

## Michel Verleysen: curriculum vitae

### *Personal details*

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*professional address* Université Catholique de Louvain (UCL)  
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*born* Uccle (Belgium), October 27, 1965

*citizenship* Belgian

*marital status* Married

### *Diplomas*

Qualification for university teaching ("Agrégation de l'Enseignement Supérieur"), UCL, 2001 :  
"Machine learning of high-dimensional data: local artificial neural networks and the curse of dimensionality"

Ph.D., UCL, 1992 : "Neural networks and associative memories for vision: from theory to VLSI"

Electrical engineer (microelectronics option), magna cum laude, UCL, 1987. Final work: "Design and realization of a speech processor and application to a digital answering machine".

### *Positions at UCL*

- Professor UCL: from October 2006
- Honorary research director FNRS: from October 2006
- Research director FNRS: from October 2005.
- Senior research associate FNRS: October 2001 – September 2005.
- Lecturer UCL : from October 2000.
- Research associate FNRS : October 1995 - September 2001.
- Invited lecturer UCL : October 1996 - September 2000.
- Post-doctoral researcher FNRS : October 1993 - September 1995.
- Post-doctoral researcher UCL : October 1992 - September 1993.
- Research assistant UCL, on the CEE-ESPRIT-BRA ELENA contract : June 1992 - September 1992.
- Civil service : October 1990 - May 1992 done (until end 1991) at UCL.
- IRSIA Ph.D. fellowship: October 1987 - September 1990 at UCL (Microelectronics laboratory).

### *Stays abroad*

- Invited professor at Paris I - Panthéon – Sorbonne University (France), 1 month each year since 2002.
- Invited professor at Evry Val d'Essonne University (France), 1 month in 2001.
- Invited professor at EPFL (Ecole Polytechnique Fédérale de Lausanne - Microinformatics laboratory) from January to May 1992

## **Research topics**

- Machine learning and computational intelligence.
- Theory and algorithms for artificial neural networks.
- Vector quantization and classification (nonlinear multivariate statistical analysis).
- Integrated intelligent sensors.
- Biomedical data and signal analysis.
- Image and pattern recognition.
- Analog and digital VLSI circuits for machine learning.
- Algorithmic constraints on VLSI implementations of neural networks.
- Biomedical VLSI circuits.

## **Publications and invited talks**

- More than 250 publications in scientific journals or communications to scientific conferences with review committee:
  - 3 books
  - 8 book chapters
  - 53 journal papers
  - 35 papers in collective books published after a conference
  - 138 communications to conferences
  - 17 edited books, conference proceedings and journal special issues  
(complete list available at <http://www.dice.ucl.ac.be/~verleyse/publications.htm>)
- Recent invited talks at international conferences (non-exhaustive list):
  - ESTSP 2007, European Symposium on Time Series Prediction, "Time series prediction and the curse of dimensionality", Helsinki (Finland), 7-9 February 2007.
  - IWANN'05, International Work-Conference on Artificial Neural Networks, "The curse of dimensionality in data mining and time series prediction", Vilanova i la Geltrú, Barcelona (Spain), 8-10 June 2005.
  - LEARNING'04, "Learning High-Dimensional Data with Artificial Neural Networks", Elche (Spain), 20-22 October 2004.
  - ACSEG 2003, Connectionist Approaches in Economics and Management Sciences, "Testing neural models: How to use resampling techniques?", Nantes (France), 20-21 November 2003
  - Mathematical finance, satellite meeting to AMAM03, Applied Mathematics and Applications of Mathematics, "Artificial neural networks in financial applications", Nice (France), 14-15/02/2003
  - LFTNC 2001: NATO Advanced Research Workshop on Limitations and Future Trends in Neural Computing, "Learning high-dimensional data", Siena (Italy), 22-24 October 2001.
- Recent invited seminars (non-exhaustive list):
  - Feature selection with mutual information and resampling; Dagstuhl seminar "Similarity-based clustering and its application to medicine and biology", Dagstuhl (Germany), 25-30 March 2007.
  - Sélection de variables par information mutuelle et rééchantillonnage; Université Paris 1 Panthéon Sorbonne, SAMOS-MATISSE-CES, Paris (France), 23 February 2007.
  - Time series prediction, Contactcenters.be, Telindus, 15 March 2005.
  - Fast Bootstrap for model selection. Université Paris 1 – Panthéon – Sorbonne, SAMOS (France), 5 November 2004
  - Non-linear analysis of high-dimensional data with artificial neural networks. UCL, IAP Dynamical Systems and Control: Computation, Identification and Modeling study day (Belgium), 24 March 2004
  - Learning high-dimensional data with artificial neural networks. Université Lyon 2, ERIC (France), in DEA ECD, "Extraction de Connaissances à partir des Données", 29 January 2004
  - Long-term time series forecasting using SOMs: the double vector quantization method. UCL Machine Learning Group (Belgium), 2 September 2003
  - Learning high-dimensional data. INSERM, Paris (France), 6 December 2002
  - Non-linear models and model selection for spectral data. Danone, Paris (France), 25 November 2002.
  - Radial-Basis Function Networks. Danone, Paris (France), 25 November 2002.
  - Artificial Neural Networks: general overview and specific signal processing model. Altran, Brussels (Belgium), 18 November 2002.
  - Statistical resampling for artificial neural network model selection. Université Paris 1 – Panthéon – Sorbonne, SAMOS (France), 11 October 2002
  - Nonlinear projections. Université Paris 1 – Panthéon – Sorbonne, SAMOS

