systems
- 2011: Saint Petersburg, Chebyshev laboratory, school on Random Processes, Conformal Field Theory and Integrable Systems
- 2011: UCL Louvain la Neuve (Belgique), workshop Rencontres d’analyse
- 2011: Porquerolle, conférence internationale Fractals and related fields II
- 2010: INRIA Rocquencourt, conférence internationale CEA-EDF-INRIA homogenization, theoretical and numerical aspects
- 2010: Institute of Mathematics, Bedlewo (Pologne), Conférence internationale Non-local operators and PDEs
- 2007: University of Sussex, Brighton (Angleterre), Conférence internationale Multiscale Analysis and computations in Stochastic Differential Equation Modeling

• **Vincent Rivoirard**

**C-INV : Invited Conferences in a national or international congress :*

- Exposé dans le cadre des Series of Lectures of the London Mathematical Society - Cambridge, mars 2011 : The Dantzig selector for high dimensional statistical problems
- Colloque Statistique et Optimisation - Institut Henri Poincaré, janvier 2011 : Panorama des estimateurs de type lasso en statistique non-paramétrique
- European Meeting of Statisticians (Invited Paper Session) - Université du Pirée, Grèce, août 2010:

Density estimation by using lasso-type estimators

**C-COM* : *Lecture without proceeding in a national or international congress*:

- Journées MAS de la SMAI - Rennes, août 2008 : Estimation par seuillage de l'intensité d'un processus de Poisson à support inconnu ou infini.
- Journées des Société française de Statistique et Société Canadienne de Statistique - Ottawa, Canada, mai 2008 : Thresholding estimation of a Poisson intensity with unknown or infinite support
- Rencontres de Statistiques Mathématiques - Luminy, décembre 2007 : Adaptive thresholding estimation of a Poisson intensity with infinite support.

• **Christian Robert**

**C-INV* : *Invited Conferences in a national or international congress* :

- Australian Statistical Conference, Adelaide, Australia 9-12 July 2012
- ISBA 2012, Kyoto, Japan, 25-29 June 2012, ISBA Lectures on Bayesian Foundations
- Challenges and Advances in High Dimensional and High Complexity Monte Carlo Computation and Theory
- workshop (12w5105), BIRS, Banff, 15-19 March 2012
- Winter Simulation Conference, Phoenix, USA, 10-14 Dec.2011 (advanced tutorial)
- Colloquium in Honor of Hans Rudolf Kunsch, Zurich, Switzerland, 2-3 Oct. 2011
- Computational Methods in Applied Sciences Workshop, Columbia University, New York, 23-25 Sept. 2011
- Thomas Bayes 250th anniversary, University of Edinburgh, Scotland, 2-5 Sept. 2011
- Joint Statistical Meeting, Miami, USA, 1-5 Aug. 2011
- Richard von Mises Lecture, Berlin, Germany, 1 July 2011
- O-Bayes 2011, Shanghai, China, 10 June 2011
- Colloquium for the retiral of D.M. Titterington, Glasgow, Scotland, 30 May 2011
- ABC in London, Imperial College London, 5 May 2011
- Latent Gaussian models, Zurich, Switzerland, 2 Feb. 2011
- Joint Statistical Meeting, Vancouver, Canada, 2-5 Aug. 2010
- 45th Meeting of the Italian Statistical Society, Padova (IT), 16-18 June 2010
- CRiSM Workshop on Model Uncertainty, University of Warwick, 30 May-2 June 2010
- Frontiers of Statistical Decision Theory, San Antonio, USA, 17-20 March 2010
- Workshop MCMC Convergence and Estimation, Athens University of Economics and Business, 13-15 Sept. 2009
- Joint Statistical Meeting, Washington DC, 30 July-5 Aug. 2009
- MaxEnt2009, Oxford, Mississippi, 4-9 July 2009.
- Third Rimini Bayesian econometrics workshop, Rimini (Italia), 1-2 July 2009
- O'Bayes 09, Philadelphia, June 4-9 2009
- EPSRC Symposium Workshop on Markov Chain-Monte Carlo, University of Warwick, 16-19 March 2009
- Fall school on Random media, phase transitions and information theory, IHP, Paris, 15 Sept. 2008
- Opening workshop of the SAMSI Program on Sequential Monte Carlo, Durham (USA), 7-10 Sept. 2008
- Opening workshop of the SAMSI Program on Sequential Monte Carlo, Durham (USA), 7-10 Sept. 2008
- World meeting of ISBA, Hamilton Island (Australia), 20-27 July 2008
- Conference in honor of Reuven Rubinstein, Sandbjerg (Denmark), 14-16 July 2008
- Computational Economics Conference, Sorbonne, 26-28 June 2008
- SSC-SFDS conference, Ottawa, 24-27 May 2008
- Statistical Theory and Methods for Complex, High-Dimensional Data, Isaac Newton Institute, Cambridge, 21-27 April 2008

- 20th Annual Conference on Statistics and Modelling in Human and Social Science, Cairo (Egypt), 24-26 March 2008
- 9th Bayesian Brazilian meeting, Sao Paulo, 23-27 Feb. 2008
- Deuxièmes Rencontres des Jeunes Statisticiens, Aussois, 2-7 Sept. 2007 (senior speaker).
- Joint Statistical Meeting, Salt Lake City, 28 July-2 Aug. 2007
- Workshop "Bioinformatics, Genetics and Stochastic Computation: Bridging the Gap", Banff International Research Station, July 1-5 2007.
- Workshop "MCMC, IS, Nice", Nice, 10-11 June 2007
- Sixth Conference on Objective Bayesian Methods (O'Bayes 6), Roma 8-11 June 2007
- Third Cape Cod Monte Carlo conference, Harvard (MA), 12-14 May 2007
- **C-COM : Lecture without proceeding in a national or international congress:*
information non conservée
- **C-AFF : Poster in a national or international congress::*
- Valencia 9, ISBA meeting, Benidorm (Spain)

• Simona Rota Nodari

- **C-COM : Lecture without proceeding in a national or international congress:*
- Février 2011 : 3rd Meeting of the GDR Quantum Dynamics, Orléans, France.
- **C-AFF : Poster in a national or international congress::*
- Avril 2010 : Conférence PDEs, relativity & nonlinear waves, Granada, Espagne.
- Avril 2010 : Conférence Differential and topological problems in modern theoretical physics, SISSA, Trieste, Italie.

• Judith Rousseau

- **C-INV : Invited Conferences in a national or international congress :*
- *March 2012* Invitée à Oberwolfach : The frontiers of nonparametrics (org : P Buhlman, T Cai, A Munk and B Yu). Exposé : On some bias in semi-parametric Bayesian statistics.
- *Sept. 2011* Invitée à Oberwolfach : Semi-parametric and very - high dimensions (org. J. Wellner and A. van der Vaart)
- *June 2011* Workshop on Bayesian nonparametrics (Vera-Cruz, Mexico). Bernstein von Mises Theorem for general smooth functionals of a curve.
- *Dec. 2010* London ERCIM. *Rates of convergence under partially improper priors*
- *June 2010* Torino (Italy) Invited conference. Bayesian nonparametric workshop on *Nonparametric estimation of the spectral density in long memory processes*
- *March 2010* San Antonio (USA) In Honor of Jim Berger . *Asymptotic properties of the posterior distribution under overspecified mixture models*
- *Octobre 2010* Topics on the Tropics (Australie). Invited distinguished speaker.
Bernstein von Mises properties of linear functional of the density
Time - varying mixture models with application to the air pollution
- *June 2009* Torino (Italy) Invited conference. Bayesian nonparametric workshop on *Mixtures of Betas densities*
- *June 2009* Philadelphia (US) Invited conference O'Bayes workshop on *Bernstein Von Mises Theorem for linear functional of the density*
- *March 2009* Warwick (UK) invited conference on MCMC: *Use of importance sampling with MCMC iterations*
- *December 2008* Paris. Workshop on Bayesian non parametric. *Bernstein Von Mises Theorem for linear*

functional of the density

- August 2008 JSM. (Denver, U.S.) Invited conference on *Combining expert knowledge in prior elicitation*
- July 2008 ISBA (Hamilton Island, Australia) Invited conference on *Combining expert knowledge in prior elicitation*
- May 2008 SFDS-SSC meeting (Ottawa, Canada) Invited conference on *Rates of convergence under partially improper priors*
- January 2008 AGROSTAT. Invited conference on *Combining expert knowledge in prior elicitation*
- *C-AFF : *Poster in a national or international congress::*
- Valencia Meeting, 2010 *Asymptotic properties of the posterior distribution under overspecified mixture models*

• Raphaël Roux

- *C-COM : *Lecture without proceeding in a national or international congress:*
- Exposé au colloque "Probabilistic methods in kinetic theory", Marseille, 2-5 mai 2011

• Robin Ryder

- *C-INV : *Invited Conferences in a national or international congress :*
- Août 2008: Conférence IECASP, Bergen, Norvège
- *C-COM : *Lecture without proceeding in a national or international congress:*
- Août 2011 : Joint Statistical Meetings, Miami, Etats-Unis
- Août 2010 : Greek Stochastics beta, Lefkada, Grèce
- Octobre 2007 : Atelier LERN/ CECD, Londres, Royaume-Uni
- Août 2007 : ICHL 18, Montréal, Canada
- *C-AFF : *Poster in a national or international congress::*
- Juin 2012 : ISBA, Kyoto, Japon
- Mai 2011 : Greek Stochastics gamma, Rethymnon, Grèce

• Julien Salomon

- *C-INV : *Invited Conferences in a national or international congress :*
- Paris, Numerical analysis of the Toolkit method, 16-20.07.08 Control of Physical Systems and Partial Differential Equations.
- Minneapolis, U.S.A, A greedy algorithm for the identification of quantum systems, 02-06.03.09 Coherence, Control, and Dissipation.
- Haifa, Israel, A monotonic algorithm for the optimal control of the Fokker-Planck equation, At the interface of dynamical and statistical cosmology and transport optimization. 22-26.03.09
- St-Petersbourg, C.E.I, Local matching indicators for concave cost transport, 11-15.05.10 Optimization and Stochastic methods for spatially distributed information.
- Sandbjerg, Danemark, Time parallelization for quantum control, 15-18.06.10 PRACCQSYS 2010.
- Pittsburgh, U.S.A, A parallel in time solver for optimal control problems, 12-16.07.10 SIAM Annual Meeting 2010.
- San-Diego, U.S.A, Time parallelization for optimal control problems, 7-11.02.11 20-th International Conference on Domain Decomposition Methods.
- Kos, Grèce, Reduced Basis Method for Parametrized Variational Inequalities e Coupled Problems in Science and Engineering (Coupled 2011). 20-22.06.11

- Berlin, Allemagne, The Bloch Equation : some numerical tools to achieve control., 12-16.09.11 25-th IFIP conference on system modeling and optimization.
- Vienne, Autriche, An optimization scheme for the computation of mean field games equilibria, 30.05-02.06.12 12th Viennese Workshop on Optimal Control, Dynamic Games and Nonlinear Dynamics.
- Rennes, A parallel scheme for optimal control in NMR, 25-29.06.12 21-th International Conference on Domain Decomposition Methods.
- **C-COM : Lecture without proceeding in a national or international congress:*
- Cancun, Mexique, ” A monotonic algorithm for the optimal control of the Fokker-Planck equation ”, 10-12.12.08 47-th IEEE Conference on Decision and Control.
- Shanghai, Chine, ” A greedy algorithm for the identification of quantum systems ”, 48-th IEEE Conference on Decision and Control. 16-18.12.09

• Filippo Santambrogio

**C-INV : Invited Conferences in a national or international congress :*

- Oct 2007, laboratoire Dieudonné, Nice, Micro-Workshop on optimal transportation ;
- April 2008, IPAM UCLA, Numerics and Dynamics for Optimal Transport ;
- July 2008, PIMS UBC Vancouver, Transport, optimization, equilibrium in economics ;
- Nov 2008, SNS Pisa, Optimal Transportation and Applications ;
- May 2009, Conférence SMAI 09, mini-symposium on Optimal Transport.
- Oct 2009, Dieudonné Lab, Nice, Recent Advances in Optimal Transportation and Applications ;

• Eric Séré

**C-INV : Invited Conferences in a national or international congress :*

2007:

- “Mathematical Models of Complex Quantum Systems” (Berlin);
- “International Conference on Variational Methods 2” (Nankai University, Tianjin).

2008:

- Conférence plénière au Second Congrès Canada-France des Sciences Mathématiques;
- “Conference France-Taiwan” (CIRM);
- “Sino-French workshop on PDEs and Applications” (Nankai University);
- AMS-SMS meeting, special session on “Elliptic and parabolic nonlinear PDEs” (Shanghai).

2009:

- “Mathematical Aspects of Quantum Field Theory” (Bordeaux);
- “International Conference on Variational Methods 2” (Nankai University).

2010:

- “Calculus of Variations and Related Topics” (Taiwan);
- “International Conference on Relativistic Effects in Heavy Elements” (Pekin).

2011:

- “Recent advances in Elliptic Issues” (Besançon);
- “8th East China PDE conference” (Xian);
- “Mathematical Methods for Ab Initio Quantum Chemistry” (Nice).

2012:

- “International Conference on Variational Methods 3” (Nankai University, Tianjin);
- “Workshop on Mathematical and Numerical Analysis of Electronic Structure Models” (Pekin);
- “Variational Methods in Mathematical Physics” (Karlsruhe, Allemagne);
- “New Developments in Relativistic Quantum Mechanics and Applications” (Newton Institute, Cam-

bridge);

- “Singular limit problems in nonlinear PDEs” (CIRM).

• François Simenhaus

**C-INV : Invited Conferences in a national or international congress :*

- Workshop YEP IX organisé par Eurandom : Two-dimensional statistical mechanics. 2012.

**C-COM : Lecture without proceeding in a national or international congress:*

- 3rd La Pietra week in Probability, Florence (Italie). Juin 2008
- Colloque Jeunes Probabilistes d’Aussois. Mars 2008.

• Alfonso Sorrentino

**C-INV : Invited Conferences in a national or international congress :*

- Ecole d’automne sur la théorie KAM faible, CIRM, Marseille (France), October 2009.
- Conference: Nice weak KAM methods in Nice, Université de Nice-Sophia Antipolis, Nice (France), February 2009.
- Conference on Stability and Instability in Mechanical Systems: Recent progress and mathematical theory, CRM (Barcelona, Spain), September 2008.

• Mireille Summa

**C-INV : Invited Conferences in a national or international congress :*

- British Classification Society 2009, Gettler Summa ”Editing and Clustering Matrices of times Series”
- ISI 2011, Gettler Summa as discussant of the session ”Learning and Data Science”
- JAIST2010, Gettler Summa ”Mining multimensional and multiple time series: Clustering and Visualization”

**C-COM : Lecture without proceeding in a national or international congress:*

- JDS2008, Gettler Summa & Goldfarb “Homogeneity measurement for functional data clusters”
- JDS2008, Gettler Summa & al. “Modelisation de chroniques sous contraintes : recherche de ressemblances, validation”
- CARME 2010, Gettler Summa & al. ”CD-Clustering”
- CARME 2010, Gettler Summa & al. ”Temporal Textual Data Analysis”
- Conference of the German Classification Society2010,Gettler Summa & al. ”Inference Method after AHC and MCA applied on data of chemotherapy toxicities”
- ICC2011, Gettler Summa & al. ”Validation of Trajectories on Factorial Plans after a Tandem Clustering Approach”

**C-AFF : Poster in a national or international congress::*

- BIOPHARMA2009, Gettler Summa & al. ”Multivariate methodology for the analysis of toxicity and response relationship: a meta analysis of cancer clinical trials”
- American College of Epidemiology, Gettler Summa & al. ’A New Clustering Method for Time Series to Discover Geographical Cancer Trends from 1960 to 2000

• Rabah Tahraoui

**C-INV : Invited Conferences in a national or international congress :*

- Cima, 5-7 novembre 2007, université de Guelma (Algérie) : problèmes de contrôle non locaux, C.N. d'optimalité et programmation dynamique.
- Cima, 7-9 novembre 2010, université de Guelma (Algérie) : comportement asymptotique anisotropique, en espace pour une edp elliptique sous forme non divergente.

- **José Trashorras**

**C-COM : Lecture without proceeding in a national or international congress:*

- "Reconstruction strategies for coarse-grained stochastic lattice systems." Workshop on Mathematical and Computational Methods for Accelerated Molecular, Stochastic and Hybrid Simulation, Heraklion, Crete, Greece, June 25-27, 2007.
- "Sur le coarse-graining de systèmes de particules en interaction sur un réseau" CANUM 2008

- **Gabriel Turinici**

**C-INV : Invited Conferences in a national or international congress :*

- Gabriel Turinici "Numerical approaches for mean field games problems" Workshop on: "Défis Actuels de la Finance " LAGA, Université Paris 13, Nov 12-13, 2009
- G. Turinici "Numerical and Theoretical Approaches in Quantum Control" invited lecture in the conference "Mathematics Analysis and Control in Chemical Physics and Related Systems", University of Nevada, Las Vegas, USA, December 14-17, 2010
- G. Turinici "Multi-polarization quantum control of rotational motion" invited lecture in the Workshop "Quantum Control" IHP, Paris Dec. 8-11, 2010
- G. Turinici "Liquidity sources: hedging and biased estimates" at the conference Frankfurt MathFinance Conference Derivatives and Risk Management in Theory and Practice 14-15 March 2011, Frankfurt, Germany
- G. Turinici "Multipolarization quantum control of rotational motion" at the workshop Quantum Control, April 4-9, BIRS, Banff, Alberta CANADA
- G. Turinici "Numerical approaches for MFG" invited lecture at the workshop MEAN FIELD GAMES AND RELATED TOPICS Rome, May 12-13, 2011
- G. Turinici "Interpolation and reduced basis for scenario-dependent function" at the WORKSHOP JLL-SMP: "REDUCED BASIS METHODS IN HIGH DIMENSIONS" Paris, June 2011
- G. Turinici "Nonlinear control: from quantum control to mean field games" invited lecture at the The Seventh Congress of Romanian Mathematicians, June 29th-July 5th 2011, Brasov, Romania,
- G. Turinici "An equilibrium mean field games model of transaction volumes" invited talk at Conference at the "Workshop on Control and Optimisation of PDEs", Graz Oct 10th-14th 2011

- **Vincent Vargas**

**C-INV : Invited Conferences in a national or international congress :*

- Oberwolfach: Workshop on Stochastic Analysis: 2011-05-29 - 2011-06-04.

- **Francois-Xavier Vialard**

**C-AFF : Poster in a national or international congress::*

- MICCAI 2010.

- **Guillaume Viger**

- **C-COM : Lecture without proceeding in a national or international congress:*

- ”Stochastic Methods in Game Theory”, Ettore Majorana Centre, Erice, 8-16 September 2010.
 - ”Dynamiques, Optimisation et Apprentissage” Valparaiso 22-26 November , 2010
 - Advances in Optimization and Related Topics, Universitat Autònoma de Barcelona, 29 November-3 December 2010
 - Journées Jeux Dynamiques: temps discret et continu: Banyuls, May 30-June 1, 2011
 - Games Toulouse 2011: Toulouse, September 12-16, 2011
 - Journées du GDR MOA, Guadeloupe, 4-7 June 2012

- **Yannick Viossat**

- **C-INV : Invited Conferences in a national or international congress :*

- Games Toulouse 2011 (2011);
 - Game Theory and Applications (Luminy, 2009).

- **C-COM : Lecture without proceeding in a national or international congress:*

- Journées MODE 2012 (Dijon) et 2010 (Limoges);
 - AlgoGT 2011: Workshop on Algorithmic Game Theory (Grenoble);
 - UECE Lisbon Meetings 2009 ; Journée ”Jeux et Telecoms” (Supelec, 2009);
 - divers séminaires (à Londres, Valence (Espagne), Grenoble, Lille,...)