- (France), 14 June 2002
- Radial-Basis Function Networks. Université Paris 1 – Panthéon – Sorbonne, SAMOS (France), 22 March 2002
- Neural network learning: the difficulties of high-dimensional data. Université Paris 1 – Panthéon – Sorbonne, SAMOS (France), 25 January 2002
- Problèmes autour des données en grande dimension, INPG LIS, 29 October 2001.

#### *Awards*

- Best paper award at the Independent Component Analysis 2007 conference: "Is the general form of Renyi's entropy a contrast for source separation?" Frédéric Vrins, Dinh-Tuan Pham, Michel Verleysen.
- Winner of the "Large Scale Ill-Conditioned ICA Problem" data analysis competition at the Machine Learning for Signal Processing 2006 conference, IEEE Signal Processing Society.

#### *Teaching at UCL*

- ELEC2870 (previously ELEC3190) "Artificial neural networks" (from 1994)
- FSAB 1101 "Mathematics" (from 2004)
- ELEC2525 "Introduction to digital electronics" (from 2003)
- FSA 3010 "Principles of scientific communication" (from 1998)
- FSA 2754 "Complements of electronics" (from 1996 to 2004)
- ELEC 2870 "Adaptive systems" (from 1994 to 2002)
- FSA 1440 "Mathematics" (in 2003).
- FSA 1340 "Mathematics – numerical analysis" (in 2002 and 2003).
- FSA 1440 "Mathematics – numerical analysis" (in 2001).
- ELEC 2560 "Integrated circuits technology" (in 1998)
- Assistant for several electronics courses between 1988 and 1993: Integrated circuits (ELEC 2570), Design and analysis of linear integrated circuits (ELEC 2650), Organization and architecture of integrated circuits (ELEC 2590), Electronic circuits 3 (ELEC 2640), Complements of electronics (FSA 2754).

#### *Teaching outside UCL*

Non-exhaustive list:

- "Bottlenecks in Machine Learning", in "Frontiers in information processing and telecommunications", doctoral school Universidad Carlos III de Madrid, 12-14 July 2006.
- "High-dimensional data" in "Artificial Perception" doctoral school, Universidad del Pais Vasco, Spain, January 2005, June 2006 and June 2007.
- "Independent Component Analysis and Nonlinear Projections" in "Artificial Perception" doctoral school, Universidad del Pais Vasco, Spain, January 2005, June 2006 and June 2007.
- Many seminars given at: Paris I-Panthéon-Sorbonne university (France), Czech Academy of Sciences (Prague, Czech republic), Ecole Polytechnique Fédérale de Lausanne (Switzerland), Institut National Polytechnique de Grenoble (France), at UCL, at the SRBII (Société Royale Belge des Ingénieurs et des Industriels), etc.
- "Programming environment for neural networks" in the "Una vision actual de las redes neuronales artificiales" course, Univ. de Malaga, September 1995.
- Analog electronics, ISEN (Institut Supérieur d'Electronique du Nord, Lille), February 1991 and January 1995.
- DEA in cognitive sciences, "VLSI implementations of neural networks", INPG (Institut National Polytechnique de Grenoble), February 1993 and 1994.
- Continued formation: "Artificial neural networks", UCL, February 1993 and 1994.
- "Neural networks models", F.Blayo, M.Verleysen, Nîmes, October 1993.
- Postgraduate course in informatics: "Biological and artificial neural networks", Ecole Polytechnique Fédérale de Lausanne, February-May 1992, and February-March 1993.
- "Realizations of artificial neural networks: VLSI, machines and neural computers", Nîmes, November 1992 and October 1993.
- Cours EUROCHIP "VLSI for signal processing: specialized architectures for artificial neural networks", UCL, October 1992.
- Cours ERASMUS 6-Angle "Artificial Neural Networks", UCL, April 1992.
- Cours EUROCHIP "VLSI Design Skills: réseaux de neurones artificiels", UCL, May 1990.