- **Olivier Wintenberger**

- **C-INV : Invited Conferences in a national or international congress :*

- Dependence in Probability and Statistics, CIRM, Marseille, France, 2011
 - Statistical models for financial data III, TUG, Graz, Autriche, 2012
 - The Mathematics and Statistics of Quantitative Risk Management, MFO, Oberwolfach, Allemagne, 2012

- **C-COM : Lecture without proceeding in a national or international congress:*

- Prediction of time series and non stationary time series, MSE, Paris, France, 2012
 - CFE’11, Londres, Royaume-Uni, 2011
 - EMAC, Sydney, Australie, 2011
 - Non-Stationarity and some applications, UCP, Cergy, France, 2011
 - Dependence in Probability and Statistics, CIRM, Marseille, France, 2011
 - WG Risk, ESSEC, Cergy, France, 2011
 - CFE’10, Londres, Royaume-Uni, 2010
 - Rencontres Statistiques Mathématiques, CIRM, Marseille, France, 2009
 - EMS 2009, Toulouse, France, 2009
 - Graybill VIII - 6th International Conference on Extreme Value Analysis, Fort Collins, USA, 2009
 - Journées de la SFDS, Bordeaux, France, 2009
 - Journées de Probabilités 2008, Lille 1, Lille, France, 2008
 - Journées de la SFDS, Ottawa, Canada, 2008
 - IMS-ASA Joint Statistical Meetings, Salt Lake City, USA, 2007

- **C-AFF : Poster in a national or international congress::*

- Colloquium on Time series analysis, Graz, Autriche, 2007

5 Appendix. Scientific influence

5.1 Some key facts

- The CEREMADE is actively cooperating with many universities all around the world. 152 foreign researchers have been visiting CEREMADE for at least one week during last five years. The laboratory is participating to non-european (ECOS, MathAmSud, PICS) and european projects held by the Ministry of Foreign Affairs (Procope, Amadeus, Picasso, Polonium, Galilée). Many national and international conferences have been organized by members of the CEREMADE (118 participations to organizing committees and 24 to scientific committees).
- Some colleagues at CEREMADE have been distinguished by prestigious prizes: P.-L. Lions just got the INRIA Grand prix, F. Forges got the CNRS Silver Medal in 2009 and L. Cohen the Grand prix EADS of the french Academy of Sciences in 2009. S. Olla (2010), P. Bernard (2012) and G. Peyré (2012) were awarded ERC Grants. P. Bernard has been invited to deliver a plenary lecture at the International Congress of Mathematicians in 2010. CEREMADE counts four IUF members: two junior: P. Bernard (2007) and S. Mischler (2010), and two senior: C. Robert (2010) and F. Forges (2011). P.-L. Lions is professor at Collège de France and member of the French Academy of Sciences.
- E. Jouini is scientific director of Institut Europlace de Finance and Research Vice-President at Université Paris-Dauphine. M. J. Esteban was President of SMAI (2009-2012) and is Chairperson of the committee of applied mathematics at EMS. P.-L. Lions sits on the High Council for Science and Technology (which has 20 members); E. Jouini has sat on this Council in 2006-2009. J. Dolbeault is the director of the Fondation des Sciences Mathématiques de Paris. I. Catto is vice-dean of education of the PRES PSL Research University. 15 ANR projects are currently managed at CEREMADE, including 11 coordinated by CEREMADE members, and 3 members of CERELADE have an ERC projects. Some members of CEREMADE participate or have participated during the period in boards of scientific expertise: ANR, AERES, EMS, ERC, NSF, national science agencies from Canada, Finland, Italy, Sweden, Switzerland.
- Members of CEREMADE sit on editorial boards of 62 international peer-reviewed journals as
 - chief editors : Annales Henri Poincaré-Analyse Non Linéaire, Applied Mathematics, Colloquium Mathematicum, Journal de Mathématiques Pures et Appliquées, Journal of the Royal Statistical Society Series B, JSFds-RSA , Mathematics and Financial Economics;
 - associate editors : Abstract and applied Analysis, Annals of Probability, Annals of the Institute of Statistical Mathematics, Annals of Statistics, ANZJS, Bayesian Statistics, Chance, Electronic Journal of Statistics, Finance and Stochastics, JASA, Mathematics and Financial Economics, Sankhya, SIAM Journal on Imaging Science, Statistical Science, Test, Tomacs;
 - members of editorial boards : Advances in Mathematics for Applied Sciences, Advances in Differential Equations, Annales de l'Institut Henri Poincaré, Archives for Rational Mechanics and Analysis, Asymptotic Theory, Bulletin of the Brazilian Mathematical Society, Chinese Annals of Mathematics, Comptes-Rendus de l'Académie des Sciences, COSMOS (Journal of the Singapore National Academy of Science), Differential and Integral Equations, Dynamic Games and Applications, Dynamic Systems and Applications, Economic Theory, Electronic Journal of Differential Equations, Finance, Finance and Stochastics, International Journal of Differential Equations and Applications, International Journal of Game Theory, International Journal of Pure and Applied Mathematics, International Journal for Computational Vision and Biomechanics, Journal of Mathematical Imaging and Vision, Mathematical Control and Related Fields, Mathematical Modelling : Theory and Applications, Mathematical Models and Methods for Applied Sciences, Mathematical Research Letters, Mathematics In Action, Medical Image Analysis, Networks and Heterogeneous Media, Nonlinear Analysis Forum, Numerical Algorithms, Numerische Mathematik, Partial Differential Equations, Probability Theory and Related Fields, Proceedings of the Royal Society of Edinburgh, Revista Matematica Iberoamericana, Ricerche di Matematica, SIAM Journal of Control and Optimization, SIAM Journal of Mathematical Analysis, Zeitschrift für Analysis und ihre Anwendungen.

5.2 Individual contributions

• Fadoua Balabdaoui

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : ANR, avec Judith Rousseau. Theme: Détermination des propriétés asymptotiques des estimateurs bayésiens semi-paramétriques.

**Participation to editorial boards*: Editeur Associe de Electronic Journal of Statistics

• Jean-Philippe Bartier

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : – Projet Procope (coopération franco-allemande)

– Projet Amadeus (coopération franco-autrichienne)

– Projet Ecos (coopération franco-chilienne)

– ANR Inégalités fonctionnelles : probabilités et équations aux dérivées partielles (IFO).

– ANR CHANT : équations Cinétiques et Hyperboliques : Aspects Numériques, Théoriques, et de modélisation.

• Ibtihel Ben Gharbia

**Regular collaborations with other laboratories*: Projet Pomdapi-INRIA Rocquencourt

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : GDR MOMAS (Modélisations Mathématiques et Simulations Numériques liées aux problèmes de gestion des déchets nucléaires)

• Imen Ben Tahar

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : ANR croyances

• Patrick Bernard

**Organization of conferences with national or international impact*: Rencontres KAM faibles a Calvi.

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : ANR KAM faible (fin en 2012)

**Management of a network (ANR, GDR, etc.)* : ERC starting grant: Symplectic aspects of Weak Kam Theory. (a partir de septembre 2012)

**Awards and honors*: – Invitation ICM 2010,

– IUF junior(2007),

– ERC Starting grant (2012).

**Participation in boards of scientific expertise*: Comité de direction de PGSM

• Patrice Bertrand

**Regular collaborations with other laboratories*: – Depuis 5 ans, collaboration avec Pierre Duchet (CNRS, Paris 6). Des exposés dans des conférences nationales ou internationales ont été présentés (le dernier ayant été présenté au séminaire de mathématiques discrètes MDOD à Paris : P. Bertrand & P. Duchet, "Orientations transitives de graphes et intervalles : du local au global", 18 mai 2010. Des publications

sont en préparation.

– Collaboration avec Jean Diatta (université de la Réunion) : deux séjours de 20 jours (2010 et 2011) à Saint-Denis, dont un séjour invité et un autre dans le cadre du projet RCI-GS(projet Feder). Un manuscrit est soumis pour publication et un autre est en préparation).

– Collaboration avec Francisco de Assis Tenorio de Carvalho (Centro de Informatica Cin, Universidade Federal de Pernambuco). Un séjour invité de 17 jours environ à Recife en avril 2012. Un manuscrit est en préparation (un preprint a été mis en ligne).

**Organization of conferences with national or international impact*: Co-organisateur du "Workshop on Data Analysis and Classification in honor of Edwin Diday", Conservatoire National des Arts et Métiers, Paris, France, September 4th, 2007.

**Participation to editorial boards*: Co-éditeur scientifique invité pour 9 textes du numéro 52 du journal CSDA (2008).

**Participation in scientific committees of conferences and congresses*: – ACKE 07,

– CLADAG 2007,

– COMPSTAT 2008 et 2010,

– IASC 07,

– MSDM 2009,

– ISSPA 2010,

– SFC 2004, 2005, 2007, 2010, 2011 et 2012,

– IFCS 2009.

• Solène Bienaise

**Organization of conferences with national or international impact*: Membre du comité organisateur de SLDS 2012 (Symposium on Learning and Data Science)

• François Bolley

**Regular collaborations with other laboratories*: – Institut Camille Jordan, Univ. Lyon 1, Dép. de mathématiques,

– Univ. Clermont-Ferrand 2, Institut de mathématiques,

– Univ. Toulouse 3.

**Organization of conferences with national or international impact*: – Co-organisation d'une session cinétique au congrès Siam-Rsme-Scm-Sema à Barcelone (juin 2010),

– Co-organisation du congrès " Evolution equations" à Hamammet (mai 2010), "Evolution equations in social sciences" à l'Université de Toulouse 1 (septembre 2010),

– Co-organisation du congrès "Optimal transport to Orsay" à l'Université de Paris-Orsay (juin 2012)

– Co-organisation du congrès en l'honneur de C. Villani à l'ENS Paris (janvier 2011)

– Co-organisation du congrès à la mémoire de C. Cercignani à l'Institut H. Poincaré (février 2011).

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : Membre des réseaux ANR "Equations d'évolution" (2009-12, responsable: D. Bakry) et "Comportement collectif et diffusion " (2009-12, responsable: J. Dolbeault)

• Bruno Bouchard

**Organization of conferences with national or international impact:* – Conférence “New advances in Backward SDEs for financial engineering applications” Tamerza, 2010, coorganisation.
– “European summer school in mathematical finance”, coorganisation depuis 2007, organisateur principal de la session 2012.

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :* – ANR “Croyances”,
– ARN Jeunes Chercheurs “Liquirisk”.

**Participation to editorial boards:* Editeur associé de la revue Finance and Stochastics

• Luciano Campi

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :* – Chaire EDF “Developpement durable”, ANR “Croyances”,
– Chaire Groupama “Le particulier face au risque”.

**Awards and honors:* Europlace Institute of Finance (EIF) Prize for the best paper in mathematical finance 2009

• Pierre Cardaliaguet

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :* – ANR JEUDI (ANR-10-BLAN-0112),
– ANR KAMFAIBLE (BLAN07-3-187245),
– ANR MICA (ANR-06-BLAN-0082), GDR 2932 “Théorie des Jeux: modélisation mathématique et applications”, GDR 3273 “Mathématiques de l’optimisation et applications”.

**Management of a network (ANR, GDR, etc.) :* co-responsable du GDR 2932 “Théorie des Jeux: modélisation mathématique et applications”

**Participation to editorial boards:* – IJGT (international journal of game theory),
– DGAA (dynamic games and applications).

• Guillaume Carlier

**Participation in collaborative research projects:* – Collaboration Pise-Dauphine (depuis 2008),
– Al-Maqdisi Project (CEREMADE-Bir Zeit University) 2012-2013.

**Regular collaborations with other laboratories:* Nombreuses visites et collaborations avec le laboratoire de Mathématiques de Pise.

**Organization of conferences with national or international impact:* – Juillet 2008: congrès transport optimal et économie à UBC (Vancouver),
– Juillet 2009: congrès transport optimal et économie aux Mines de Paris
– Juin 2012: Optimal transport to Orsay.

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :* – ANR Otarie (Nice-Observatoire-Dauphine-Moscou),
– ANR EVAMEF (Dauphine-Toulouse), GDR MOA (Mathématiques de l’optimisation et applications).

**Management of a network (ANR, GDR, etc.)* : Co-responsabilité scientifique du GDR MOA de 2009 à 2011.
 **Awards and honors*: PEDR depuis 2004
 **Participation in scientific committees of conferences and congresses*: – Président du comité scientifique des journées MODE 2012,
 – membre du comité scientifique de SMAI 2009.
 **Participation in boards of scientific expertise*: Evaluator pour: ANR, AERES, SNF (Suisse), NSF (USA), NSERC (Canada).

• **Roberto Casarin**

**Awards and honors*: Received the Italian Economics Society (SIE) Award as best PhD Thesis 2004.

• **Isabelle Catto**

**Participation in collaborative research projects*: – Membre du projet ECOS No. C02E09 *Opérateurs maximaux, équations d'ordre 4 et dérive-diffusion* (2006–2008)
 **Regular collaborations with other laboratories*: – Universidad Granada : plusieurs séjours d'une semaine (fév. 2011, juil. 2010) sur invitation de J. Soler
 – Pontifica Universidad Catolica de Chile, Santiago du Chili, séjour de 2 semaines en août 2007, sur invitation de R. Benguria.
 **Organization of conferences with national or international impact*: – Mini-workshop 0707a *Multiscale and Variational Methods in Material Science and Quantum Theory of Solids*, Oberwolfach, 11–17 février 2007. Co-organisation avec Isaac Vikram Chenchiah, Johannes Zimmer et Ivan Veselíc.
 **Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : – Responsable local et membre du GDR *Dynamique Quantique* depuis 2009

• **Pierre Cazes**

**Participation to editorial boards*: – Rédacteur en chef du JSFds-RSA en 2007-2008
 – Rédacteur en chef adjoint de la revue : Statistique et Enseignement de la SFdS du 01-01-2009 au 31-10-2011 et membre du comité éditorial de cette revue

• **Laurent Cohen**

**Organization of conferences with national or international impact*: Comité d'organisation: Mathematics and Image Analysis 2009 et Mathematics and Image Analysis 2012, Paris.
 **Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : – GDR MSPC, GDR ISIS.
 – Projet FIRST,
 – ANR SURF, ANR PNANO, ANR NATIMAGES, ANR MESANGE.
 **Management of a network (ANR, GDR, etc.)* : Coordinateur ANR MESANGE.
 Directeur GDR MSPC jusqu'en 2009, membre du comité directeur depuis.
 **Awards and honors*: – Lauréat 2009 d'un Grand Prix de l'Académie des Sciences: Prix de la Fondation d'entreprise EADS (sciences de l'information), pour l'ensemble des contributions sur les modèles

déformables et leurs applications en imagerie biomédicale.

– IEEE Fellow 2010 for contributions to computer vision technology for medical imaging.

**Participation to editorial boards:* – Journal of Mathematical Imaging and Vision (Springer),

– Medical Image Analysis (Journal),

– Machine Vision and Applications (Journal),

– International Journal for Computational Vision and Biomechanics

**Participation in scientific committees of conferences and congresses:* – First International Conference on Scale Space Methods and Variational Methods in Computer Vision (SSVM), Ischia, Italy, May 30 - June 2, 2007.

– Sixth International Workshop on Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR'07), Lotus Hill Institute, China 2007.

– 11th IEEE International Conference on Computer Vision ICCV 2007, Rio de Janeiro, Brazil, 14-21 October 2007,

– 3rd International Conference on Computer Vision Theory and Applications, VISAPP'08, 22 - 25 January, 2008 Funchal, Madeira - Portugal.

– RFIA 2008 15ème Congrès Francophone AFRIF-AFIA de Reconnaissance des Formes et Intelligence Artificielle Amiens, France, 22-25 Janvier, 2008.

– IEEE Conference on Computer Vision and Pattern Recognition Anchorage, Alaska, June 24-26, 2008.

– European Conference on Computer Vision, ECCV 2008 Marseille, France, October 12-18, 2008.

– 19th IAPR/IEEE International Conference on Pattern Recognition ICPR 2008, Tampa, Florida, USA, December 8-11, 2008.

– International Conference on Imaging Theory and Applications, IMAGAPP 2009.

– International Conference on Computer Vision Theory and Applications - VISAPP, 2009.

– CompIMAGE'2010 Symposium - Computational Modeling of Objects Represented in Images: Fundamentals, Methods and Applications Buffalo, NY, May 5-7th, 2010.

– International Conference on Imaging Theory and Applications, IMAGAPP 2010.

– European Conference on Computer Vision, ECCV 2010, Greece, September 2010.

– MICCAI'2010.

– ACCV'2010 , Asian Conference on Computer Vision, New Zeland, November 2010.

– SSVM'2011 Israel, May-June 2011.

– IEEE Sibgrapi'2011 Brazil, August 2011.

– CompIMAGE'2012 Conference - Computational Modeling of Objects Represented in Images: Fundamentals, Methods and Applications Rome (Italy) from 5th to 7th of September 2012.

– 8th bi-annual conference on Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR 2011).

– VipIMAGE2011 - 3rd ECCOMAS Thematic Conference on Computational Vision and Medical Image Processing, Portugal, October 2011.

– International Conference on Computer Vision Theory and Applications - VISAPP 2012, Rome (Italy), 24-26 february, 2012.

• Rose-Anne Dana

**Organization of conferences with national or international impact:* – Workshop Multivariate and Dynamic risk (co A. Galichon) IHP, sept. 09

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :* – ANR Croyance

– ANR risk

- Chaire Les particuliers face au risque
- **Management of a network (ANR, GDR, etc.)* : – Coordinateur ceremade ANR Croyance
- ANR risk
- Organisatrice du seminaire de la chaire «Les particuliers face au risque
- **Participation to editorial boards*: – Éditeur associé de la revue "Mathematics and Financial Economics" depuis 2007.
- Coéditeur de la revue "Macroeconomics Dynamics" depuis 2000.
- Coéditeur de Finance and Stochastics de 2008-11
- **Participation in boards of scientific expertise*: ANR Italienne

• Emmanuel Denis-Lépinette

- **Organization of conferences with national or international impact*: Workshop Paris-Dauphine 2010

• Jean Dolbeault

- **Regular collaborations with other laboratories*: liste non exhaustive, 5 dernières années:
 - TU Wien (Autriche), Université de Vienne (Autriche), Université Toulouse 1, Université Toulouse 3, Université d'Evry, PUC (Chili), UChile (Chili), Université de Wrocław, Université autonome de Madrid (Espagne), Université autonome de Barcelone (Espagne), Universidad del Pais Vasco (Espagne), Université de Crète (Grèce), Université de Lyon 1, Politecnico di Torino (Italie), Politecnico di Milano (Italie), Université de Rome 1 (Italie), Université de Rome 3 (Italie), Imperial College (UK), Université de Cambridge (UK), Université de Cergy-Pontoise, Georgia Tech (USA), Cermics ENPC, Université de Nantes, Université de Pavie (Italie), Université de Grenade (Espagne), Beijing Normal University (Chine), Université de Buenos Aires (Argentine)
- **Organization of conferences with national or international impact*:
 - 4-6/6/2007 Co-organisation du workshop "Functional Inequalities: Probability and PDE's" Université Paris-X Nanterre (ANR IFO)
 - 19/7/2007: Co-organisation du "Workshop on nonlinear PDE's and applications to biology and physics", CAPDE et Université du Chili
 - 26/9/2008: Premier workshop EDPs UAM - Paris-Dauphine (Collegio de España, Paris): "Mathématiques franco-espagnoles au Collège d'Espagne"
 - 27-28/1/2009: Second workshop EDPs UAM - Paris-Dauphine (UMA, Madrid)
 - 21-26/6/2009: Workshop on Theory and Applications of Classical and Quantum Kinetic Theory, BIRS, Banff, Canada.
 - 6-7/10/2009: Workshop Concentration en vitesse et en espace dans les modèles cinétiques et diffusifs (chemotaxis, gravitation, swarming), ANR CBDif (Institut Henri Poincaré, Paris).
 - 9-14/5/2010: Workshop on Nonlinear Diffusions and Entropy Dissipation: From Geometry to Biology, BIRS, Banff, Canada.
 - 12-13/1/2012: Workshop Functional Inequalities and PDE in the Life Sciences (Avec P. Markowich).
- **Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : ANR Accquarel, IFO, EVOL, NoNAP et participation à de nombreux projets bilatéraux:
 - Pays: CHILI, Unité partenaire: PUC, Santiago, Chili, Intitulé: Contrat no. C02E06 (co-responsable avec E. Séré): Equations aux dérivées partielles de la physique mathématique, Cadre de la coopération: MAE - ECOS Sud, Organisme partenaire: ECOS-CONYCIT (coopération franco-chilienne)
 - Pays: AUTRICHE, Organisme partenaire: Univ. Vienne, Unité partenaire: WPI, Intitulé: Projet Amadeus (coopération franco-autrichienne). Contrat no. 05538SB (responsable): Kinetic modelling in stellar physics, charged particles physics and mathematical biology, Cadre de la coopération: MAE - Programme d'actions intégrées

- Pays: AUTRICHE, Organisme partenaire: Technische Universität, Intitulé: Partenariat Hubert Curien Amadeus (coopération franco-autrichienne) no. 13785UA (participant) Advanced entropy methods for applied PDEs, Cadre de la coopération: MAE - Programme d'actions intégrées
- Pays: AUTRICHE, Organisme partenaire: Technische Universität, Intitulé: Partenariat Hubert Curien Amadeus (coopération franco-autrichienne) no. 22978WA (participant) Long-time asymptotics for evolution equations in chemistry and biology, Cadre de la coopération: MAE - Programme d'actions intégrées
- Pays: ESPAGNE, Organisme partenaire: ICREA, Intitulé: Partenariat Hubert Curien Picasso (coopération franco-autrichienne) no. 13702TG (participant) Advanced entropy methods for applied PDEs, Cadre de la coopération: MAE - Programme d'actions intégrées
- Pays: ESPAGNE, Organisme partenaire: Univ. Autonome de Barcelone, Intitulé: Partenariat Picasso (coopération franco-espagnole) (participant) Long-time asymptotics for evolution equations in chemistry and biology, Cadre de la coopération: MAE - Programme d'actions intégrées
- Pays: POLOGNE, Organisme partenaire: Univ. Wroclaw, Intitulé: Partenariat Hubert Curien Polonium (coopération franco-plonaise) no. 13886SG (responsable) Entropy methods in nonlinear evolution equations, Cadre de la coopération: MAE - Programme d'actions intégrées
- Pays: POLOGNE, Organisme partenaire: Univ. Wroclaw, Intitulé: Partenariat Hubert Curien Polonium (coopération franco-plonaise) no. 20078TL (participant) Nonlinear evolution equations with anomalous diffusions, Cadre de la coopération: MAE - Programme d'actions intégrées
- **Management of a network (ANR, GDR, etc.)* : – ANR ANR Collective behaviour & diffusion (CBDif-Fr)
- Nonlinear Analysis and Partial Differential Equations (NAPDE), a MathAmSud project (2009-2012) with main teams at Université Paris-Dauphine, INRIA, Santiago (Chile), IMPA (Brazil) and Buenos Aires (Argentina).
- **Participation to editorial boards*: Editeur de Colloquium Mathematicum, Editeur invité de Kinetic and Related Models pour le volume dédié à N. Ben Abdallah
- **Participation in boards of scientific expertise*: ERC et nombreux journaux scientifiques

• Sophie Donnet

- **Participation in collaborative research projects*: – Depuis 2011 : Membre du projet ANR Calibration. Coordinateur : Vincent Rivoirard
- Depuis 2011 : Membre de l'équipe ORIO (Observatoire des Réseaux Intra- et Inter-Organisationnels), laboratoire IRISSO, Université Paris-Dauphine
- Depuis 2010 : Membre du projet ANR Bandhit sur *Statistiques bayésiennes non-paramétriques*. Coordinateur : Judith Rousseau
- Since 2009 : Membre du projet ANR BigMC sur *Méthodes de Monte Carlo en grande dimension*. Coordinateur : Gersende Fort
- **Regular collaborations with other laboratories*: – MAP5 (Adeline Samson, Avner Bar Hen)
- INAPG (Pierre Barbillon)
- **Other*: Referee pour Computational Statistics & Data Analysis , Annals of Statistics, Biometrical Journal, Biometrics, Australian and New Zealand journal of statistics, Bernoulli Journal...