## PhD supervision

### *supervisor or co-supervisor*

- Arnaud De Decker, "EEG analysis", in progress.
- Gaël de Lannoy, "Epilepsy crisis anticipation" (co-supervisor with J. Delbeke), in progress.
- Catherine Krier, "Spectrometric data analysis", in progress.
- Réjane Rousseau, "Biomarkers quantification and detection in  $^1\text{H-NMR}$  spectroscopy" (co-supervisor with B. Govaerts), in progress.
- Simon Dablemont, "Modeling and prediction of high-frequency financial assets with artificial neural networks associated to pattern classification and dynamic changes forecasting", in progress.
- Luh Yen, "Support Vector Machines for supervised classification of high-dimensional data" (co-supervisor with M. Saerens), in progress.
- Nicolas Delannay, "Artificial neural networks for functional data: design and learning of Radial-Basis Function networks", 23 October 2007.
- Damien François, "High-dimensional data analysis: learning with artificial neural networks" (co-supervisor with V. Wertz), 10 January 2007.
- Geoffroy Simon, "Long-term time series prediction with artificial neural networks", in progress.
- Frédéric Vrins, "Independent Component Analysis for non-invasive fetal ECG extraction", in progress.
- Cédric Archambeau " Probabilistic Models in Noisy Environments and their Application to a Visual Prosthesis for the Blind" (co-supervisor: J. Delbeke), 26 September 2005.
- John Lee "Analysis of high-dimensional numerical data: From principal component analysis to nonlinear dimensionality reduction and blind source separation", December 2003.
- Nabil Benoudjit "Variable selection and neural networks for high-dimensional data analysis: Application in infrared spectroscopy and chemometrics", November 2003.
- Nicolas Donckers "Design of analog low-power micro-systems for data acquisition ", in progress.
- Amaury Lendasse, "Time series forecasting with artificial neural networks" (co-supervisor with V. Wertz), October 2003.
- Carlos Dualibe (UCL and Universidad Catolica de Cordoba, Argentina), "VLSI realizations for fuzzy logic and artificial neural networks ", August 2001.
- Pascal Doguet, "Design of an integrated stimulator for a visual prosthesis" (co-supervisor with C. Trullemans), September 2000.

### *accompanying committee member*

- Konstantinos Gaitanis, " Analyse automatique de comportements de groupes par réseaux Bayésiens dynamiques" (advisor B. Macq), in progress.
- Xavier Desurmont, "Architectures et techniques de l'analyse d'image pour les systèmes de surveillance intelligents", in progress.
- Quentin Noirhomme, "Mapping of Brain functions" (advisor B. Macq), in progress.
- Michaël Demeyere, "Métrologie dimensionnelle sans contact par triangulation laser sous éclairage structure: développement de nouveaux instruments pour applications de terrain" (advisor C. Eugène), 14 March 2006.
- Pierre-François D'Haese, "Optimal placement of deep brain stimulators (advisor B. Macq), 27 January 2006.
- Benoît Georis, "Program supervision techniques for easy configuration of video understanding systems" (advisor B. Macq), 23 January 2006.
- Lotfi Guedria, "Modélisation et spécification des systèmes complexes de traitement de signal temps réel" (advisors J.D. Legat, L. Vandendorpe), UCL-CETIC, in progress.
- Damien Hubaux, "Nouvelle méthodologie de conception de systèmes de traitement de signal" (advisors J.D. Legat, L. Vandendorpe), in progress.
- Julien Duron, "Séparation des composantes du paramètre de susceptibilité magnétique en imagerie par résonance magnétique (IRM) : application à l'oxymétrie" (advisors B. Macq, R. Demeure), UCL, in progress.
- Medhy Oozeer, "La stimulation électrique extracellulaire : amélioration de la sélectivité" (advisors V. Legat, J. Delbeke), UCL, in progress.
- Laurent Demeus, "Méthodes de conception de circuits analogiques basse tension pour systèmes de communication et applications en technologie CMOS-SOI" (advisor D. Flandre), UCL, in progress.
- Damien Douxchamps, " Multidimensional photogrammetry of short-lived events" (advisor B. Macq), UCL, 18 October 2004.
- Jacek Czyz, " Decision fusion in identity verification using facial images" (promoteur L.