• Lassad El Moubarki

- **Participation in collaborative research projects*: participation au projet PHC UTIQUE (num. 20852RJ (code= 09G1419)) - Domaine : fouille de données.
- **Regular collaborations with other laboratories*: Collaboration avec le laboratoire de recherche opérationnelle et d'aide à la décision de l'ISG de Tunis dans le cadre de ma thèse (2006-2009) qui a été encadrée en co-

tutelle. Encadrants scientifiques : P. Bertrand (Ceremade) et G. Bel Mufti (ESSEC Tunis).

- **Romuald Elie**

- **Regular collaborations with other laboratories:* Collaborations avec le laboratoire de mathématiques d'Evry, France; et avec l'Imperial College, London.

- **Organization of conferences with national or international impact:* One-day workshop on mathematical finance, 2008

- **Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : Participation a l'ANR RISK portée par Elyes JOUINI

- **Management of a network (ANR, GDR, etc.)* : Porteur de l'ANR Jeune Chercheur LIQUIRISK (2011-2015)

- **Maria J. Esteban**

- **Participation in collaborative research projects:* Projet ECOS-CONYCIT (coopération franco-chilienne) no. C02E08: Limites singulières et équations elliptiques

- **Regular collaborations with other laboratories:* School of Mathematics - Georgia Tech University

- **Organization of conferences with national or international impact:* – Organisatrice de la “Consensus Conference” of the Forward Look de l'ESF “Mathematics and industry”, Madrid, Avril 2010.

- Organisation (avec B. Kawohl et A. Cianchi) du workshop “Optimal Constants in the Theory of Sobolev Spaces and PDEs”, Oberwolfach (Allemagne), février 2010.

- Organisation (avec N. Bellomo) d'un mini-symposium SIMAI-SMAI sur la modélisation du cancer dans Euroscience Open Forum (ESOF 2010), Torino, 2010.

- Membre du comité d'organisation des Journées sur transfert et mathématiques industrielles de la R.S.M.E. - Saint Jacques de Compostelle, Espagne.

- Organisation (avec M. Brown, K. Schmidt et H. Siedentop) du Programme thématique “Spectral theory of relativistic operators” au Newton Institute, Cambridge, 2012.

- **Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : – ANR NONAP (2010-2014).

- Projet ANR ACCQUAREL (2004-2009).

- Membre des GDR GREFI-MEFI (2876), AEDP (2434).

- **Management of a network (ANR, GDR, etc.)* : Co-responsable de l'ANR NONAP

- **Awards and honors:* – Conférence 'Ladyzhenskaya' à l'université de Leipzig, Avril 2008.

- Conférence invitée au Congrès Européen de Mathématiques, Amsterdam, 2008.

- **Organizations/Invitations to non-academic scientific events:* – Cérémonie des prix en mathématiques et informatique (avec Académie des Sciences et INRIA)

- 2 conférences internationales dans le cadre du Forward Look en mathématiques industrielles en Europe.

- **Participation to editorial boards:* – Co-éditrice en chef (avec E. Séré) des it Annales de l'Institut Henri Poincaré - Analyse non-linéaire.

- Membre de l'équipe éditoriale du it SIAM Journal of Mathematical Analysis et de l'it Electronic Journal of Differential Equations.

- **Participation in scientific committees of conferences and congresses:* – Membre du comité de programme de la 2013 SIAM conference on materials' science.

- Membre du comité scientifique ou de programme du projet OxPDE de l'Université d'Oxford et du séminaire d'Analyse Paris-London.

- Membre du comité du programme scientifique des congrès ICIAM 2011, CEDYA 2009, CEDYA 2011, QMath11 (Hradec Kralove, Tchequie, 2010), de l'Abel Symposium 2010, du 10è Forum des jeunes mathématiciennes (femmes et maths - Mission pour la place des femmes du CNRS) et du "Euskadi-Kyushu

Workshop on Applied Mathematics” (Euskadi-Kyushu 2011), Forum des jeunes mathématiciennes 2010 et du EMS-RESME joint Mathematical Weekend in 2011 (Bilbao).

**Participation in boards of scientific expertise:* – Comité national du CNRS 2004-2008),
– ERC Panel pour les advanced grants en mathématiques (panel PE1) ((2008, 2010, 2012),
– Evaluation de la recherche mathématiques en Suède et en Italie

**Other:* – Présidence de la SMAI (Société de Mathématiques Appliquées et industrielles): 2009-2012
– Chair du comité de mathématiques appliquées de la Société mathématique européenne
– Membre du Conseil Scientifique et l’Ecole Nationale des Ponts et Chaussées
– Membre du comité d’administration de l’Université Paris-Dauphine et de la Fondation Dauphine.

• David Ettinger

**Awards and honors:* Major premier concours externe d’agrégation d’économie

• Jacques Fejoz

**Regular collaborations with other laboratories:* IMCCE (Observatoire de Paris), Penn State University, University of Maryland

**Organization of conferences with national or international impact:* – Dynamique et EDP (CIRM, 11/2012)
– Workshop on Instabilities in Hamiltonian systems (Fields Institute, Toronto, 12-17/6/2011)
– Journée Dynamique Paris VI-Paris VII (IMJ, 19/11/2010)
– Colloque Géométrie et Dynamique, Marc Chaperon 60 ans (IHP, 11-16 janvier 2010)
– Colloque Paulette Libermann (IHP, 7-12 décembre 2009)

– Rencontres internationales de Mécanique céleste à l’Institut H. Poincaré (11-20/12/2007)

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :* – Projet ANR Kam Faible (A. Fathi)
– Projet ANR Dyn PDE (L. Stolovitch)

**Organizations/Invitations to non-academic scientific events:* – Salon des jeux mathématiques (2007, 2011)

– Nuits de l’Observatoire (2009)

**Participation in scientific committees of conferences and congresses:* – Dynamique et EDP (CIRM, 11/2012)

– Workshop on Instabilities in Hamiltonian systems (Fields Institute, Toronto, 12-17/6/2011)

– Journée Dynamique Paris VI-Paris VII (IMJ, 19/11/2010)

**Other:* Rédaction de notices scientifiques dans l’agenda de l’IMCCE

• Jean-Baptiste Fiot

**Regular collaborations with other laboratories:* Collaboration avec le CSIRO, Brisbane, Australie

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :* Presentation lors d’un GT - GDR ISIS (mai 2012)

**Awards and honors:* VIPimage 2011 - Best student paper award

• Danielle Florens

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :* Chaire EDF ” Développement Durable”.

- **Nicolas Forcadel**

- **Regular collaborations with other laboratories:* – Collaboration avec l'équipe COMMANDS de l'INRIA
- Collaboration avec le CERMICS de l'Ecole des Ponts et Chaussées
- **Organization of conferences with national or international impact:* Organisation de l'école : Introduction to numerical methods for moving boundaries, 12-14 Novembre 2007, ENSTA.
- **Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :*
- Membre du projet européen SADCO Sensitivity Analysis for Deterministic Controller Design (Marie Curie Initial Training Network), 2011-2014
- Membre de l'ANR AMAM Asymptotic Methods Applied to Materials science, 2011-2014
- Membre de l'ANR IDEE "Interfaces Dynamics in Evolution Equations", 2011-2014
- Membre de l'ACI "Dynamique des dislocations" 2004-2008
- Membre de l'ANR MICA "Mouvements d'Interfaces, Calcul et Applications" 2006-2010
- Membre du projet "Galilée no 14639PG (2007)" (coopération franco-italienne)
- **Awards and honors:* Prix de thèse ENPC en 2007

- **Francoise Forges**

- **Organization of conferences with national or international impact:* – Co-organisateur de l'atelier "Recent Advances in Revealed Preference Theory: Testable restrictions in markets and games", Université Paris-Dauphine, 25-26 novembre 2010.
- **Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :* Partenariat franco-espagnol Picasso (Ministère des affaires Etrangères/ EGIDE) avec l'Université de Valence, 2007, 2008.
- **Awards and honors:* Médaille d'argent du CNRS, 2009
- **Participation in scientific committees of conferences and congresses:* – Membre du comité scientifique (impliquant la sélection d'articles et leur organisation en sessions) du 4th World Congress of Game Theory, Istanbul, Juillet 2012.

- **Ivan Gentil**

- **Management of a network (ANR, GDR, etc.) :* Responsable à Dauphine des projets ANR "IFO" et "EVOL"
- **Participation in scientific committees of conferences and congresses:* Organisation de 2 congrès.
- **Other:* J'ai effectué 3 cous post-doctoraux à Lille, Grenoble et Londres

- **Olivier Glass**

- **Organization of conferences with national or international impact:*
- Co-organisateur avec J. Le Rousseau (Orléans), L. Rosier (Nancy) et E. Trélat (Orléans) d'un trimestre à l' I.H.P. à l'automne 2010, sur le thème "Contrôle d'EDP et Applications".
- Co-organisateur du congrès « Control of Physical Systems and Partial Differential Equations », à l'Institut Henri Poincaré, Paris, du 16 au 20 juin 2008
- **Management of a network (ANR, GDR, etc.) :*
- Coordinateur du projet ANR jeunes chercheurs 'ContrôleFlux', 2006-2009,
- Responsable du partenaire parisien du projet ANR blanc 'CISIFS' (2009-),

– Vice-coordonateur du GDR/GDRE 'CONEDP' (Contrôle des équations aux dérivées partielles) depuis 2009,

**Participation to editorial boards:*

- Membre du comité éditorial de Mathematical Control and Related Fields (MCRF) depuis 2011,
- Membre du comité éditorial de SIAM Journal of Control and Optimization depuis 2012.

• Bernard Goldfarb

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : Coordinateur responsable d'un projet déposé dans le cadre de l'appel d'offre européen Erasmus Mundus, associant les Universités La Sapienza (Roma) Rey Juan Carlos (Madrid) Paris-Dauphine

**Participation to editorial boards:* – responsable des traductions en français des résumés de Biometrics – rapporteur (referee) de revues (RAIRO, RSA) et congrès (ASMDA, GfKL)

– Membre du comité éditorial de la page « Excel'Ense » de la revue Modulad

**Participation in scientific committees of conferences and congresses:* Comité scientifique du symposium SLDS2009 (Paris), et du symposium SLDS2012 (Florence)

• Philippe Gravejat

**Participation in collaborative research projects:* Membre du projet ANR Jeunes Chercheurs et Jeunes Chercheuses "Ardypiteq" et du projet ANR blanc "Interface".

**Organization of conferences with national or international impact:* Co-organisation des colloques:

– "Recent progress and perspectives on the Gross-Pitaevskii equation with non-zero boundary conditions" à l'Institut Wolfgang Pauli (Vienne, septembre 2010);

– "Nonlinear dispersive partial differential equations and related topics" à l'Institut Henri Poincaré (Paris, juin 2011);

– "Vortices and solitons for classical and quantum fluids" au Centre International de Rencontres Mathématiques (Marseille, mars 2012).

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : Membre du GDR "Dynamique quantique".

**Management of a network (ANR, GDR, etc.)* : Coordinateur du projet ANR Jeunes Chercheurs et Jeunes Chercheuses "Ardypiteq".

• Massimiliano Gubinelli

**Organization of conferences with national or international impact:*

– Organisation du workshop "Rough paths and SPDEs" April 6-7, 2010. Newton Institute, Cambridge, Royaume Uni.

– Organisation du workshop "Rough paths in interaction", Juin 10-11, 2010. Institut Henry Poincaré, Paris, France.

– Organisation du workshop "Rough Paths and PDEs", Août 2012, Mathematisches Forschungsinstitut Oberwolfach, Allemagne.

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : Membre de l'ANR Magix Mathématiques et géométrie exacte. Projet JC 2009/2012.

**Management of a network (ANR, GDR, etc.)* : Coordinateur de l'ANR ECRU Exploration on Rough Paths. Project Blanc 2009/2012.

**Participation in boards of scientific expertise*: Membre du groupe d'évaluation Mathématique et Statistique du NSERC (agence de la recherche Canadienne).

• **Bénédicte Haas**

**Regular collaborations with other laboratories*: Christina Goldschmidt (Oxford), Victor Rivero (Guanajuato), Grégory Miermont (ENS Lyon)

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : Membre des projets ANR A3, porté par J-F.Delmas, et MADCOF, porté par N.Fournier

• **Boris Haspot**

**Participation in collaborative research projects*: ANR "Maths océano" portée par David Lannes

**Regular collaborations with other laboratories*: Université Paris Est (Frédéric Charve)

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : ANR "Maths océano" portée par David Lannes

• **Matthieu Hillairet**

**Participation in collaborative research projects*:

– 2011-2012 : Membre du projet "Instabilités hydrodynamique" financé par la mairie de Paris (Programme "Emergences") et porté par C. Lacave,

– 2008-2012 : Membre du projet "RUGO" financé par l'ANR et porté par D. Gérard-Varet.

– 2009-2010 : Membre d'un projet franco-allemand Hubert Curien, collaboration avec J. Escher, C. Walker (Université de Hannover) et Ph. Laurençot (Université Toulouse 3)

**Regular collaborations with other laboratories*: 2007-2012 : Collaboration avec P. Wittwer (Département de Physique théorique, Université de Genève)

**Organization of conferences with national or international impact*: Septembre 2007 : Membre du comité d'organisation de la session d'automne du GDR MOAD.

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : 2007-2012 : GDR Analyse des EDPs, CHANT

• **François Huveneers**

**Participation in collaborative research projects*: 2010-2012: European Advanced Grant Macroscopic Laws and Dynamical Systems (MALADY) (ERC AdG 246953).

**Regular collaborations with other laboratories*: – 2007 (5 months): Invited at Helsinki University (Finland) by A. Kupiainen.

– 2011 (1 month): Invited at Courant Institute (USA) by L.-S. Young.

– 2012 (May 2 to May 7): Invited at the University of Cologne (Germany) by W. De Roeck.

• **Vincent Iehlé**

**Management of a network (ANR, GDR, etc.)* : – Chef de Projet - Galilée 2010 (EGIDE et Ministère des

Affaires Etrangères), U. Paris-Dauphine et U. de Salerne (Italie): Transmission et acquisition d'information sur les marchés financiers.

**Participation in communities of scientific programming*: – Membre Participant: ESF Research Networking Programme (2006-2010), Public Goods, Public Projects and Externalities.

**Participation in scientific committees of conferences and congresses*: – Organisateur local du XVIIème European Workshop on General Equilibrium Theory, juin 2008 (Paestum, Italie).

– Co-organisateur de la session "Externalities and Public Choice", Conference SAET, juillet 2009 (Ischia, Italie). avec E. del Mercato.

– Co-organisateur de l'atelier "Recent Advances in Revealed Preference Theory", Université Paris-Dauphine, novembre 2010.

– Co-organisateur de la session "Cooperative Games and Externalities", Conference SAET, juillet 2011 (Faro, Portugal). avec F. Forges.

– Co-organisateur de l'atelier "Recent Advances on Beliefs in Decision Theory", Université Paris-Dauphine, novembre 2011.

• Cyril Imbert

**Organization of conferences with national or international impact*:

– Co-organisateur du colloque "Nonlocal operators and partial differential equations" à Bedlewo, juin-juillet 2010 (Centre Banach)

– Membre du comité scientifique "Nonlocal aspects in PDEs and Applications", Besançon (Mai 2010)

– Organisateur du colloque "Nonlocal operators and partial differential equations" à Bedlewo, juin-juillet 2010 (Centre Banach)

– Organisateur principal d'un workshop de 5 jours à Banff International Research Station (27 avril-2 mai 2008) sur les "opérateurs non-locaux et applications" (autres organisateurs : A. Mellet (Vancouver) et R. Monneau (Ponts et Chaussées))

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* :

– Membre de l'ANR IDEE Dynamique d'interfaces dans les équations d'évolution (JCJC M. Alfaro 2011-2014) (25%).

– Anciens projets : ANR Hamilton-Jacobi et théorie KAM faible (P. Thieullen, 2008-2011) (20%), ANR Equations d'évolution dissipatives et convergence vers l'équilibre (EVOL, D. Bakry, 2009-2011)(20%), ANR Mouvement d'Interfaces, Calculs et Applications (Chambolle, 2006-2010)(40%), Egide -PHC Polonium "Nonlinear evolutions equations with anomalous diffusions" (porteur, 2009-2011)

• Elyès Jouini

**Participation in collaborative research projects*: Directeur scientifique de l'Institut Europlace de Finance (fondation de recherche)

**Organization of conferences with national or international impact*:

– Households Risk and Insurance Workshop, Palais Brongniart, Paris, 2010,

– Dynamic Risk Sharing Workshop, Paris-Dauphine, 2009,

– Liquidity and Risk Management: Lessons from Current Capital Market Experiences, Myron Scholes Conference, Paris-Dauphine, 2008,

– Summer School Perceiving, Measuring and Managing Risk: Illiquidity, Long-Term Risk, Natural Resources, Pacific Institute for Mathematical Sciences, UBC, Vancouver, 2008 (with Ivar Ekeland, Ulrich Horst and Ali Lazrak)

– Inaugural Workshop of the Groupama Chair, Le passage de la mutualisation à un lissage dans le temps des charges, Paris, 2007,

- Risk: Individual and Collective Decision Making Workshop, Paris-dauphine, 2007
- **Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : Membre du réseau Amamef (European Science Foundation)
- **Management of a network (ANR, GDR, etc.)* : Responsable de l'ANR "Croyances" (2007-2010), responsable de l'ANR "Risk" (2011-2014)
- **Awards and honors*:
 - 2007, Titulaire de la chaire Groupama "Les particuliers face aux risques" de la Fondation du risque
 - 2008 Best Paper Award in Finance, Europlace Institute of Finance,
 - 2009 Finance and Sustainability European Research Award (best published article)
 - 2010 Chevalier de la Légion d'Honneur
 - 2012 renouvellement de la Chaire Groupama pour 5 ans

**Participation to editorial boards*:

- Editeur en chef de Mathematics and Financial Economics, Springer-Verlag,
- Membre des comités éditoriaux de Finance, Finance & Stochastics, Revue d'Economie Financière, Revue tunisienne des sciences de gestion, Revue française de gouvernance d'entreprise
- Co-éditeur de la collection "Paris-Princeton Mathematical Finance Seminar" dans la série Lecture Notes in Mathematics, Springer-Verlag,
- Membre du comité éditorial de la collection "Mathematical Modeling: Theory and Applications", Kluwer

**Participation in scientific committees of conferences and congresses*:

- New advances in backward SDEs for financial engineering application, Tamerza, Tunisie, 2010.
- 8th International Workshop on Pension, Insurance and Saving, Palais Brongniart, Paris, 2010.
- 7th International Workshop on Pension, Insurance and Saving, Palais Brongniart, Paris, 2009.
- Workshop Econometrics of Hedge Funds, CREST-ENSAE, Paris, 2009,
- French Finance Association Conference (AFFI) 2007, 2008, 2009.
- International Conference on Stochastic Analysis and Applications, Hammamet, 2007, 2009.
- Workshop Dynamic and Multivariate Risk measures, IHP, Paris, 2008.
- Colloque La responsabilité des dirigeants : quelles protections?, Paris-Dauphine, 2008.
- Colloque Pension and Savings: consequences of longevity risks on pension systems and labor markets, Paris-Dauphine, 2008.
- Workshop on bi-variated risk, health and insurance, Dauphine, 2007.

**Participation in boards of scientific expertise*:

- Membre du Haut-Conseil de la Science et de la Technologie (2006-2009),
- Membre du conseil d'Analyse Economique (2008-2011),
- Membre de la Commission nationale d'évaluation des projets nucléaires et des déchets de long terme (depuis 2008)

**Other*: Membre du Steering Committee du Pôle de compétitivité mondial Finance Innovation, depuis 2007

● **Idris Kharroubi**

**Participation in collaborative research projects*: member of the ANR project LIQUIRISK

● **Hubert Lacoïn**

**Regular collaborations with other laboratories*: Mission longue à l'IMPA Rio de Janeiro. Septembre 2011-Aout 2012.

**Awards and honors*:

Prix de thèse (effectué au LPMA/Université Paris 7):

– Prix de la fondation EADS pour une thèse de Mathématique (2010).

– Prix Perrissin-Pirasset/Schneider de la Chancellerie des universités de Paris (2010).

**Participation in boards of scientific expertise*: Rapporteur pour des articles scientifiques dans diverses revues: Annals of Probability, PTRF, Communications in mathematical Physics, Annales de l’Institut Henri Poincaré...

• Jimmy Lamboley

**Regular collaborations with other laboratories*:

– IRMAR Rennes

– LAMA Chambéry

– Polytecnico di Milano Milan

– IECN Nancy

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : ANR GAOS, 2009-2012

**Participation in boards of scientific expertise*: Rapporteur pour les revues :
Annales IHP Analyse non-linéaire, ESAIM COCV

• Guillaume Legendre

**Regular collaborations with other laboratories*: POEMS UMR 7231 CNRS/ENSTA/INRIA

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : ANR ACCQUAREL, ANR CISIFS, ANR NONAP

**Other*: membre des comités de sélection en section 26 de l’université Paris-Dauphine (2009), de l’université de technologie de Compiègne (2009), de l’université Pierre et Marie Curie (2012) et du conservatoire national des arts et métiers (2012).

• Joseph Lehec

**Organization of conferences with national or international impact*: – 1er octobre 2010: Journée de travail de l’ANR Evol.

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : – ANR Evol

• Pierre-Louis Lions

**Participation in communities of scientific programming*:

– Membre du Haut Conseil de la Science et de la Technologie

– Membre du Comité des Programmes Scientifiques du CNES

**Awards and honors*:

– Juin 2012 : Grand prix de l’INRIA

– Officier de la légion d’honneur

– Docteur honoris causa de Heriot-Watt University (Edimbourg) et de la City University of Hong-Kong

– Membre de l’Académie des sciences de France, d’Argentine, d’Italie, du Brésil

– Membre de l’Istituto Lombardo.

**Organizations/Invitations to non-academic scientific events:* – Membre fondateur du Comité International de l' " International Summer School of Applied Mathematics", Morningside Institute, Chinese Academy of Sciences.

**Participation to editorial boards:*

– Rédacteur en chef de : Journal de Mathématiques Pures et Appliquées, Applied Mathematics
– Membre du comité de rédaction de : Advances in Mathematics for Applied Sciences, Advances in Differential Equations, Annales de l'Institut Henri Poincaré, Archives for Rational Mechanics and Analysis, Asymptotic Theory, Bulletin of the Brazilian Mathematical Society, Chinese Annals of Mathematics, Comptes-Rendus de l'Académie des Sciences, COSMOS (Journal of the Singapore National Academy of Science), Differential and Integral Equations, Dynamic Systems and Applications, International Journal of Differential Equations and Applications, International Journal of Pure and Applied Mathematics, Mathematical Models and Methods for Applied Sciences, Mathematical Research Letters, Mathematics In Action, Networks and Heterogeneous Media, Nonlinear Analysis Forum, Numerical Algorithms, Numerische Mathematik, Partial Differential Equations, Proceedings of the Royal Society of Edinburgh, Revista Matematica Iberoamericana, Ricerche di Matematica, Zeitschrift für Analysis und ihre Anwendungen

**Participation in boards of scientific expertise:*

– Président du jury du prix "Science et Défense"
– Membre de l'International Advisory Board of the Scuola di Dottorato in Scienze Astronomiche, Chimiche, Fisiche e Matematiche "Vito Volterra"
– Membre du Scientific Advisory Panel de l'European Mathematical Society

• Vito Mandorino

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : ANR Kam faible (ANR-07-BLAN-0361)

• Victor Filipe Martins da Rocha

**Regular collaborations with other laboratories:* Escola de Pós-Graduação em Economia, Fundação Getulio Vargas, Rio de Janeiro

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : ANR Croyances

**Participation to editorial boards:* Economic Theory

**Participation in scientific committees of conferences and congresses:* European Workshop on General Equilibrium Theory (2012), University of Exeter

• Katia Meziani

**Regular collaborations with other laboratories:* travaux en collaboration avec des membres du LAMA et du CREST.

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : ANR Bandhit, ANR quantum stat, ANR Calibration

**Other:* reviewer pour des revues avec comité de lecture (EJS, Bernoulli...)

• Jean-Marie Mirebeau

**Awards and honors:*

Prix solennel de la chancellerie des universités de Paris, Perrissin-Pirasset/Schneider, en Mathématiques Fondamentales et Appliquées, pour ma thèse.

Prix de la meilleure thèse de la fondation d'entreprise EADS, en Mathématiques et leurs interactions.

• Stéphane Mischler

**Organization of conferences with national or international impact*: Organisateur de la session “Ecuaciones en Derivadas Parciales y Aplicaciones” du congrès “8th International Conference on Operations Research”, La Habana, Cuba, 25-29 February 2008

Organisateur de l'Ecole d'hiver “PDE and Mathematical Biology”, La Habana, Cuba, 15-19 Février 2010 et de la session “PDE and Mathematical Biology” du congrès “9th International Conference on Operations Research”, La Habana, Cuba, 22-26 Février 2010

Membre du comité scientifique du congrès “10th International Conference on Operations Research”, La Habana, Cuba, 6-9 Mars 2012, et coordinateur de la session “PDE and probability”

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* :

- membre du GDR GRIP de Th. Goudon
- membre du GDR CNRS 2900 ”CHANT” de F. Castella
- Responsable de l'ANR Spinada 2005-2008
- Co-responsable de l'ANR Madcof 2008-2012

**Awards and honors*: Membre junior de l'institut universitaire de France (IUF), promotion Oct. 2010

Prix annuel 2009 de l'Académie des Sciences de Cuba pour l'article *Turing instabilities at Hopf bifurcation* écrit en collaboration avec M. Rodriguez Ricard

• Ludovic Moreau

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : Membre de l'initiative de recherche ”protection financière des agricultures”, Crédit-Agricole Assurances - Université Paris Dauphine Membre de la chaire Finance et développement durable

• Clément Mouhot

**Participation in collaborative research projects*: ANR MADCOF, ERC starting grant

**Organization of conferences with national or international impact*:

- May and July 2011: Organization (with Eric Carlen, Maria Carvalho and Nicolas Fournier) of two workshops and an international conference Probabilistic methods in kinetic theory, CIRM, Marseille.
- February 2011: Organization (with François Bolley, Laurent Desvillettes and Silvia Lorenzani) of an international conference in the memory of Carlo Cercignani, IHP, Paris.
- January 2011: Organization (with François Bolley and Alessio Figalli) of an international conference Kinetic equations, geometry, probability, optimal transport: old and new in the honor of Cédric Villani, Fields medallist 2010, ENS Paris.
- July 2010: Organization of one of the sessions of the conference Singularity in PDEs at IHES, Paris.
- February 2010: Organization (with Stéphane Mischler) of an international conference PDE and biology, La Habana, Cuba.

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* :

- ANR ”Spinada” (responsable Stéphane Mischler)
- GDR ”Chant”, GDR ”Analyse des équations aux dérivées partielles”

- GDR Franco-Italien GREFI-MEFI
- Coopération franco-espagnole - Partenariat Hubert Curien (ex-PAI)
- ANR MADCOF
- **Participation to editorial boards:* JSP, ACAP, ESAIM Proc

- **Bruno Nazaret**

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : Participation aux projets ANR EVOL (15%) et OTARIE (30%)

- **Adrien Nguyen Huu**

**Other:* membre de l'Association des Docteurs et Doctorants de Dauphine

- **Nejla Nouaili**

**Regular collaborations with other laboratories:* LAGA, université Paris 13.

- **Joana Oliveira dos Santos**

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : ANR Kam faible

- **Stefano Olla**

**Participation in collaborative research projects:* 2010-2015: ERC advanced grant No 246953, Malady (Microscopic Laws and Dynamical System). CoPI avec Carlangelo Liverani (PI). Le projet de recherche et le financement est distribué entre la Seconde Université de Rome (Liverani) et l'Université Paris-Dauphine (Olla).

**Organization of conferences with national or international impact:*

- Large Scale Dynamics, Oberwolfach, septembre 2007, avec H. Spohn and C. Landim.
- WORKSHOP GREFI-MEFI 2008. From Dynamical Systems to Statistical Mechanics. CIRM, Luminy, février-Mars 2008.
- Stochastic Processes and Applications, Interacting Particles Session, Berlin Juillet 2009.
- Large Scale Dynamics, Oberwolfach, novembre 2010, avec H. Spohn and C. Landim.
- Fourier's Law, Field Institute, Toronto, Canada, avril 2011, avec Carlangelo Liverani.
- Nonequilibrium Statistical Mechanics: Mathematical Understanding and Numerical Simulation (12w5013), BIRS, Banff, Canada, novembre 2012, avec Joel Lebowitz et Gabriel Stoltz.

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* :

- 2007-2010- ANR LHMSHE - Limites hydrodynamiques et mécanique statistique hors équilibre.
- 2010 -present ANR SHEPI - Systèmes Hors Equilibre de Particules en Interaction

**Management of a network (ANR, GDR, etc.)* : GDRE Grefi-Mefi, Comité de Gestion Scientifique

**Participation to editorial boards:* Annals of Probability Probability Theory and Related Fields

**Participation in boards of scientific expertise:* AERES, comité d'évaluation du Laboratoire de Nancy, 2011

- **Catherine Pardoux**

- *Organization of conferences with national or international impact:* SLDS 2009 : Statistical Learning and Data Science, Paris, 2009 SLDS 2012 : Statistical Learning and Data Science, Florence, 2012
- *Participation to editorial boards:* Membre du comité éditorial de la page « Excel'Ense » de la revue Modulad

- **Gabriel Peyré**

- *Participation in collaborative research projects:* – Directeur du GdR CNRS MSPC
- *Organization of conferences with national or international impact:*
 - Organisateur, Mathematics and Image Analysis 2009
 - Organisateur, Mathematics and Image Analysis 2012
- *Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :* – Membre des GDR MSPC, GDR ISIS et GDR Vision.
- *Management of a network (ANR, GDR, etc.) :*
 - Coordinateur projet ANR Natimages
 - Coordinateur projet ERC SIGMA-Vision
- *Participation to editorial boards:* – Editeur associé SIAM Journal on Imaging Science
- *Participation in scientific committees of conferences and congresses:*
 - SIAM Imaging Science 2008
 - SIAM Imaging Science 2010
 - SIAM Imaging Science 2012

- **Raphael PREVOST**

- *Regular collaborations with other laboratories:* Philips Research Medisys

- **Hugo Raguét**

- *Regular collaborations with other laboratories:* UNIC CNRS UPR-3293
- *Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :* GDR MSPC

- **Mohamed Rahal**

- *Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :* Contrat ANR: Projet SEVEN en collaboration avec EDF, INRIA, LIMSI/CNRS et SEMIOSYS

- **Jérôme Renault**

- *Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :*
 - ANR Croyances (resp. E. Jouni, Dauphine)

- ANR ATLAS (from Applications to Theory in Learning and Adaptive Statistics), resp. P. Reynaud-Bouret et G. Stoltz (DMA, ENS).
- Réseau Franco-Israelien “Strategic Use of Information in Dynamic Games”, avec notamment E. Lehrer et E. Solan
- Projet Picasso “Communication stratégique et réseaux”, Ceremade et Département d’Analyse économique, Alicante (responsables F. Forges et P. Hernandez)
- **Awards and honors*: Pedr 2002, renouvelée en 2006.

• **Anthony REVEILLAC**

- **Regular collaborations with other laboratories*: Collaboration suivie avec l’“institut für Mathematik, Humboldt-Universität zu Berlin”
- **Organization of conferences with national or international impact*:
 - Organisation du groupe de travail “Journée Processus et Champs Fractionnaires”, 28 janvier 2008, La Rochelle.
 - Organisation du groupe de travail “Journée Image”, 11 octobre 2007, La Rochelle.

• **Rémi Rhodes**

- **Regular collaborations with other laboratories*:
 - Julien Barral, université Paris 13, LAGA
 - Xiong Jin, University of St Andrews, Mathematics Institute, North Haugh, St Andrews, Ecosse.
 - Julien Sohler, Université Roma 3, Italie
 - Scott Sheffield, Massachusetts Institute of Technology, Boston, USA.
 - Bertrand Duplantier, CEA Saclay.
- **Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : GDR: Analyse multifractale, ANR CHAMU
- **Participation in boards of scientific expertise*:
 - commission d’experts du CEREMADE
 - commission d’experts du laboratoire Jean Dieudonné, université de Nice Sophia-Antipolis

• **Vincent Rivoirard**

- **Participation in collaborative research projects*: Participation à des projets initiés par plusieurs universités du Chili (Universidad de Chile, Universidad de Valparaiso et Pontificia Universidad Católica de Chile) : Projet de coopération internationale CONICYT, Projet de la Fondation Andes, Programme MathAmSud
- **Regular collaborations with other laboratories*:
 - Laboratoire Jean Dieudonné de Nice
 - CREST-ENSAE
 - Laboratoire de mathématiques d’Orsay
 - Laboratoire de Statistique de l’Université de Valparaiso
- **Organization of conferences with national or international impact*:
 - Organisateur pour le compte de la SFdS de la première rencontre franco-chilienne de statistique tenue à l’IHP en avril 2012
 - Organisateur pour le compte du GT MAS de la SMAI de la journée “Fiabilité” tenue à l’ENS (journée commune SFdS - GT MAS de la SMAI) tenue en juin 2009

- Organisateur pour le compte du GT MAS de la SMAI de la journée "Modèles d'évolution en biologie" tenue à l'IHP (journée commune SFdS - GT MAS de la SMAI) tenue en avril 2008
- Organisateur de la session "Statistique bayésienne" aux journées MAS de Nancy, septembre 2006
- **Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : Participation aux ANR suivantes :
 - ANR Bahhdits (2011-) : Bayésien non paramétrique, techniques en grandes dimension et simulations (coordinatrice : Judith Rousseau)
 - ANR Parcimonie (2009-) : (coordinateur : Erwan Le Pennec)
 - ANR SP BAYES (2007-2011) : Statistiques bayésiennes semi-paramétriques (coordinatrice : Judith Rousseau)
 - ANR ATLAS (2006- 2010) : From Applications to Theory in Learning and Adaptive Statistics (coordinatrice : Patricia Reynaud-Bouret)
 - **Management of a network (ANR, GDR, etc.)* : Coordinateur de l'ANR Calibration (2012-)
 - **Participation in scientific committees of conferences and congresses*: Membre du comité de programme des Journées de Statistique 2011 organisées par la SFdS
 - **Participation in boards of scientific expertise*:
 - Expertise de projet pour la Swiss National Science Foundation
 - Membre des commissions de spécialistes et de comités de sélection pour:
 - Mai 2012 : l'Ecole Centrale de Lyon (extérieur, recrutement MCF) et l'Université de Nice (extérieur, recrutement MCF)
 - Octobre 2011 : l'Université Paris 10 Nanterre (extérieur, recrutement MCF)
 - Mai 2011 : les Universités de Paris Dauphine (intérieur, président du comité de sélection, recrutement MCF) et de Paris 10 Nanterre (extérieur, recrutement Prof)
 - Mai 2010 : les Universités d'Orsay (intérieur, recrutement MCF) et de Paris 6 (extérieur, recrutement MCF)
 - Mai 2009 : les Universités d'Orsay (intérieur), de Paris 6 (extérieur, recrutement MCF) et de Paris 7 (extérieur, recrutement MCF)
 - Mai 2008 : les Universités d'Orsay (intérieur, recrutement MCF), de Caen (extérieur, recrutement MCF) et d'Aix-Marseille 1 (extérieur, recrutement MCF)
 - Mai 2007 : les Universités d'Orsay (intérieur, recrutement MCF), de Caen (extérieur, recrutement MCF) et d'Aix-Marseille 1 (extérieur, recrutement MCF)
 - **Other*: Création de l'Equipe INRIA CLASSIC (avec Olivier Catoni et Gilles Stoltz) au sein du Département de Mathématiques et Applications de l'ENS. Le projet CLASSIC (Convex Learning through Aggregation, Supervised Statistical Inference, and Classification) a été accepté par le Comité des Projets de l'INRIA Rocquencourt le 4 juin 2009.

• Christian Robert

- **Organization of conferences with national or international impact*:
 - Workshop on Computational Methods, ICMS, Edinburgh, March 2012 (co-organiser with M. Girolami and A. Mira).
 - ABC in London, Imperial College London, May 2011 (co-organiser with M. Stumpf).
 - Adap'Skiii, a satellite meeting to MCMC'Ski 3, 3-7 January 2011, Snowbird, Utah (USA) (main organiser).
 - Workshop on Statistical Mixtures, ICMS, Edinburgh, March 2010 (co-organiser with K.L. Mengersen and D.M. Titterton).
 - ABC in Paris, Université Paris-Dauphine, 29 June 2009 (sole organiser).
 - Adap'Skii, a satellite meeting to MCMC'Ski, 6-8 January 2008, Bormio (Italy) (main organiser).
 - Workshop "Bioinformatics, Genetics and Stochastic Computation: Bridging the Gap" Banff International Research Station, 1-5 July 2007 (co-organiser).

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : ANRS Ecosstat (2005), Misgepop (2005), Adap'MC (2005), NPBayes (2007), EMILE (2008), bandhit (2008) - Action Concertée Incitative, Nouvelles Interfaces des Mathématiques sur "Algorithmes particuliers, optimisation stochastique et applications à l'environnement" in 2005-2008.

**Awards and honors*:

–Président 2009 de l'association ISBA (International Society for Bayesian Analysis) Fellow of the American Statistical Association (ASA) 2012

–AMSI-SSAI Lecturer 2012 (Australian Mathematical Sciences Institute and Statistical Society of Australia, Inc.)

**Participation to editorial boards*:

–Editeur en chef du Journal of the Royal Statistical Society Series B de 2006 à 2010

–Associate editor pour les journaux JASA, Annals of Statistics, TEST, Statistical Science, Sankhya, Annals of the Institute of Statistical Mathematics, Bayesian Statistics, CHANCE, TOMACS

**Participation in scientific committees of conferences and congresses*:

– ISBA 2012, Kyoto, 25-29 June 2012 (co-organiser of three sessions).