Vandendorpe), UCL, 12 December 2003.

- Philippe Thissen, "Architectures de circuits massivement parallèles pour la classification par méthodes neuronales" (advisor: J.D. Legat), UCL, 18 November 1996.

#### *Participation to juries*

##### *French Ph.D. supervision habilitation*

- Bernard Girau, Université Nancy 2, 14 Décembre 2007.
- Hélène Paugam-Moisy, ENS Lyon, janvier 1997.

##### *Ph.D. theses (in addition to above lists)*

- Aurélien Hazan, "Interaction robot/environnement dans le cadre de la psychologie écologique. Implémentation des affordances", Université d'Evry (France), 11 December 2007.
- Thiago Turchetti Maia, "Transductive Learning Based On Information Theory and Statistical Learning Theory", Universidade Federal de Minas Gerais, Brazil, 14 July 2007.
- Olivier Martin, "Mixed reality interactive storytelling : acting with gestures and facial expressions", UCL, 4 July 2007.
- Jarkko Venna, "Dimensionality Reduction for Visual Exploration of Similarity Structures", Helsinki University of Technology, 8 June 2007.
- Md. Kaled Masukur Rahman, "Extension of Self-Organizing maps to Structured Data Domains", City University of Hong Kong, 23 March 2007.
- Quentin Noirhomme, "Localisation of brain functions : stimulating brain activity and source reconstruction for classification", UCL, 18 October 2006.
- Manuela Alba Bueno, "Study and characterization with scan microscopies of employable nano-materials in new architectures for molecular memories" (advisors K. Goser, I. Rojas, A.Prieto), University of Granada (Spain), 5 May 2006.
- Sylvain Lespinats, "Style du génôme exploré par analyse textuelle de l'ADN" (advisor Bernard Fertil), Université Pierre et Marie Curie (Paris, France), 10 April 2006.
- Cédric De Roover, "Video object segmentation: driving active contours based on watershed boundaries" (advisor B. Macq), 27 March 2006.
- Yacin Jerbi, "Evaluation des options et gestion des risques financiers par les réseaux de neurones et les modèles à volatilité stochastique" (advisors M. Cottrell, F. Abid), Université Paris I Panthéon Sorbonne, 20 February 2006.
- Jérôme Blancher, "Nouveau critère pour analyser la stabilité des distances de voisinage sur les cartes auto-organisatrices" (advisors G. Lamarque, R. Harba), Université d'Orléans, 19 December 2005.
- Bart Hamers, "Kernel models for large scale applications" (advisor B. De Moor), Katholieke Universiteit Leuven, June 2004.
- Isabelle De Macq, "Hyperrectangular space partitioning trees" (advisor L. Simar), UCL, May 2004.
- Brieux Conan-Guez, "Modélisation supervisée de données fonctionnelles par perceptron multi-couches", Univ. Paris IX Dauphine, 18 December 2002.
- Fernando Silveira, "Low power analog IC design and optimization in bulk and SOI CMOS technologies in view of application to pacemakers", UCL, 6 September 2002.
- Vincent Dessart, "SOI specific analog techniques for low-noise high-temperature or ultra-low power circuits" (promoteurs J.P. Colinge, D. Flandre), UCL, 20 April 2001.
- Jordi Sole i Casals, "Contribucio a la separacio de fonts i a les seves aplicacions", Universitat de Vic, October 2000.
- Anisoara Paraschiv-Ionecu, "Conception de capteurs performants: une approche fondée sur la séparation de sources", Université Joseph Fourier Grenoble I, July 2000.
- Serji Bermejo, "Learning with nearest neighbour classifiers", Universitat Politecnica de Catalunya, March 2000.
- Patrick Rousset, "Application des algorithmes d'auto-organisation à la classification et à la prévision", Université de Paris 1 Sorbonne, November 1999.
- Stéphane Pigeon, "Authentification multimodale d'identité" (advisor L. Vandendorpe), UCL, 11 February 1999.
- Roberto Teran, "Forecasting and prediction using dynamic recurrent neural networks with adaptive time-delays", Faculté Polytechnique de Mons, October 1998.
- Smaïl Ibbou, "Classification, analyse des correspondances et méthodes neuronales", Université de Paris 1 Sorbonne, January 1997.
- Davor Pavisic, "Effects of inhibitory synapses on recurrent neural networks", Faculté Polytechnique de Mons, January 1997.
- Frédéric Geurts, "Compositional analysis of structured dynamical systems: dynamics and

computations" (promoteurs Y. Kamp, A. Arnold), UCL, 22 March 1996.

- Valeriu Beiu, "Neural networks using threshold gates: a complexity analysis of their area and time efficient VLSI implementations", Katholieke Universiteit Leuven, May 1994.
- Didier Achvar, "Séparation de sources par réseaux de neurones", Université des Sciences et Techniques de Montpellier, November 1993

***Responsibility and  
coordination of funded  
projects***

- Beneficiary of a regional public funding (Brussels region) "Event tracking and annotations in long-term ECG signals", 2006-2008.
- Beneficiary of a regional public funding (Walloon region) "Anticipation of epileptic seizures", 2005-2008.
- Beneficiary of a UCL-FSR project "Nonlinear models for spectrometric data", 2005-2007.
- Beneficiary of a data analysis research project in spectroscopy with a multinational agrofood industry (France), 2005.
- Beneficiary of a Tournesol project "Datahighdim : Analyse exploratoire de données en grande dimension" avec l'Université Joseph Fourier, Grenoble (France), 2005.
- Beneficiary (with V. Wertz) of a data analysis research project with a US pharmaceutical company, 2005.
- Beneficiary (with B. Gailly and V. Wertz) of a Belgian National Bank patronage, "Development of high-dimensional nonlinear data analysis tools to interpret company strategies", 2003-2004.
- Responsible for UCL of the scientific cooperation project with Genova University (Communauté Française de Belgique/Région Wallonne funding), "Intelligent sensor arrays on silicon", 2003-2004.
- Participant to the "Datahighdim – ACI Masse de données" French Research Ministry, 2003-2006 (funding restricted to French partners).
- Responsible of the UCL-FSR project "Development of brain-machine interfaces through the analysis of motor cortex electrical signals", 2002-2003.
- Responsible for UCL of the research contract with Electrabel, "Study of electrical load charges through Kohonen self-organizing maps classification", 2000-2002.
- Beneficiary (with J.D. Legat and L. Vandendorpe) of the RETICOM project "Real-time communications on DSP" in the frame of the Objectif 1 Hainaut phasing out.
- "Administrative Project Manager" and "Task Leader" of the EC-IST n° 25145 OPTIVIP (OPTImisation of a Visual Implantable Prosthesis) project, 2001-2004.
- Responsible for UCL of the EC n° 29207 EUNITE "European Network on Intelligent Techniques for Smart Adaptive Systems" project, 2001-2003.
- Responsible for UCL of the Tournesol project: "Design of low-cost high-performance network sensors" with the Institut National Polytechnique de Grenoble, 2000.
- Responsible of the First n°981/3814 project from the "Région Wallonne" "Study and design of an EEG measurement system based on nonlinear source analysis methods", with the D.T.I. company, 1999-2001.
- Responsible for UCL of the EC n° 28013 NEURONET project "EC Network of Excellence in Neural Networks", 1999-2000.
- Co-beneficiary of the FRSM (Fund for Medical Scientific Research) grant 3.4584.98 "Experimental and numerical modelling study of the artificial neural stimulation with a spiral cuff electrode ", 1998-2001.
- "Administrative Project Manager" and "Task Leader" of the EC-ESPRIT-LTR n° 22527 MIVIP (MICROsystem based VISual Prosthesis), 1996-2000.
- Responsible for UCL of the INCO (EC) project "ITUBR: Implantable Telemetric Unit for Bio-medical Research", 1996-1998.
- Beneficiary of FNRS grants for the organization of the annual "ESANN: European Symposium on Artificial Neural Networks" between 1996 and 2004.
- Coordinator of Human Capital and Mobility EC project "ESANN: European Symposium on Artificial Neural Networks", 1993-1995.
- Coordinator of Human Capital and Mobility EC project "Fellowships for Research on Artificial Neural Networks" (14 partners), 1993-1995.
- Beneficiary of several "Horizon" projects (Région Wallonne Ministry).
- Responsible of the TOURNESOL (Communauté Française de Belgique) project "Study of incremental learning algorithms", with the Institut National Polytechnique de Grenoble, 1993-1995.
- Responsible for UCL of the CEE-ESPRIT-BRA n° 6841 ELENA project (Enhanced Learning for Evolutive Neural Architectures), 1992-1995.