– O-Bayes 2011, Conference on Objective Bayesian techniques, Shanghai, China, 11-15 June 2011 (member of the scientific committee).

– O'Bayes 09, Conference on Objective Bayesian techniques, Philadelphia, 5-10 June 2009 (member of the scientific committee).

– ISBA 2008, Hamilton Island, 21-25 July 2008 (member of the scientific committee).

– Deuxièmes Rencontres des Jeunes Statisticiens 2005, Aussois, 02-07 Sept 2007 (member of the scientific committee).

– O'Bayes 07, Conference on Objective Bayesian techniques, Roma, 8-11 June 2007 (member of the scientific committee).

**Participation in boards of scientific expertise*: NSF, EPSRC, Academy of Finland, AERES,

• **Simona Rota Nodari**

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : ANR NoNAP

**Awards and honors*: Prix au mérite *Virlogeux en Science* décerné par la Chancellerie des universités de Paris

• **Judith Rousseau**

**Regular collaborations with other laboratories*: Collaborations suivies avec LPMA, Orsay et le CREST en FRANCE, ainsi qu'avec QUT (Australie), Bocconi (Italie), Korea et Seoul Universities

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : Financement ANR : Responsable du projet ANR SP Bayes accepté en juillet 2007. Responsable ANR Bandhits à partir de 2010. Participation à l'ANR BigMC et à l'ANR Calibration

**Management of a network (ANR, GDR, etc.)* : Coordinatrice de 2 ANR : SP Bayes et Bandhits

**Participation to editorial boards*: Editeur associé de ANZJS (depuis juillet 2008) Editeur associé de Annals of Statistics depuis Septembre 2009

**Participation in scientific committees of conferences and congresses*: Comité Scientifique de l'ISBA 2008, Comité scientifique du Workshop Bayesian nonparametrics (2013)

**Participation in boards of scientific expertise*: Membre du conseil scientifique de l'INRA

• **Robin Ryder**

**Regular collaborations with other laboratories:* Département de Statistique, Oxford; Institut Jean Nicod, ENS; CREST

**Awards and honors:* Savage Award de la meilleure thèse, décerné par l'ISBA : mention honorable, catégorie méthodologie appliquée

**Other:* Membre d'Opération Postes

• Julien Salomon

**Participation in collaborative research projects:*

– 2006-2009, A.N.R C-QUID : Contrôle Quantique et Identification (Responsable J-M. Coron). Membre du projet.

– 2008-2011, A.N.R OTARIE : Theory and Applications to cosmological Reconstruction and Image processing (Responsable A. Sobolevskii). Responsable scientifique du projet pour l'Université Paris-Dauphine. Participation : 55%

**Organization of conferences with national or international impact:* Paris, 7-9.06.11 "Optimal Transport, algorithms and applications". Conférence organisée avec G. Carlier et J. Delon. Page de la conférence : <http://www.mccme.ru/~ansobol/otarie/paris110607.html>

**Participation in communities of scientific programming:* – Journée de la Recherche à Dauphine : Introduction au transport optimal. 22/03/12

– Interventions au Lycée Chaptal. 2011 2012. Introduction aux mathématiques appliquées, devant un public de Lycéens et d'élèves de CPGE.

• Filippo Santambrogio

**Organization of conferences with national or international impact:*

– Coorganisateur du colloque Optimal Transport and Applications to Economics, Paris 2009 (Ecole des Mines), avec G. Carlier et A. Galichon.

– Coorganisateur du Groupe de Travail de Calcul des Variations de Paris-Dauphine en 2009/10.

– Coorganisateur du Séminaire Parisien d'Optimisation, depuis octobre 2010.

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :*

– ANR OTARIE

– Responsable local du projet ANR jeunes EVaMEF (projet Paris Dauphine-Toulouse School of Economics, responsable national : A. Blanchet), 2009/12.

**Awards and honors:*

– Prix "Gioacchino Iapichino" pour une oeuvre d'analyse mathématiques (réservé aux jeunes mathématiciens italiens) remis par l'Accademia dei Lincei, Rome, 2007

– Prix d'études "Benedetto Sciarra" remis par la SNS de Pise, 2004

– Médaille de bronze aux Olympiades Internationales de Mathématiques, Bucharest, 1999

• Eric Séré

**Organization of conferences with national or international impact:* "Mathematical Aspects of Quantum Electrodynamics" (21-25 Juin 2010 à l'IHP).

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :*

Project ANR NoNap "NONlinear problems in Nuclear and Atomic Physics" (2010-2014).

Project ANR Accquarel "Approches computationnelles en chimie quantique relativiste" (2006-2009).

- **Participation to editorial boards*: Co-editor en chief (avec M.J. Esteban) des Annales de l'IHHP - Analyse non linéaire depuis Janvier 2006.
- **Participation in scientific committees of conferences and congresses*: "Loss of compactness in nonlinear problems : new trends and applications" (CIRM, 2009)
- **Participation in boards of scientific expertise*: external referee of the ERC Advanced / Starting Grant project proposals since 2010.

- **François Simenhaus**

- **Participation in collaborative research projects*: Postdoc dans le cadre de l'ERC Advanced Research Grant "Phase transitions in random evolutions of large-scale structures" dirigé par Fabio Martinelli.
- **Regular collaborations with other laboratories*: Collaboration en cours avec Fabio Toninelli de l'ENS Lyon.
- **Other*: Rapport pour PTRF en janvier 2012.

- **Jérémy Sok**

- **Participation in collaborative research projects*: membre de l'ANR-10-BLAN 0101

- **Alfonso Sorrentino**

- **Participation in collaborative research projects*: ANR KAM FAIBLE
- **Organization of conferences with national or international impact*: Conference Mather 70 (Lyon, Juin 2012)
- **Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : ANR, GNAMPA (Italy)
- **Participation in scientific committees of conferences and congresses*: JSID Universitat Politecnica de Barcelona (Scientific Committee)

- **Mireille Summa**

- **Participation in collaborative research projects*: PHC UTIQUE Hubert Curien 2009 Paris Tunis ; Encadrement de projet de recherche d'étudiants de master à Tunis et finalisation de thèses; Contrat de collaboration de recherche entre le CEREMADE et le Centre de Santé des Industries Gazières et Electriques.
- **Regular collaborations with other laboratories*: Royal Holloway University of London, U.K. Computer Science Department; Università Federico II, Napoli, Italia Dipartimento di Statistica; Università La Sapienza, Roma, Italia Dipartimento di Statistica
- **Organization of conferences with national or international impact*: Statistical Learning and Data Science 2009 (Paris), Statistical Learning and Data Science 2012 (Florence)
- **Organizations/Invitations to non-academic scientific events*: Conférencière invitée au NEC de Princeton (U.S.A.), Invitations à divers exposés au Pôle Cap Digital et chez Visual Decision
- **Participation to editorial boards*: revue MODULAD
- **Participation in scientific committees of conferences and congresses*: Statistical Learning and Data Science 2009 (Paris), Statistical Learning and Data Science 2012 (Florence)

- **Rabah Tahraoui**

**Participation in scientific committees of conferences and congresses:*

– Cima 07, université de Guelma, Algérie, 5-7 novembre 2007

– Cima 10, université de Guelma, Algérie, 7-9 novembre 2010

**Other:* Coorganisateur du groupe de travail calcul des variation du Ceremade, avec P. Cardaliaguet et B. Nazaret .

• **Tristan Tomala**

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :* ACI: « Information limitée et rationalité limitée en économie », PSE. – ANR: ATLAS, ENS Ulm. 'Croyances', dauphine.

• **Myriam Touati**

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :* Contrat ANR-SEVEN: (classification & Visualisation pour l'Exploration et la Navigation): projet ANR-RNTL de l'Oséo-Anvar, a pour but de faciliter l'exploration de grands volumes de données ou de résultats d'analyses complexes pour des utilisateurs non-spécialistes du traitement des données ou d'un domaine d'étude

• **Gabriel Turinici**

**Participation in collaborative research projects:* ANR ACCQUAREL, ANR C-QUID, ANR EMAQS

**Participation in networks (GDR, GDRE, GDRI, ANR, etc.) :* participe comme membre extérieur aux réunions de l'ANR PITAC; membre du projet MICMAC de l'INRIA Rocquencourt.

**Management of a network (ANR, GDR, etc.) :* coordonateur ANR ACCQUAREL

**Participation to editorial boards:* editeur associé à Abstract and Applied Analysis (impact factor 1.44)

**Participation in boards of scientific expertise:* évaluateur ANR

• **Vincent Vargas**

**Management of a network (ANR, GDR, etc.) :* Coordinateur du projet ANR-11-JCJC CHAMU Dotation de 50000 euros

• **Francois-Xavier Vialard**

**Participation in collaborative research projects:* ERC Five Challenges in Computational Anatomy. Imperial College

**Regular collaborations with other laboratories:* Imperial College - Applied Mathematics

**Participation in boards of scientific expertise:* IJCV, JMIV, MICCAI, SIAM imaging science, SIAM Control, ANR.

• **Guillaume Vigerl**

**Organization of conferences with national or international impact*: Organisation de "International conference: Games and strategy in Paris", 11-13 juin 2012 <http://sites.google.com/site/sorin60th/>
 **Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : Membre du GDR 3273 MOA, du GDR 2932 Théorie des Jeux: Modélisation Mathématique et Applications, et de l'ANR Jeudy: ANR-10-BLAN 0112

• **Yannick Viossat**

**Regular collaborations with other laboratories*: Projet Picasso "Communication stratégique et réseaux" entre le CEREMADE et le département d'économie de l'université d'Alicante (2006-2009).
 **Organization of conferences with national or international impact*:
 – Games and Strategy in Paris, 11-13 juin 2012, IHP, Paris.
 – Game Theory and Biology, 4-6 novembre 2010, Paris 6.
 **Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : GDR 2932 "Théorie des jeux : modélisation mathématiques et applications"; ANR RISK ; projet PEPS Strates.
 **Participation in scientific committees of conferences and congresses*:
 – 1st Dauphine workshop on Economic Theory
 – 2nd Dauphine workshop on Economic Theory

• **Olivier Wintenberger**

**Participation in collaborative research projects*: Responsable avec T. Mikosch du projet de recherche Franco-Danois "Stable limits for sums of dependent multivariate random variables" soutenu par le service de Coopération scientifique et universitaire de l'ambassade française au Danemark. Affiliation au projet ANR Bandhits et Calibration.
 **Regular collaborations with other laboratories*: Collaboration avec T. Mikosch du département de mathématiques de l'université de Copenhague. Collaboration avec P. Alquier du LPMA de l'université Paris 7. Collaboration avec C. Francq et J.-M. Zakoian du LFA, CREST.
 **Organization of conferences with national or international impact*: Organisateur de la session "méthodes adaptatives pour les séries chronologiques", Journées du GT SMAI-MAS, Bordeaux, 2010.
 **Participation in networks (GDR, GDRE, GDRI, ANR, etc.)* : Affiliation aux projets ANR Bandhits et Calibration.
 **Management of a network (ANR, GDR, etc.)* : Responsable avec T. Mikosch du projet de recherche Franco-Danois "Stable limits for sums of dependent multivariate random variables" soutenu par le service de Coopération scientifique et universitaire de l'ambassade française au Danemark.
 **Awards and honors*: Lauréat du Elsevier Travel grant, du Graduate Student Travel Support et du Laha Travel Award de l'Institute of Mathematical Statistics.

5.3 List of invited researchers during the period 2007-2012

Year 2007

- Aloisio ARAUJO (invited by Rose-Anne DANA)
- Giada BASILE (invited by Stefano OLLA)
- Rafael BENGURIA (invited by Jean DOLBEAULT)

- Rafael BENGURIA (invited by Maria J. ESTEBAN)
- Lyne BILLARD (invited by Edwin DIDAY)
- Jean BRICMONT (invited by Stefano OLLA)
- Gonzalo CONTRERAS (invited by Patrick BERNARD)
- Thomas DULUC (invited by Gabriel PEYRE)
- Patricio FELMER (invited by Jean DOLBEAULT)
- Antoine GROLLEAU (invited by Gabriel PEYRE)
- Tomasz KOMOROWSKI (invited by Stefano OLLA)
- Ari LAPTEV (invited by Jean DOLBEAULT)
- Roberto LIVI (invited by Stefano OLLA)
- Antoine MELLET (invited by Stéphane MISCHLER)
- Hichem OUNAIES (invited by Isabelle CATTO)
- Frank RIEDEL (invited by Rose-Anne DANA)
- Christian SCHMEISER (invited by Jean DOLBEAULT)
- Paola SIRI (invited by Stefano OLLA)
- Robert STANCZY (invited by Jean DOLBEAULT)
- Tai-Peng TSAI (invited by Eric SERE)

Year 2008

- Anton ARNOLD (invited by Jean DOLBEAULT)
- Piotr BILER (invited by Jean DOLBEAULT)
- Lyonell BOULTON (invited by Gabriel TURINICI)
- Nabil BOUSSAID (invited by Eric SERE)
- Lorenzo BRASCO (invited by Guillaume CARLIER)
- Alfred BRUCKSTEIN (invited by Laurent COHEN)
- Boris BUFFONI (invited by Patrick BERNARD)
- Ovidiu CARJA (invited by Gabriel TURINICI)
- Luigi DE PASCALE (invited by Guillaume CARLIER)
- Astrid DECOENE (invited by Jean DOLBEAULT)
- Edouard DOUET (invited by Julien SALOMON)
- Miguel ESCOBEDO (invited by Maria J. ESTEBAN)
- Patricio FELMER (invited by Jean DOLBEAULT)
- Francisco Javier FERNANDEZ (invited by Isabelle CATTO)
- Michal KOWALCZYK (invited by Jean DOLBEAULT)
- Dimitri KRAMKOV (invited by Bruno BOUCHARD)
- Catalin-George LEFTER (invited by Gabriel TURINICI)
- Offer LIEBERMAN (invited by Judith ROUSSEAU)
- Brunero LISEO (invited by Judith ROUSSEAU)
- Michael LOSS (invited by Maria J. ESTEBAN)
- Ross MCVINISH (invited by Judith ROUSSEAU)
- Julien MILLE (invited by Laurent COHEN)
- Emmanuel MILTON (invited by Eric SERE)
- Fionn MURTAGH (invited by Bernard GOLDFARB)
- Alireza NEMATOLLAHI (invited by Christian P. ROBERT)
- Paola SIRI (invited by Stefano OLLA)
- Nir SOCHEN (invited by Laurent COHEN)
- Robert STANCZY (invited by Jean DOLBEAULT)
- Gabriella TARANTELLA (invited by Jean DOLBEAULT)
- Juan Luis VASQUEZ (invited by Jean DOLBEAULT)

- Anthony YEZZI (invited by Laurent COHEN)
- Boguslaw ZEGARLINSKI (invited by Ivan GENTIL)

Year 2009

- Gonca AKI (invited by Jean DOLBEAULT)
- Ghazi BEL MUFTI (invited by Patrice BERTRAND)
- Mohamed BELHADJ (invited by Gabriel TURINICI)
- Johel BELTRAN (invited by Milton David JARA VALENZUELA)
- Piotr BILER (invited by Jean DOLBEAULT)
- Léon-yves BOTTOU (invited by Mireille SUMMA)
- Lyonell BOULTON (invited by Jean DOLBEAULT)
- Alfred BRUCKSTEIN (invited by Laurent COHEN)
- Guisepe BUTTAZZO (invited by Filippo SANTAMBROGIO)
- Scricciolo CATIA (invited by Judith ROUSSEAU)
- Carla CHAN (invited by Christian P. ROBERT)
- Annabelle COLLIN (invited by Yannick VIOSSAT)
- James ELDER (invited by Laurent COHEN)
- Miguel ESCOBEDO (invited by Jean DOLBEAULT)
- Nadia ESSOUSSI (invited by Patrice BERTRAND)
- Francisco javier FERNANDEZ (invited by Isabelle CATTO)
- Rupert FRANK (invited by Jean DOLBEAULT)
- Jozsef FRITZ (invited by Stefano OLLA)
- Christina GOLDSCHMIDT (invited by Bénédicte HAAS)
- Patricia GONCALVES (invited by Milton David JARA VALENZUELA)
- Abdellaziz HARRABI (invited by Eric SERE)
- Grzegorz KARCH (invited by Jean DOLBEAULT)
- Tomasz KOMOROWSKI (invited by Stefano OLLA)
- Michal KOWALCZYK (invited by Jean DOLBEAULT)
- Claudio LANDIM (invited by Stefano OLLA)
- Jaeyong LEE (invited by Judith ROUSSEAU)
- Catalin-George LEFTER (invited by Gabriel TURINICI)
- Mohamed LIMAM (invited by Patrice BERTRAND)
- Michail LOULAKIS (invited by Stefano OLLA)
- Laurent MARTIN (invited by Eric SERE)
- Hayet MERABET (invited by Christian P. ROBERT)
- Pascal MOSSAY (invited by Filippo SANTAMBROGIO)
- Katalin NAGY (invited by Stefano OLLA)
- Khanchel RIADH (invited by Patrice BERTRAND)
- Frank RIEDEL (invited by Rose-Anne DANA)
- Kaspar RUFIBACH (invited by Fadoua BALABDAOUI)
- Julien SABIN (invited by Eric SERE)
- Nir SOCHEN (invited by Laurent COHEN)
- Robert STANCZY (invited by Jean DOLBEAULT)
- Gabriella TARANTELLA (invited by Maria J. ESTEBAN)
- Achilles TERTIKAS (invited by Jean DOLBEAULT)
- Marie TIGNON (invited by Yannick VIOSSAT)
- Juan Luis VASQUEZ (invited by Jean DOLBEAULT)
- Bernhard VON STENGEL (invited by Yannick VIOSSAT)
- Shih-hsien YU (invited by Clément MOUHOT)

Year 2010

- Martial AGUEH (invited by Guillaume CARLIER)
- Marwan AL OQEILI (invited by Guillaume CARLIER)
- Clair ALSTON (invited by Christian P. ROBERT)
- Anton ARNOLD (invited by Jean DOLBEAULT)
- Aldo BAZAN (invited by Ivan GENTIL)
- Ghazi BEL MUFTI (invited by Patrice BERTRAND)
- Rafael BENGURIA (invited by Jean DOLBEAULT)
- Piotr BILER (invited by Cyril IMBERT)
- Lyne BILLARD (invited by Edwin DIDAY)
- Julian BONDER (invited by Jean DOLBEAULT)
- Alfred BRUCKSTEIN (invited by Laurent COHEN)
- Guisepe BUTTAZZO (invited by Guillaume CARLIER)
- Andrew COMECH (invited by Maria J. ESTEBAN)
- Malgorzata CUDNA (invited by Stefano OLLA)
- Luigi DE PASCALE (invited by Guillaume CARLIER)
- Manuel DEL PINO (invited by Jean DOLBEAULT)
- Lassad EL MOUBARKI (invited by Patrice BERTRAND)
- Miguel ESCOBEDO (invited by Jean DOLBEAULT)
- Stephen FIENBERG (invited by Christian P. ROBERT)
- Isabel FLORES-SAAVEDRA (invited by Jean DOLBEAULT)
- Tasa FUNAKI (invited by Stefano OLLA)
- Giovanni GALLAVOTTI (invited by Stefano OLLA)
- Filippo GAZZOLA (invited by Jean DOLBEAULT)
- Radouen GHANEM (invited by Rabah TAHRAOUI)
- Jésus HERNANDEZ (invited by Maria J. ESTEBAN)
- Orest IFTIME (invited by Gabriel TURINICI)
- Hitochi ISHII (invited by Pierre-Louis LIONS)
- Milton David JARA VALENZUELA (invited by Stefano OLLA)
- Grzegorz KARCH (invited by Cyril IMBERT)
- Tomasz KOMOROWSKI (invited by Stefano OLLA)
- Catalin-george LEFTER (invited by Gabriel TURINICI)
- Offer LIEBERMAN (invited by Judith ROUSSEAU)
- Carlangelo LIVERANI (invited by Stefano OLLA)
- Gaël MARTIN (invited by Christian P. ROBERT)
- Kerrie MENGERSEN (invited by Christian P. ROBERT)
- Hayet MERABET (invited by Christian P. ROBERT)
- Fionn MURTAGH (invited by Mireille SUMMA)
- Haifa NAKOURI (invited by Patrice BERTRAND)
- Misha NEKLYUDOV (invited by Massimiliano GUBINELLI)
- Habib OUERDIANE (invited by Danielle FLORENS)
- Francesco PALUMBO (invited by Mireille SUMMA)
- Sonia PETRONE (invited by Judith ROUSSEAU)
- Frederica PEZZOTTI (invited by Jean DOLBEAULT)
- Kaspar RUFIBACH (invited by Fadoua BALABDAOUI)
- Oscar SANCHEZ (invited by Isabelle CATTO)
- Christof SPARBER (invited by Jean DOLBEAULT)
- Robert STANCZY (invited by Jean DOLBEAULT)

- Eugène STEPANOV (invited by Filippo SANTAMBROGIO)
- Gabriella TARANTELLA (invited by Maria J. ESTEBAN)
- Augusto TEIXEIRA (invited by Milton David JARA VALENZUELA)
- Achilles TERTIKAS (invited by Jean DOLBEAULT)
- Giuseppe TOSCANI (invited by Jean DOLBEAULT)
- Abderrahmen TOUATI (invited by Danielle FLORENS)
- Dimitrios TSAGKAROGIANNIS (invited by José TRASHORRAS)
- Maurizio VICHI (invited by Bernard GOLDFARB)
- Bruno VOLZONE (invited by Jean DOLBEAULT)

Year 2011

- Fabio ANCONA (invited by Olivier GLASS)
- Scott ARMSTRONG (invited by Pierre-Louis LIONS)
- Giada BASILE (invited by Stefano OLLA)
- Karine BERTIN (invited by Vincent Rivoirard)
- Maxim BICHUCH (invited by Luciano CAMPI)
- Lyne BILLARD (invited by Edwin DIDAY)
- Adrien BLANCHET (invited by Guillaume CARLIER)
- Nabil BOUSSAID (invited by Maria J. ESTEBAN)
- Lorenzo BRASCO (invited by Guillaume CARLIER)
- Paula BRITO (invited by Patrice BERTRAND)
- Alfred BRUCKSTEIN (invited by Laurent COHEN)
- Jose Alfredo CANIZO RINCON (invited by François BOLLEY & Stéphane MISCHLER)
- Pier marco CANNARSA (invited by Pierre CARDALIAGUET)
- José a. CARRILLO (invited by Jean DOLBEAULT)
- Philippe CHARTON (invited by Patrice BERTRAND)
- Bernard DACOROGNA (invited by Guillaume CARLIER)
- Albina DANILOVA (invited by Luciano Campi)
- Luigi DE PASCALE (invited by Guillaume CARLIER)
- Kurusch EBRAHIMI FARD (invited by Massimiliano GUBINELLI)
- Ruppert FRANK (invited by Jean DOLBEAULT)
- Tadahisa FUNAKI (invited by Stefano OLLA)
- Giovanni GALLAVOTTI (invited by Stefano OLLA)
- Maria GUALDANI (invited by Stéphane MISCHLER)
- Changfeng GUI (invited by Eric SERE)
- Jésus HERNANDEZ (invited by Maria J. ESTEBAN)
- Tu Bao HO (invited by Mireille SUMMA)
- Hitochi ISHII (invited by Pierre-Louis LIONS)
- Tiphaine JEZEQUEL (invited by Patrick BERNARD)
- Kostas KARDARAS (invited by Romuald ELIE)
- Tomasz KOMOROWSKI (invited by Stefano OLLA)
- Michal KOWALCZYK (invited by Jean DOLBEAULT)
- Claudio LANDIM (invited by Stefano OLLA)
- Catalin-george LEFTER (invited by Gabriel TURINICI)
- Michael LOSS (invited by Maria J. ESTEBAN)
- Peter MARKOWICH (invited by Jean DOLBEAULT)
- Daniel MATTHES (invited by Jean DOLBEAULT)
- Hayet MERABET (invited by Christian P. ROBERT)
- Thomas MIKOSCH (invited by Olivier WINTENBERGER)

- Hayet NAFTI (invited by Bruno BOUCHARD)
- Katalin NAGY (invited by Stefano OLLA)
- Tien Khai NGUYEN (invited by Olivier GLASS)
- Hirofumi OSADA (invited by Stefano OLLA)
- Francesco PALUMBO (invited by Mireille SUMMA)
- Alessio PORRETTA (invited by Pierre CARDALIAGUET)
- Mario PULVIRENTI (invited by Stéphane MISCHLER)
- Henri RALAMBONDRAINY (invited by Edwin DIDAY)
- Mariano RODRIGUEZ RICARD (invited by Stéphane MISCHLER)
- Nicolas SAINTIER (invited by Jean DOLBEAULT)
- Oscar SANCHEZ (invited by Isabelle CATTO)
- Makiko SASADA (invited by Stefano OLLA)
- Panagiotis SOUGANIDIS (invited by Pierre-Louis LIONS)
- Robert STANCZY (invited by Jean DOLBEAULT)
- Eugène STEPANOV (invited by Guillaume CARLIER)
- Gabriella TARANTELLA (invited by Maria J. ESTEBAN)
- Dimitrios TSAGKAROGIANNIS (invited by José TRASHORRAS)
- Bruno VOLZONE (invited by Jean DOLBEAULT)
- Yann WERNER (invited by Rose-Anne DANA)
- Andriy ZAPECHELNYUK (invited by Yannick VIOSSAT)

Year 2012

- Martial AGUEH (invited by Guillaume CARLIER)
- Marwan AL OQEILI (invited by Guillaume CARLIER)
- Gefry BARAD (invited by Gabriel TURINICI)
- Rafael BENGURIA (invited by Isabelle CATTO)
- Alfred BRUCKSTEIN (invited by Laurent COHEN)
- Martins BRUVERIS (invited by François Xavier VIALARD)
- Boris BUFFONI (invited by Patrick BERNARD)
- Kurusch EBRAHIMI FARD (invited by Massimiliano GUBINELLI)
- Giovanni GALLAVOTTI (invited by Stefano OLLA)
- Pierre-Emmanuel JABIN (invited by Stéphane MISCHLER)
- Milton David JARA VALENZUELA (invited by Stefano OLLA)
- Kay KIRKPATRICK (invited by Stefano OLLA)
- Tomasz KOMOROWSKI (invited by Stefano OLLA)
- Jian-Guo LIU (invited by Amic FROUVELLE)
- Michael LOSS (invited by Maria J. ESTEBAN)
- Jan MAAS (invited by François BOLLEY)
- Daniel MATTHES (invited by Jean DOLBEAULT)
- Mario MAURELLI (invited by Massimiliano GUBINELLI)
- Fionn MURTAGH (invited by Mireille SUMMA)
- Marc NIETHAMMER (invited by François Xavier VIALARD)
- Marcel NUTZ (invited by Bruno BOUCHARD)
- Laurent RISSER (invited by François Xavier VIALARD)
- Victor RIVERO (invited by Bénédicte HAAS)
- Jesus ROSADO (invited by Jean DOLBEAULT)
- Leonid RYZHIK (invited by Stefano OLLA)
- Oscar SANCHEZ (invited by Isabelle CATTO)
- Makiko SASADA (invited by Stefano OLLA)

- Lukasz STEPIEN (invited by Stefano OLLA)
- Peter WITWVER (invited by Matthieu HILLAIRET)
- Myrna WOORDERS (invited by Françoise FORGES)

6 Appendix. Interactions with social, economic and cultural environment

6.1 Some key facts

- P.-L. Lions is heading the scientific council of France Telecom and dXO Labs. He is scientific director of the Calyon-EDF Chair “Quantitative Finance and Sustainable Development”
- E. Jouini holds the Groupama Chair “Individual investors facing financial risk” and is President of the Fondation Dauphine. He has sat in the Prime Minister’s Economic Analysis Council (2008-2010), and sits on the National Evaluation Commission for long-term Nuclear Strategy.
- There has been 6 “bourses CIFRE” (PhD funding with an industrial partner) during the period.
- L. Cohen and G. Peyré participate to the competitiveness cluster “Cap digital” (<http://www.capdigital.com/les-projets-cap-digital/>) (formerly IMVN) through their ANR projects MESANGE and NatImages.
- A patent of M. Summa was sold in 2011 by Université Paris-Dauphine to the start-up “Isthma” (specialized in data processing). CEREMADE had participated in 2004 in the creation of Isthma with the help of the national agency ANVAR.

6.2 Individual contributions

- **Fadoua Balabdaoui**

- **Software for decision-making*: – R-package ‘logdisconc’ (2009): Compute the log-concave maximum likelihood estimator of a pmf.
- R-package ‘OrdMonReg’ (2012): Compute least squares estimates of one bounded or two ordered anti-tonic regression curves.

- **Fethallah Benmansour**

- **Software for decision-making*: – <http://cvlab.epfl.ch/software/delin/index.php>

- **Bruno Bouchard**

- **Documents on different media contributing to the dissemination of scientific culture, in-service training and public debates*: Notes de cours en ligne :
 - Méthodes de Monte Carlo en Finance. Cours donné à Paris 6, Paris 7 et Dauphine, depuis 2002.
 - Introduction à l’évaluation d’actifs financiers par absence d’opportunité d’arbitrage. Cours donné à l’ENSAE et Paris 6, depuis 2006.
 - Portfolio management under risk constraints. Cours donné à la MITACS-PIMS-UBC Summer School in Risk Management and Risk Sharing, Vancouver, 2010
 - Introduction to stochastic control of mixed diffusion processes, viscosity solutions and applications in finance and insurance. Cours donné au Master recherche Masef entre 2007 et 2010.
 - Mini-course on Stochastic Targets and related problems. Slides du mini-cours donné au workshop “Stochastic Control and Finance”, Roscoff, 2012.
- **Contracts with non-academic entities, co-financed theses*: – Contrat de thèse cifre avec Chevreux (Crédit Agricole): Minh Ngoc Dang, Contrôle optimal pour le trading haute fréquence, 2008- 2011.
- Contrat de thèse cifre EDP : Adrien Nguyen Huu, Couverture d’options en marchés imparfaits et applications aux marchés de l’électricité, 2008-2012.

- Contrat de thèse cifre avec Pacifica: Ludovic Moreaux, Évaluation et gestion de risques mixtes dommage/prix de marché : applications à la gestion des risques en agriculture, 2009-2012.
- Contrat de thèse cifre avec Axa: Lihang Wang, Sur l'évaluation et la structuration des variables annuities, 2009-2012.
- **Participation in instances of non-academic partners (scientific committees, steering committees, ...)*: – Membre de la chaire "Les particuliers face aux risques", Dauphine-Ensaie-Groupama, de 2007 à 2009.
- Membre du comité de pilotage de l'IR "Protection financière des agriculteurs", Pacifica-IEF-Dauphine, janv. 2009 à janv. 2011.
- Membre du comité de pilotage de l'IR "Risques et assurances de l'agriculture", Pacifica-IEF-Astrium Géo, depuis 2011.

• Laurent Cohen

- **Patents and licences*: – Contrat de collaboration de recherche avec Philips Recherche France.
- Projet INFOMAGIC dans le cadre des Poles de compétitivité de la Région Ile-de-France : IMAGE, MULTIMEDIA ET VIE NUMÉRIQUE, (IMVN). Indexation par le contenu.
- **Documents on different media contributing to the dissemination of scientific culture, in-service training and public debates*: – Laurent D. Cohen, Portrait de chercheur. Film réalisé par la Fondation EADS (2009).
- "<http://www.ceremade.dauphine.fr/~cohen/GP09>"

• Rose-Anne Dana

- **Articles and books in professional or technical reviews*: – participation aux cahiers de la chaire du risque.
- **Other*: – rapports pour Axa.

• Ngoc Minh Dang

- **Articles and books in professional or technical reviews*: – Rigorous Post-Trade Market Impact Measurement and the Price Formation Process, Charles-Albert Lehalle, Ngoc Minh Dang. Trading, Spring 2010, Vol. 2010, No. 1: pp. 108-114.

• Sophie Donnet

- **Conferences, debates, exhibitions organized for professionals or groups in society*: – 2011: Participation à la journée "Filles et maths, une équation lumineuse" organisée par Animaths.
- **Participation in instances of non-academic partners (scientific committees, steering committees, ...)*: – 2012: Membre de comités de sélection MCF à Toulouse et Nantes.
- 2011: Membre du comité de sélection MCF pour un poste de Probabilités-Statistiques (membre intérieur), Université Paris-Dauphine.

• Lassad El Moubarki

- **Articles and books in professional or technical reviews*: – Houda Ben Mhenni Haj Youssef, Lassad El Moubarki, Olfa Benouda Sioud, (2010) "Can diversification degree amplify momentum and contrarian

anomalies?”, Review of Accounting and Finance, Vol. 9 Iss: 1, pp.50 - 64.

– Houda Ben Mhenni Haj Youssef, Lassad el Moubarki et Olfa Benouda Sioud, (2008) ”Impact de la diversification sur la psychologie de l’investisseur : étude empirique des anomalies”, Bankers, Markets & Investors N° 94.

- **Romuald Elie**

**Contracts with non-academic entities, co-financed theses*: Participation à la chaire Finance et développement durable: interactions avec les chercheurs d’EDF sur des problèmes de gestion d’actifs et de contrôle stochastique.

- **Maria J. Esteban**

**Articles and books in professional or technical reviews*: – M.J. Esteban. ”About the final event of the ESF-EMS Forward Look Project on Mathematics and Industry: A new road for industrial mathematics in Europe is now open”. Newsletter of the EMS, 79, (2011), p. 11-12.

– M.J. Esteban. ”About the final event of the ESF-EMS Forward Look Project on Mathematics and Industry: A new road for industrial mathematics in Europe is now open”. ECMI Newsletter, 49, (2011), p. 8-9.

– RESME 2011 - Transfer and Industrial Mathematics. P. Quintela, M. J. Esteban, W. Gonzalez, M. C. Muniz, J. Rubio and J. J. Salazar editors. Universidad de Santiago de Compostela, publicaciones, 2011.

– ”European Success Stories in Industrial Mathematics”. M.J. Esteban et al. éditeurs. Springer, 2011.

**Documents on different media contributing to the dissemination of scientific culture, in-service training and public debates*: – Publication d’un rapport sur la prospective en mathématiques appliquées dans le cadre de mes activités pour la SMAI

– Publication d’un Livre Blanc sur l’accueil du doctorat de mathématiques appliquées dans les entreprises dans le cadre de mes activités pour la SMAI

- **Jacques Fejoz**

**Documents on different media contributing to the dissemination of scientific culture, in-service training and public debates*: – Notices dans l’agenda de l’IMCCE.

- **Francoise Forges**

**Documents on different media contributing to the dissemination of scientific culture, in-service training and public debates*: – 2012 : ”Les ventes aux enchères”, Tangente, Hors série thématique La théorie des Jeux, 42-44.

- **Ivan Gentil**

**Documents on different media contributing to the dissemination of scientific culture, in-service training and public debates*: – Publication d’un livre d’enseignement pour la première année à l’université Paris-Dauphine : Éléments de calcul différentiel pour l’économie - Mathématiques L sciences éco - Édition Ellipses 2011.

- **Olivier Glass**

**Other*: – Organisateur de la journée « Mathématiques en mouvement » (2009 et 2010), journée de vulgarisation mathématique destinée aux étudiants de premier cycle, dans le cadre de la Fondation Sciences Mathématiques de Paris.

- **Françoise Goupil**

**Patents and licences*: – Participation au logiciel SODAS pour l'Analyse de données symboliques : conception et réalisation du module DSTAT.

- **Massimiliano Gubinelli**

**Software for decision-making*: – Participation au développement du logiciel TeXmacs ("www.texmacs.org"), une plateforme pour la rédaction de document scientifiques et l'interaction avec des logiciels de calcul.

- **Pierre Jacob**

**Software for decision-making*: – PAWL: package R pour l'algorithme de Wang-Landau

– py-smc2: package python pour l'algorithme SMC^2

– py-block-imh: package python pour l'algorithme block IMH

**Documents on different media contributing to the dissemination of scientific culture, in-service training and public debates*: – Blog: <http://statisfaction.wordpress.com/>

- **Elyès Jouini**

**Articles and books in professional or technical reviews*: ARTICLES:

– Dans l'âme des investisseurs, in Repenser l'Économie, Regards croisés sur l'économie, 2012.

– Transaction Costs in Financial Models, (with B. Bouchard), in Encyclopedia of Quantitative Finance, Rama Cont (Ed), Wiley, 2010.

– Risques : prise de décision individuelle et collective (with M. Nayaradou), Risques , 2008.

– La crise des subprimes ou l'irruption des particuliers dans la sphère financière, Risques , 2008.

OUVRAGE:

– La Finance Islamique, Elyès Jouini et Olivier Pastré, Economica 2009.

**Documents on different media contributing to the dissemination of scientific culture, in-service training and public debates*: – Retraites: pour un mécanisme de régulation pérenne, afin de sortir du bricolage, (avec Jean-Claude Angoulvant et Denis Chemillier-Gendreau), Le Monde, 12/02/2010

– Haro sur la finance, (avec Denis Chemillier-Gendreau), Le Monde, 5/11/2008.

– La crise des subprimes place l'endettement des ménages au coeur de la sphère financière, Le Monde, 08/01/2008.

– La modélisation financière sur la sellette, Le Monde, 16/12/2008.

**Participation in instances of non-academic partners (scientific committees, steering committees, ...)*: – Président de la Fondation dauphine (depuis 2011)

– Président du Jury du Grand Prix de l'Asset Management (Eurofonds et Le Monde), 2007, 2008, 2009.

- Membre du Comité scientifique de la Fondation Banque de France, 2006-2011.
- Membre du Comité scientifique de l'Association Française de la Gestion Financière, since 2004.
- Membre du Directoire de la Fondation du Risque, depuis 2006.
- Membre du Bureau Exécutif Scientifique de l'Institut Louis Bachelier
- **Other*: – Ministre dans le Gouvernement tunisien de transition (2011)
- Sherpa du Premier Ministre tunisien pour la préparation du G8 (Deauville, 2011)

● Pierre-Louis Lions

- **Documents on different media contributing to the dissemination of scientific culture, in-service training and public debates*: – Cours annuel au Collège de France (vidéo)
 - "<http://mougins.rhf-international.com/videos/Pierre-Louis-Lions.html>"
- **Conferences, debates, exhibitions organized for professionals or groups in society*: – Conférence publique (ISAAC), Londres (13 juillet 2009)
 - Conférences du Collège de France à Tunis "L'homme artificiel", Bibliothèque Nationale (4 février 2008)
 - Conférence publique à l'Académie des Sciences, Tunis (5 février 2008)
 - Conférence dans un lycée dans le cadre de la ((Junior Academy", Vienne (18 octobre 2007)
 - Conférence publique au Ria de Bilbao Maritime Museum (25 septembre 2008)
 - Participation à la table ronde de l'Institut Doctoral Paris Tech (19 novembre 2008)
 - Exposé sur les Jeux à champ moyen, Bercy (27 novembre 2008).
- **Participation in instances of non-academic partners (scientific committees, steering committees, ...)*: – Président du Conseil Scientifique d'EDF
 - Président du Conseil Scientifique de France Télécom
 - Conseiller Scientifique auprès de BNP PARIBAS, CALYON, EADS-ST
 - Membre du Conseil d'Administration de la Fondation d'Entreprise IXIS
 - Administrateur de Sark et Channel Bridge
 - Membre du comité scientifique de DxO Labs SA

● Catherine Pardoux

- **Patents and licences*: – Participation à un contrat avec le Ministère des Transports du tourisme et de la mer (méthodologie de prévisions de demande de transport), encadrement d'un stagiaire du CNAM au CEREMADE sur cette recherche (2006-2007).

● Sylvain Pelletier

- **Patents and licences*: – Participation au contrat de recherche RATP/CEREMADE.

● Gabriel Peyré

- **Software for decision-making*: – Développement du site web www.numerical-tours.com.
- **Documents on different media contributing to the dissemination of scientific culture, in-service training and public debates*: – "<http://images.math.cnrs.fr/Le-traitement-numerique-des-images.html>"

● Vincent Rivoirard

**Articles and books in professional or technical reviews:* – Rivoirard V. et Stoltz G. "Statistique en action". 320 pages (+224 pages d'annexes). Paru chez Vuibert.
– Rivoirard V. et Stoltz G. "Statistique mathématique en action". 448 pages +112 pages d'annexes). Paru chez Vuibert.

• **Christian Robert**

**Articles and books in professional or technical reviews:* – Les bases de la statistique bayésienne (avec J.M. Marin) "Techniques de l'Ingénieur" AF605 (2009).
**Software for decision-making:* – DIYABC, a software towards Approximate Bayesian Computation (ABC) for inference on population history using molecular markers,
"http://www1.montpellier.inra.fr/CBGP/diyabc/"
**Contracts with non-academic entities, co-financed theses:* – thèse Mathilde Bouriga, soutenue en 2012, financée par EDF.

• **Judith Rousseau**

**Articles and books in professional or technical reviews:* 2 chapitres de livre :
– Robert, C.P. and Rousseau, J.(2009): *On Bayesian Data Analysis*. In "Bayesian Methods and Expert Elicitation", Risk Book, London
– Robert, C.P, Marin, J.M. and Rousseau, J. (2010) *Bayesian inference*. In Handbook of Statistical Systems Biology.

• **Robin Ryder**

**Software for decision-making:* – Logiciel TraitLab, langage MatLab : reconstruction d'arbres phylogénétiques pour des données provenant des sciences humaines.

• **Oudom Somphone**

**Patents and licences:* – Convention CIFRE avec Philips Recherche France (PRF).

• **Mireille Summa**

**Software for decision-making:* – Coauteur plateforme DeltaMetric (c).
**Patents and licences:* – CNISF numéro 19164 1774441 code INPI vendu par Paris-Dauphine en 2011 à la société Isthma.
**Documents on different media contributing to the dissemination of scientific culture, in-service training and public debates:* – Élaboration du document en 2009 libellé in situ "Data Management" pour l'Université de Princeton: j'ai présenté et remis au professeur Leon Bottou mes séminaires de recherche en français et en anglais qui ont servi de base pour l'élaboration des séminaires en américain.
**Contracts with non-academic entities, co-financed theses:* – Contrat CIFRE 2009-2012 pour ma doctorante Solène Bienaise avec le Service Santé Industries Électriques et Gazières de France.

**Other*: – De 2007 à 2011 j’ai géré avec la cellule Valorisation et Recherche, le partenariat CEREMADE-ISTHMA, où Isthma est une société dont j’ai impulsé la création en 2004 sur la base de mes travaux de recherche dans le cadre de l’incubateur dont Paris Dauphine est partie prenante; le partenariat a pris fin en 2011, avec la vente à la société du brevet déposé par Dauphine et dont je suis co-auteur.

- **Gabriel Turinici**

**Articles and books in professional or technical reviews*: – article sur le contrôle quantique paru dans La Recherche.

**Patents and licences*: – contrat avec EDF (juillet-sept 2007).

**Contracts with non-academic entities, co-financed theses*: – thèse CIFRE avec BNP Paribas 2011-2013.

- **Francois-Xavier Vialard**

**Articles and books in professional or technical reviews*: – Shape Splines and Stochastic Shape Evolutions: A Second-Order Point of View. (QAM 2012)

– Invariant higher-order variational problems II: JNLS 2012

– Invariant higher-order variational problems: CMP 2011

– Diffeomorphic 3D Image Registration via Geodesic Shooting using an Efficient Adjoint Calculation. 2011

**Software for decision-making*: – uTilzreg: outils de recalage d’image par diffeomorphismes, disponible sur sourceforge.

– GMO detection statistical software OPACSA.

- **Yannick Viossat**

**Documents on different media contributing to the dissemination of scientific culture, in-service training and public debates*: – “Comment faire coopérer des individus égoïstes”, chapitre de la nouvelle brochure SMF-SMAI-SdFS “L’explosion des mathématiques”, à paraître.

**Conferences, debates, exhibitions organized for professionals or groups in society*: – Conférence à l’université ouverte de l’université Paris-Dauphine (destinée à l’ensemble du personnel de l’université)

7 Appendix. PhD supervisions and doctoral activities

7.1 Some key facts

- F. Forges is director of the Dauphine's Graduate School, M. Gubinelli is heading the mathematical program of the Graduate School.
- The mathematics program of Dauphine's Graduate school has currently 43 students.
- During the period 2007/2011, 32 PhD in mathematics were defended in CEREMADE.
- The average duration of a thesis was 42 month.

7.2 Individual contributions

• Giuseppe Benedetti

**Seminars for doctoral schools, summer schools for young researchers:* Summer School in Financial Mathematics 2011 (ETH Zurich), Séminaire Bachelier (Paris)

• Patrick Bernard

**PhD supervisions:*

–Joana Santos (thèse soutenue le 01/11/2011). Financement : Bourse du gouvernement portugais. Situation professionnelle après soutenance : ATER.

–Vito Mandorino (thèse soutenue le 01/09/2012). Financement : Allocation doctorale.

**PhD examining boards:* Rapports thèse: Figalli (2007), Jaulent(2008), Humilière(2008), Bounemoura(2010), Zavidovique (2010), Labrousse (2012).

Rapports HdR: Massart

Jury HdR: Figalli, Nazaret, Massart

**Seminars for doctoral schools, summer schools for young researchers:* Introduction to Weak KAM theory, Warwick, 2012.

The Lax-Oleinik semi-group, Lisbon, 2011.

The Cauchy problem for the Hamilton-Jacobi equation, Edimbourg, 2011.

• Patrice Bertrand

**PhD supervisions:*

–Lassad El Moubarki (thèse soutenue le 17/12/2009). Financement : En partie par le Larodec (Laboratoire de l'ISG) et en partie par le projet PHC UTIQUE . Situation professionnelle après soutenance : Maitre de conférences à l'université de SFAX (Tunisie).

**PhD examining boards:* Sergiu CHELCEA (2007), Marc LE POULIQUEN (2008), Lassad EL MOUBARKI (2009), Mohamed RAHAL (2010)

**Joint supervision of a PhD with a foreign University:* Encadrement scientifique de la thèse en cotutelle de Lassad EL MOUBARKI (avec côté tunisien l'encadrement scientifique de G. Bel Mufti et administratif de M. Limam - lab. Larodec de l'ISG à Tunis).

• Bruno Bouchard

**PhD supervisions:*

- Lihang Wang (thèse en cours) Financement : Cifre avec AXA.
- Adrien Nguyen Huu (thèse soutenue le 13/07/2012). Financement : CDD EDF. Situation professionnelle après soutenance : Postdoc at Fields Institute / McMaster University. .
- Ludovic Moreau (thèse en cours) Financement : Cifre avec Pacifica. Situation professionnelle après soutenance : En fin de thèse (soutenance en septembre 2012).
- Than Nam Vu (thèse soutenue le 17/10/2011). Financement : Allocation ministérielle. Situation professionnelle après soutenance : En attente d'un poste de chercheur au Vietnam..
- Minh Dang (thèse soutenue le 01/06/2011). Financement : Cifre avec Chevreux (C.A. SA). Situation professionnelle après soutenance : Equipe de recherche de Chevreux.
- Jean-François Chassagneux (thèse soutenue le 28/11/2008). Financement : Allocation ministérielle. Situation professionnelle après soutenance : Lecturer à Imperial College.

**PhD examining boards: Jury de HDR :*

- Membre du jury de Stéphane Crépey, Mathématiques financières et finance numérique, 2008.
- Coordination de la thèse de Hdr de Luciano Campi, Frictions de marché: coûts de transaction, asymétrie d'information et marché de l'énergie, 2010.

Jurys de thèse :

- Gregor Heyne : sous la direction de Ulrich Horst (Humboldt-Universität), Essays on Minimal Supersolutions of BSDEs and on Cross Hedging in Incomplete Markets, 2012.
- Nicolas Millot : sous la direction de Fabrice Abergel (ECP), Hedging Contingent Claims by Convex Local Risk-Minimization, 2012, rapporteur.
- Emilie Fabre : sous la direction de Nizar Touzi (Polytechnique), Quelques contributions au contrôle et aux équations rétrogrades en finance, 2012.
- Dylan Possamaï : sous la direction de Nizar Touzi (Polytechnique), A Journey through Second-Order BSDEs and other Contemporary Issues in Mathematical Finance, 2011.
- Xiaolu Tan : sous la direction de Nizar Touzi (Polytechnique), Stochastic control methods for optimal transportation and probabilistic numerical schemes for PDEs, 2011.
- Marcel Hoeschler : sous la direction de Peter Bank (TU-Berlin), Limit order book models and optimal trading strategies, 2011, rapporteur.
- Armand Nkoupeyou : sous la direction de Monique Jeanblanc et Anis Matoussi, Optimisation des portefeuilles d'actifs soumis au risque de défaut, 2010, rapporteur.
- Azmi Makhlof : sous la direction d'Emmanuel Gobet, Fractional regularity and stochastic analysis of discretizations; Adaptive simulation algorithm in credit risk, 2009, rapporteur.
- Dimitri De Valière : sous la direction de Youri Kabanov, Problèmes de non- arbitrage, de recouvrement et d'optimisation de consommation dans un marché financier avec coûts de transactions, 2009, rapporteur.
- Idris Kharroubi : sous la direction de Huyen Pham, EDS rétrogrades et contrôle stochastique séquentiel en temps continu en finance, 2009.
- Hao Wang : sous la direction de Said Hamadène, Equations Différentielles Stochastiques Rétrogrades Réfléchies et Applications au Problème d'Investissement Réversible et aux Equations aux Dérivées Partielles, 2009.
- Emmanuel Denis (Lepinette): sous la direction de Youri Kabanov, Marchés avec coûts de transaction : approximations de Leland et arbitrage, 2008, rapporteur.
- Céline Labart : sous la direction d'Emmanuel Gobet, EDSR: analyse de discrétisation et résolution par méthodes de Monte Carlo adaptatives - Perturbation de domaines pour les options américaines, 2007.
- *Seminars for doctoral schools, summer schools for young researchers:* Organisation de la European Summer School in Mathematical Finance, depuis 2007.
- *Design of training units:* Refonte du Master 2 recherche Masef. Préparation du précédent plan quin-

quennal en tant que responsable du master Masef. Préparation du nouveau plan en collaboration avec l'actuel responsable.

- **Luciano Campi**

- **PhD supervisions:*

- Matteo Del Vigna (thèse soutenue le 30/01/2012). Financement : Bourse Université de Pise.
 - Nicolas Langrené (thèse en cours) Financement : Paris 7.
 - Giuseppe Benedetti (thèse en cours) Financement : Bourse Crest.

- **Pierre Cardaliaguet**

- **PhD supervisions:*

- Christine Grün (thèse soutenue le 21/09/2012). Financement : Marie Curie Initial Training Network (FP7-PEOPLE-2007-1-1-ITN, No. 213841-2).
 - Anne Souquière (thèse soutenue le 29/10/2010). Financement : Bourse doctorale. Situation professionnelle après soutenance : Chef de division au CETMEF. .
 - Aurélien Monteillet (thèse soutenue le 17/11/2008). Financement : Bourse AMN. Situation professionnelle après soutenance : Enseignant en classe préparatoire, Brest..

- **PhD examining boards:* J. Renault (HDR, 2007), F. Gensbittel (Paris 1, 2010, rapporteur), R. Laraki (HDR, 2011), N. Forcadel (HDR, 2011), Q. Lin (Brest, 2011), G. Thouroude (X, 2012, rapporteur), X. Venel (thèse, 2012)

- **Seminars for doctoral schools, summer schools for young researchers:*

- Summer School “New trends in optimal control” (Ravello, Italy, Sept. 2012)
 - GNAMPA School “Differential equations and dynamical systems” (Gatea, juin 2012)
 - Ecole d’été en Calcul des Variations et Applications (CIRM, juil. 2011)

- **Guillaume Carlier**

- **PhD supervisions:*

- Aimé Lachapelle (thèse soutenue le 03/06/2010). Financement : bourse de doctorat. Situation professionnelle après soutenance : Ingénieur chez MFG Labs (Paris).
 - Lorenzo Brasco (thèse soutenue le 11/10/2010). Financement : bourse de doctorat. Situation professionnelle après soutenance : MCF a Marseille depuis 2011.
 - Anouar Houmia (thèse soutenue le 29/04/2011). Financement : bourse de doctorat. Situation professionnelle après soutenance : Assistant Professor en Arabie Saoudite.

- **PhD examining boards:*

- Jurys de thèse de doctorat: Vincent Iehlé (rapporteur), Francois Alter (rapporteur), Stéphane Bonneau, Manh-Hung Nguyen (rapporteur), Caroline Ventura, Olivier Kneuss (rapporteur, EPFL, Lausanne), Damien Bosc (rapporteur).
 - Jurys d’HDR : Yves Lucet (rapporteur), Cyril Imbert, Filippo Santambrogio, Marco Scarsini, Alfred Galichon.

- **Seminars for doctoral schools, summer schools for young researchers:* -Mini-cours Bachelier en juin 2012
 - Mini-cours a l’IMA (Minneapolis) en juin 2010 -Mini-cours a Santiago (Chili) en janvier 2009

- **Joint supervision of a PhD with a foreign University:* Cotutelle de thèse pour Lorenzo Brasco

• Isabelle Catto

**PhD supervisions:*

–Saber Trabelsi (thèse soutenue le 29/09/2008). Financement : Bourse de thèse (co-tutelle). Situation professionnelle après soutenance : Post-doctorat, Kaust Institute, Arabie Saoudite.

**PhD examining boards:*

– M. Garcia Arroyo (dir. Eric séré), Université Paris-Dauphine, 16 novembre 2011

– Jesús Montejo Gámez (dir. José Luis López), Universidad de Granada, Espagne, 25 février 2011

– Hadj Selem (dir. Laurent Di Menza), Université de Reims Champagne Ardenne, 13 décembre 2010

**Design of training units:* – Vice-doyenne de la formation du PRES PSL depuis avril 2012; conception et lancement d'un nouveau premier cycle en septembre 2012

– Depuis 2009, co-responsabilité de l'UE de mathématiques du L1 de Gestion et Economie Appliquée (750 étudiants, coordination de 24 enseignants)

• Pierre Cazes

**PhD supervisions:*

–Christian DERQUENNE (thèse soutenue le 01/02/2006).

**PhD examining boards:*

– Depuis 2007, j'ai été dans plus de 15 jurys de thèses. J'ai été en particulier rapporteur des thèses, suivantes : Ah-PINE(2007, Un. Paris 6), BETTANT-BOUGEARD(2007,Un. Rennes 2),JACOBOWICZ (2007, CNAM), LABIOD (2008, Un. Paris 6), HUSSON (2008, HDR, Un. Rennes 2), HANAFI (2009, HDR, Un. Paris Dauphine), KACEM (2010, Un. De Sousse).

– J'ai aussi été co-directeur de thèse de EL-MOURBAKI(2009, Un. Paris Dauphine).

– J'ai été aussi président du suivi de thèse de S. VERDUN, ancien élève du M2 ISF et président de son jury de thèse en février 2012 à l'ONIRIS à Nantes.

– J'encadre actuellement S. BIENAISE qui doit soutenir sa thèse courant 2013

• Laurent Cohen

**PhD supervisions:*

–Prasenjit SAHA (thèse interrompue) Financement : ecole doctorale dauphine.

–Jean-Baptiste FIOT (thèse en cours) Financement : Contrat Doctoral.

–Jose Alberto Iglesias Martinez (thèse en cours) Financement : Projet Européen FIRST.

–Oudom Somphone (thèse soutenue le 04/02/2009). Financement : CIFRE. Situation professionnelle après soutenance : Chercheur Philips.

–Adrien Auclair (thèse soutenue le 04/09/2010). Financement : CIFRE. Situation professionnelle après soutenance : Création d'entreprise.

–Fethallah Benmansour (thèse soutenue le 01/02/2010). Financement : Contrat Doctoral. Situation professionnelle après soutenance : Chercheur EPFL.

–Raphael Prevost (thèse en cours) Financement : CIFRE.

PhD examining boards:* Participation au Jury et/ou **rapporteur pour les thèses de O. Somphone, S. Pelletier et F. Benmansour (Dauphine), **D. Lesage** et N. Chenouard (ENST), **V. T. TA** (Caen), Nicolas Verbeke et A. Auclair (Paris 5), Nicolas Lermé (Paris-Nord), J. Mille et J. Olivier (Tours), **C. Allène** (ESIEE), P. Maurel (ENS Ulm), **M. P. Garcia** (Rennes), T. Lefevre et S. Cremer (Telecom Sud Paris), **R. Ben-Ari** (Tel Aviv University, Israel).

et au jury d'habilitation de Didier Auroux (Toulouse) et G. Peyré (Paris Dauphine, **coordinateur**).

**Seminars for doctoral schools, summer schools for young researchers:* Cours (10h) dans une école pour jeunes chercheurs, méthodes variationnelles et Imagerie biomédicale, Université de Toronto, Mai 2012.

• **Rose-Anne Dana**

**PhD examining boards:* – C Ventura, dec. 09, université Paris 1

- J. Gierlinger, sept. 10, Université de Toulouse 1
- Thai Ha-Huy, nov. 11, université Paris 1
- C.Reichlin, ETH Zurich oct. 12

• **Ngoc Minh Dang**

**PhD examining boards:*

- Nizar Touzi, Ecole Polytechniques
- Gilles Pagès, UPMC
- Bruno Bouchard, Paris Dauphine
- Frédéric Abgergel, Ecole Central Paris
- Jim Gatheral, CUNY New York
- Mathieu Rosenbaum, UPMC
- Charles-Albert Lehalle, CA Cheuvreux

• **Emmanuel Denis-Lépinette**

**PhD supervisions:*

- Tan Tran Quaoc (thèse en cours)

**PhD examining boards:* Jury dans la thèse de Dimitri De Vallière, Université de Besançon.

• **Edwin Diday**

**PhD supervisions:*

- Cherif MBALLO (thèse soutenue le 12/12/2005).
- Meryem IMAKOR (thèse en cours)
- Abdourahamane BALDE (thèse en cours)
- Ibrahima WAGNE (thèse en cours) Financement : Bourse gouvernementale du Sénégal.
- Baba dit Malley KANE (thèse en cours)
- Mohamed Chérif RAHAL (thèse soutenue le 21/01/2010). Financement : ATER.

• **Jean Dolbeault**

**PhD supervisions:*

- Gaspard Jankowiak (thèse soutenue le 00/00/2013). Financement : Bourse CNRS.
- Juan Campos (thèse soutenue le 00/12/2012). Financement : Allocation internationale.

**PhD examining boards:* 8/10/2007: soutenance de thèse d'Anne-Laure Dalibard
10/10/2007: soutenance de thèse de Vincent Calvez (rapporteur)

11/7/2008: soutenance HDR d'Ivan Gentil (coordinateur des travaux)
8/6/2009: soutenance de thèse de Dorian Le Peutrec
4/12/2009: soutenance de thèse de Gaël Raoul (Président du jury)
24/11/2010: soutenance de thèse de Kimiya Minoukadeh (rapporteur)
25/11/2010: soutenance d'HDR de Bruno Nazaret (coordinateur des travaux)
21/10/2011: soutenance HDR de Marjolaine Puel (Président du jury)
5/12/2011: soutenance de thèse d'Emmanuel Boissard (rapporteur)
**Joint supervision of a PhD with a foreign University:* Co-encadrement doctoral de Roberta Bosi (avec Anton Arnold), soutenance en 2007
Co-encadrement doctoral de Juan Mayorga (avec Patricio Felmer), soutenance en 2006

• Sophie Donnet

**PhD examining boards:*

- 2012 : membre du jury de thèse de Mathilde Bourigat. Directeur : Christian P. Robert.
 - 2011 : Membre du jury de thèse de Dorota Gajda. **Sujet** : Optimisation of algorithmic methods in a Bayesian context and dynamical modelisation of disease transmission in a heterogen population. **Directeurs** : Chantal Guihenneuc-Jouyaux (Université Paris-Descartes) et Jean Maccario (INSERM)
 - 2009 : Membre du jury de thèse de Aude Grelaud. **Sujet** : Selection biases and model choice in phylogenetic trees **Directeurs** : Jean-Michel Marin et Christian P. Robert
- *Other responsibilities for doctoral studies:* Depuis 2010 : Membre du comité de thèse de Clémence Rigaux. **Sujet** : Risk-benefit Analysis. Nutritional benefit versus food risk analysis in fruits and vegetables transformation. **Directeurs** : Isabelle Albert and Frédéric Carlin

• Romuald Elie

**PhD examining boards:* Vu Than Nam, 2011, soutenue a Dauphine

• Maria J. Esteban

**PhD examining boards:* Participation au jury d'HDR de Céline Grandmont, Philippe Gravejat, Mathieu Hillairet, Pauline Lafitte, Virginie Bonnaille-Noel et Gabriel Stoltz

• David Etinger

**PhD examining boards:* Omer Biran Arnaud Féral

**Seminars for doctoral schools, summer schools for young researchers:* séminaire "Théorie des contrats-enchères" (école doctorale Dauphine) séminaire "Information-contrats" (Ecole doctorale Cergy-Pontoise)

• Jacques Fejoz

**PhD supervisions:*

- Jessica Massetti (thèse en cours)
- Lei Zhao (thèse en cours)

- **Danielle Florens**

**PhD supervisions:*

–Rayan SULEIMAN (thèse en cours)

- **Nicolas Forcadel**

**PhD supervisions:*

–Zhiping Rao (thèse soutenue le 30/09/2013). Financement : Ecole Polytechnique.

- **Francoise Forges**

**PhD supervisions:*

–Heinrich Nax (thèse soutenue le 17/02/2011). Financement : Bourse, Oxford. Situation professionnelle après soutenance : Post-doc.

–Omer Biran (thèse soutenue le 17/06/2011). Financement : CNRS. Situation professionnelle après soutenance : Chef de projet informatique.

**Joint supervision of a PhD with a foreign University:* Co-direction avec Peyton Young (Oxford)

- **Olivier Glass**

**PhD supervisions:*

–Vincent Perrollaz (thèse soutenue le 09/12/2011). Financement : Allocation couplée. Situation professionnelle après soutenance : ATER.

–Matthieu Léautaud (thèse soutenue le 22/06/2011). Financement : Allocation couplée. Situation professionnelle après soutenance : Post-doctorant.

**PhD examining boards:*

– Rapporteur de la thèse de Hayk Nersisyan, Université de Cergy, décembre 2011

– Coordinateur de l'HDR de Matthieu Hillairet, Université Paris-Dauphine, Novembre 2011

– Membre du jury d'HDR de Nicolas Seguin, Université Pierre et Marie Curie, décembre 2011

– Membre du jury de thèse de Chloé Mullaert, Université Pierre et Marie Curie, décembre 2011

- **Bernard Goldfarb**

**Seminars for doctoral schools, summer schools for young researchers:* Séminaire de méthodes quantitatives pour doctorants de l'Ecole Doctorale de Dauphine (2007; 2008; 2009; 2010; 2011)

- **Philippe Gravejat**

**PhD examining boards:* Membre du jury de la thèse soutenue par Mauricio Garcia Arroyo à l'Université Paris Dauphine (novembre 2011).

- **Massimiliano Gubinelli**

- **PhD supervisions:*

- Remi Catellier (thèse en cours) Financement : Bourse Dauphine.
 - Khalil Chouk (thèse en cours) Financement : Bourse AXA.
 - Allez Romain (thèse en cours) Financement : ENS.

- **PhD examining boards:*

- Rapporteur et membre du jury pour la thèse de A. Sportiello (Ecole Normale Supérieure de Pise, 2009) sur les aspect combinatoires de certains modeles de mécanique statistique.
 - Membre du jury de F. Hernandez (Limites d'échelles pour des systèmes de particules, Paris Dauphine, 2010), A. Deya (Rough paths, Nancy, 2010), J. Sohier (Modeles de polymeres, Paris 7, 2010), M. Del Vigna (Information Asymmetry and Equilibrium Models in Behavioral Finance, cotutelle Paris-Dauphine et Université de Pise, 2011).
 - J'ai participé au jury d'HDR de J. Unterberger (Rough paths et analyse stochastique du mouvement Brownien fractionnaire, Nancy, 2010).

- **Bénédicte Haas**

- **PhD supervisions:*

- Robin STEPHENSON (thèse en cours)

- **Matthieu Hillairet**

- **PhD examining boards:* Octobre 2009 : Membre du jury de thèse de Claire Bost (Laboratoire Jean Kuntzmann, Université Grenoble I)

- **Seminars for doctoral schools, summer schools for young researchers:* Aout 2011 : Mini-cours "Close-to-contact dynamics of solids inside a viscous fluid" pour l'école d'été "Fluid solid interactions for biological applications" à Prague.

- **Rachid Id Brik**

- **PhD examining boards:* Monsieur. Gabriel TURINICI, Paris Dauphine Monsieur. Gianluca FUSAI, Universita' del Piemonte Orientale Monsieur. Rudiger KIESEL Univarsitat Duisburg-Essen Monsieur. Patrice PONCET, ESSEC et Université Sorbonne Monsieur. Andrea RONCORONI, ESSEC

- **Seminars for doctoral schools, summer schools for young researchers:* Summer School à l'UBC "Perceiving, measuring and managing risk: illiquidity, long-term risk, natural resources" du 30 Juin au 11 Juillet à Vancouver CANADA

- **Vincent Iehlé**

- **Seminars for doctoral schools, summer schools for young researchers:* – Cours "Evaluation des actifs en Equilibre Général", Master 2 Recherche en Economie Monétaire et Financière (EMFI), Université Paris-Dauphine, 2012.

- Cours "Game Theory", PhD Program, Kansas University, USA, 2007.
- Cours "Game Theory", PhD Program, Università di Salerno, Italie, 2007.

- **Cyril Imbert**

**PhD examining boards*: Décembre 2008, Brest. Aurélien Monteillet (directeur de thèse : P. Cardaliaguet)

- **Elyès Jouini**

**PhD supervisions*:

- Jérôme Renault (thèse soutenue le 30/11/2007).
- Pierre-Olivier Ruether (thèse soutenue le 14/06/2012). Financement : Contrat doctoral.
- Selima Ben Mansour (thèse soutenue le 30/04/2009). Financement : Contrat doctoral. Situation professionnelle après soutenance : Enseignant-Chercheur (Tunisie).
- Vincent PORTE (thèse en cours)

- **Idris Kharroubi**

**Seminars for doctoral schools, summer schools for young researchers*: Organisation de la Journée Bachelier des doctorants.

- **Pierre-Louis Lions**

**PhD supervisions*:

- Anne-Laure DALIBARD (thèse soutenue le 08/10/2007). Financement : AMN. Situation professionnelle après soutenance : Chargée de recherches au CNRS (DMA, ENS Ulm).
- Olivier Guéant (thèse soutenue le 30/06/2009). Financement : Privé. Situation professionnelle après soutenance : Maître de conférences à l'Université Paris-Diderot.

- **Victor Filipe Martins da Rocha**

**PhD supervisions*:

- Rodrigo Jardim Raad (thèse soutenue le 28/02/2011). Financement : CNPq . Situation professionnelle après soutenance : Professeur assistant, UFMG (Universidade Federal de Minas Gerais, Brazil).

- **Julien Mille**

**Joint supervision of a PhD with a foreign University*: Thèse réalisée en co-tutelle avec l'ISG de Tunis

- **Jean-Marie Mirebeau**

**Seminars for doctoral schools, summer schools for young researchers*: Cours de l'école doctorale de

l'Université Paris-Dauphine "Conception et optimisation de maillages pour la simulation numérique", 12h d'enseignement.

- **Stéphane Mischler**

- **PhD supervisions:*

- Justine Scher (thèse en cours) Financement : Allocataire.
 - Cristoball Quiniao (thèse en cours) Financement : Bourse chilienne.
 - Isabelle Tristani (thèse en cours) Financement : Allocataire Moniteur.
 - Kleber Carrapatoso (thèse en cours) Financement : Allocataire Moniteur.

- **PhD examining boards:* F. Charles (Décembre 2009, rapporteur), B. Haas (HDR, Novembre 2010), A. Frouvelle (Juin 2011, président), P. Gabriel (Juin 2011), E. Hingant (Septembre 2012, rapporteur), T. Rey (Septembre 2012, rapporteur), D. Broizat (Décembre 2012, rapporteur)

- **Seminars for doctoral schools, summer schools for young researchers:* Cours sur les modèles de fragmentation durant l'Ecole d'été "Modélisation en dynamique des populations et évolution", La Londe les Maures (Var), 10-14 Septembre 2012, web: <http://www.cmap.polytechnique.fr/~ecolemathbio2012/>

- **Other responsibilities for doctoral studies:* Encadrement post-doctoral de José Alfredo Cañizo en 2006-2007 (financement de l'ANR SPINADA) et 2007-2008 (financement par une bourse du gouvernement espagnol) sur les équations de coagulation. J.A. Cañizo est actuellement post-doctorant à l'université de Cambridge

- **Clément Mouhot**

- **PhD examining boards:* Mouhamad El Safadi, Sabine Hittmeir, Raphaël Roux, Daniel Han-Kwan

- **Stefano Olla**

- **PhD supervisions:*

- Giada Basile (thèse soutenue le 01/06/2007). Financement : Bourse Ministère Italie. Situation professionnelle après soutenance : 2007-2011 Postdoc a Berlin et Bonn, Allemagne, depuis 2011, ricercatore Università de Rome 1.

- Freddy Rolando Hernandez Romero (thèse soutenue le 10/03/2010). Financement : allocation ministere et monitorat. Situation professionnelle après soutenance : Professeur associe en Brasil..

- **PhD examining boards:* Plusieurs jury de doctorat, HDR, rapporteur et ou membre.

- **Seminars for doctoral schools, summer schools for young researchers:* Cours pour l'école doctorale de Lublin, Pologne, Octobre-Novembre 2011.

- **Joint supervision of a PhD with a foreign University:* MAkiko Sasada, Université Tokyo, Japon, cotutelle avec prof. T. Funaki (2009-2011, thèse soutenue à Tokyo en février 2011).

- **Gabriel Peyré**

- **PhD supervisions:*

- Samuel Vaiter (thèse en cours) Financement : Contrat ERC SIGMA-Vision.
 - Hugo Raguét (thèse en cours) Financement : Bourse doctorale EDIMO.
 - Nicolas Schmidt (thèse en cours) Financement : Ecole doctorale EDIMO.

**PhD examining boards:*

- Rapporteur de thèse de Yanniv Gur (Tel Aviv University, Mars 2009), Boris Mailhé (INRIA, Rennes, Dec. 2009), Jean-Marie Mirebeau (Paris 6, Dec. 2010), Bruno Galerme (ENS Cachan, Dec. 2010).
- Comité de thèse de Xavier Delaunay (CNES, Toulouse, Nov. 2008), Pierre Maurel (ENS, Paris, Dec. 2008), Nicolas Thorstensen (ENPC, Dec. 2009), Sheraz Khan (Ecole Polytechnique, Jan. 2010), François-Xavier Dupé (ENSICAen, Jan. 2010), Arnaud Woiselle (CEA Saclay, Dec. 2010), Emilien Tlapale (INRIA Sophia, Jan. 2011).

**Seminars for doctoral schools, summer schools for young researchers:*

- Ecole doctorale "Biomedical Image Analysis Summer School", <http://cvc-biomed.centrale-ponts.fr/>
- Ecole Analyse multirésolution pour l'image, <http://multiresolution.liris.cnrs.fr/>

• Anthony REVEILLAC

**PhD examining boards:* Examinateur de la thèse de M. H. Henkel : "Range-based parameter estimation in diffusion models" soutenue à l'université Humboldt de Berlin le 24 septembre, 2010 (directeur de thèse: M. Markus Reiss).

• Rémi Rhodes

**PhD examining boards:* Charles Manson, Université de Warwick, Angleterre, directeur de thèse: Martin Hairer.

• Vincent Rivoirard

**PhD supervisions:*

- Laure Sansonnet (thèse en cours) Financement : Bourse de l'Université Paris Sud.

• Christian Robert

**PhD supervisions:*

- Gholamhossein gholami zorgabad (thèse soutenue le 10/02/2008). Financement : gouvernement Iranien. Situation professionnelle après soutenance : Assistant Professor, Iran.
- Billy AMZAL (thèse soutenue le 01/12/2004). Financement : ENGREF. Situation professionnelle après soutenance : Assessment Methodology Unit, European Food Safety Authority, Parma, Italy.
- Stéphane GREGOIR (thèse soutenue le 10/10/2009). Financement : INSEE. Situation professionnelle après soutenance : Professeur EDHEC, Doyen de la Faculté et de la Recherche, .
- Roberto Casarin (thèse soutenue le 03/11/2007). Financement : bourse italienne. Situation professionnelle après soutenance : assistant Professor at Università di Brescia.
- Aude Grelaud (thèse soutenue le 15/12/2009). Financement : bourse CREST, puis ATER. Situation professionnelle après soutenance : postdoc Rutgers University (USA).
- Mathilde Bouriga (thèse soutenue le 27/04/2012). Financement : EDF. Situation professionnelle après soutenance : Embauche EDF.

**PhD examining boards:* information non conservée

**Seminars for doctoral schools, summer schools for young researchers:*

- Bayesian Statistics, ISBA 2008, Hamilton Island, 20-21 June 2008.

- Bayesian model choice, Young European Statistician Workshop (YES-III), Eurandom, Eindhoven, 5-7 Oct. 2009
- MCMC Theory, Wharton University, Philadelphia, 1-10 November 2010 - Universidad Autonoma Madrid (UAM), Madrid, 27-31 October 2009
- Bayesian Core - Hierarchical models in Ecology, Banff Research Station, Banff, Canada, 10-12 September 2010 - Frontiers of Statistical Decision Theory, San Antonio, USA, 17-20 March 2010 - Gran Paradiso National Park, Cogne, Italy, 13-17 July 2009 - Universita di Padova, Italy, 28 April 2009 - Queensland University of Technology, Brisbane, Australia, 3-10 August 2008 - Boston Chapter of the ASA, Boston (USA), 16 October 2007
- ABC methods, Universita La Sapienza, Roma, 27 Feb-2 Mars 2012
- **Other responsibilities for doctoral studies:* Reviewer of the Ph.D theses of: Roger Collet (U. Paris 1, 2007) Ana Arribas Gil (U. Paris 11, 2007), Roman Holenstein (U. British Columbia, Vancouver, 2009), Dennis Prangle (University of Lancaster, 2011), Oliver Ratmann (Imperial College London, 2009), Alireza Roodaki (Supélec, 2012), Virgile Caron (U. Paris 6, 2012)

• Judith Rousseau

**PhD supervisions:*

- (thèse en cours)
- Soleiman Khazaei (thèse soutenue le 17/10/2011). Financement : Bourse en Iran. Situation professionnelle après soutenance : Enseignant chercheur en Iran.

**PhD examining boards:* 7 participations à des jurys de thèse 3 rapports de thèses

**Seminars for doctoral schools, summer schools for young researchers:* Cours pour l'école YES d'Eindhoven

• Julien Salomon

**PhD supervisions:*

- Kamel Riahi (thèse soutenue le 01/07/2012). Financement : ANR. Situation professionnelle après soutenance : ATER.
- Aimé Lachapelle (thèse soutenue le 03/06/2010). Financement : Ecole doctorale EDIMO. Situation professionnelle après soutenance : Salarié en entreprise privée.

• Filippo Santambrogio

**PhD examining boards:* – Aimé Lachapelle (Dauphine, 2010)

• Eric Séré

**PhD supervisions:*

- Jérémy Sok (thèse en cours) Financement : Allocation doctorale.
- Loïc Le Treust (thèse en cours) Financement : Allocation doctorale.
- Antoine Levitt (thèse en cours) Financement : Allocation Ile de France.
- Simona ROTA NODARI (thèse soutenue le 06/07/2011). Financement : Allocataire Moniteur. Situation professionnelle après soutenance : postdoctorat à l'université Pierre et Marie Curie.
- Mauricio GARCIA ARROYO (thèse soutenue le 16/11/2011). Financement : Allocataire Moniteur. Situation professionnelle après soutenance : ATER à Paris-Dauphine.

**PhD examining boards*: -rapporteur de la thèse d'Amélie Deleurence (ENPC, 2008) -membre du jury d'HDR de Mihai Maris (Universite de Franche-Comte, 2008) -coordinateur de l'HDR de Philippe Gravejat (Paris-Dauphine, 2012).

• Mireille Summa

**PhD supervisions*:

–Solène Bienaise (thèse en cours) Financement : CIFRE (Centre de santé des industries gazières et électriques).

**PhD examining boards*:

–Royal Holloway University of London (U.K.), 2011 Dmitri Devetyarov (Confidence and Venn machines and their applications to proteomics)

– Università Federico Secondo (Italia), 2012 Carlo Drago (The Density Valued Data Analysis in Temporal Data) Cristina Tortora (Non Hierarchical Clustering Methods on Factorial Subspaces)

– Paris-Dauphine (France) 2008 Chiraz Ben Ali(Impact de la structure de propriété sur la divulgation d'informations financières des sociétés cotées françaises)

**Seminars for doctoral schools, summer schools for young researchers*:

– 2007 2008 2009 2010 2011 2012 Séminaires Méthodes Quantitatives pour la Recherche Ecole Doctorale de Dauphine (DME)

– 2010-2011 Séminaire Apprentissage Statistique et Science des Données Ecole Doctorale de Dauphine (CEREMADE)

**Joint supervision of a PhD with a foreign University*: Dans le cadre d'un ERASMUS RECHERCHE avec l'Università Federico II de Napoli Italia co encadrement de la thèse de Cristina Tortora hébergée pendant six mois au CEREMADE à Paris Dauphine

**Design of training units*: 2010-2011 trois ateliers de formation CNRS " Analyse Géométrique des Données" (CEVIPOF SciencePo-Paris,MAP5 Paris 5,CEREMADE Paris-Dauphine)

• Rabah Tahraoui

**PhD supervisions*:

–Anouar Houmia (thèse soutenue le 29/04/2011). Situation professionnelle après soutenance : Poste de maître de conférence en Arabie Saoudite.

**PhD examining boards*: Rapporteur de la thèse de Moez Ayachi et membre du jury-(directeur Joël Blot)-Univ. Paris1: soutenance le 06-10-2009.

• Gabriel Turinici

**PhD supervisions*:

–Rachid ID BRIK (thèse soutenue le 05/12/2011). Financement : bourse externe. Situation professionnelle après soutenance : en recherche de post-doc.

–Andreea GRIGORIU (thèse soutenue le 26/11/2010). Financement : allocation du ministère. Situation professionnelle après soutenance : post-doctorant à Princeton University.

• Vincent Vargas

**PhD supervisions:*

–Romain Allez (thèse en cours) Financement : Allocataire moniteur ENS.

• **Yannick Viossat**

**PhD examining boards:* Jury de thèse de Pierre Coucheney (août 2011, université de Grenoble)

7.3 Doctoral school courses

2007–2008.

- S. Olla (CEREMADE), Macroscopic non–equilibrium behavior of chains of oscillators (18h)
- P. Bernard (CEREMADE), Solution de viscosité, théorie KAM faible et hamiltonienne (21h)
- F. Bolley, B. Nazaret et F. Santambrogio (CEREMADE), Transport optimal & applications (18h)
- G. Peyré (CEREMADE), Méthodes variationnelles et parcimonieuses en traitement des signaux et des images (18h)
- C. Mouhot (CEREMADE), Irreversibilité partielle, globale et hypocoercitive (18h)

2008–2009.

- S. Olla (CEREMADE), Interacting particle systems, statistical mechanics and probability theory (18h)
- J.-M. Lasry (CEREMADE), Mean Field Games et applications (8h)
- I. Gentil (CEREMADE), Critère de courbure-dimension: applications aux inégalités fonctionnelles et à la convergence de diffusions (8h). Chaque séance du cours s’est prolongée avec le groupe de travail du projet EVOL: ”Equations d’évolutions et convergence à l’équilibre”.
- F. Bolley, B. Nazareth et F. Santambrogio (CEREMADE), Transport optimal & applications (18h).

2009–2010.

- Série de séminaires sur ”Apprentissage, Science des Données et Applications/Learning and Data”: B. Le Roux, J. Chiche, analyse géométrique des données; P. Bertrand, A. Chervonenkis, A. Gammerman, I. Nouretdinov, apprentissage; M. Bardos, R. Emilion, M. Gettler-Summa, C. Pardoux, applications: environnement textuel, marketing, transport, épidémiologie, gestion, banque
- M. Jara (CEREMADE), Méthodes de couplage pour des chaînes de Markov (8h)
- C. Mouhot (CEREMADE), Approche mathématique de l’amortissement Landau (8h)
- I. Ekeland (CEREMADE), Prise de décision à très long terme: le cas du changement climatique
- S. Mischler, C. Mouhot, E. Trizac et B. Wennberg. Quantification de la propagation du chaos (12h)

2010–2011.

- L. Campi, E. Denis (CEREMADE), Introduction to the theory of transaction costs in financial markets (12h)
- C.P. Robert (CEREMADE), Reading seminar in Statistical Classics (12h)
- C. Garban (ENS Lyon), Hypercontractivité, fonctions Booléennes et percolation (12h)
- R. Monneau, Homogénéisation de la dynamique de particules en interactions (12h)
- J. Werner (Univ Minnesota), The theory of bubbles (12h)

2011–2012.

- T. Mikosch, Théorie des valeurs extrêmes et applications (15h)
- S. Mischler. Extension du théorème spectral pour une classe d’EDP linéaires (12h)
- J.-M. Mirebeau. Construction et adaptation de maillages pour la simulation numérique (12h).
- I. Ekeland. Méthodes variationnelles et dualité: une introduction (4h)
- S. Olla. From microscopic dynamics to thermodynamics: a “classical” approach through hydrodynamic limits. ”Thermodynamics and Statistical Mechanics. (9h)