- Responsible for UCL of the CEE-ESPRIT-BRA n°3049 NERVES (Innovative Architectures and VLSI Implementations for Neurocomputing) project, 1989-1992.

### Visits

- Several one- to two-weeks stays at the Ecole Polytechnique Fédérale de Lausanne (Switzerland), Institut National Polytechnique de Grenoble (France), Universidad de Granada (Spain), Czech Academy of Sciences (Prague, Czech Republic), University of Oxford (UK), etc.

### Expertise activities

#### *International scientific journals*

- Editor-in-chief of the "Neural Processing Letters" journal (from September 1994), published by Kluwer Academic Publishers (1996-2005) and Springer (2005-).
- Associate editor of the IEEE Transactions on Neural Networks journal (from 2004)
- Editorial Board member of the Neurocomputing journal (Elsevier) from January 1994.
- Edition of journal special issues:
  - Neural Networks special issue on "Advances in Self-Organizing Maps", Vol. 19, Nos. 6-7 (July-August 2006), eds. M. Cottrell, M. Verleysen
  - Neurocomputing, special issue on "Fundamental and information processing aspects of Neurocomputing", Vol. 48, Nos. 1-4, pp. 1-367 (October 2002), eds. M. Verleysen, J. Vandewalle
- Reviewer for the following scientific journals (non-exhaustive list) :
  - IEEE Transactions on Neural Networks
  - IEEE Transactions on Pattern Analysis and Machine Intelligence
  - IEEE Signal Processing Letters
  - IEEE Transactions on Systems, Man and Cybernetics, Part B
  - IEEE Transactions on Circuits and Systems
  - IEEE Journal of Solid-State Circuits
  - IEEE Transactions on VLSI systems
  - IEEE Transactions on Instrumentation and Measurement
  - IEEE Transactions on Image Processing
  - IEEE Transactions on Fuzzy Systems
  - Neural Networks
  - Pattern recognition
  - Pattern Analysis and Applications
  - Chemometrics and Intelligent Laboratory Systems
  - IEE Proceedings G
  - IEE Proceedings - Computer and Digital Techniques
  - Electronics Letters
  - Integration - the VLSI journal
  - International Journal on Circuit Theory and Applications
  - Image and Vision Computing Journal
  - International Journal of Neural Systems
  - Neural Network World
  - Image and Vision Computing
  - European Journal of Economic and Social System

#### *International scientific conferences (scientific committee member)*

#### Non-exhaustive list:

- ICANN (International Conference on Artificial Neural Networks), 2006 (Athens, Greece), 2005 (Warsaw, Poland), 2002 (Madrid, Spain), 2001 (Vienne, Austria), 1999 (Edinburgh, Scotland), 1998 (Skovde, Sweden), 1997 (Lausanne, Switzerland) and 1996 (Bochum, Germany).
- IJCNN (International Joint Conference on Neural Networks), 2006 (Vancouver, Canada), 2004 (Budapest, Hungary), 2000 (Como, Italy).
- IWANN (International Workshop on Artificial Neural Networks) 2005 (Vilanova i la Geltrú, Barcelona, Spain), 2003 (Menorca, Spain), 2001 (Granada, Spain), 1999 (Alicante, Spain), 1997 (Canaries, Spain), 1995 (Malaga, Spain), 1993 (Barcelone, Spain), and 1991 (Granada, Spain).
- WSOM (Workshop on Self-Organizing Maps) 2005 (Paris, France), 2003 (Hibikino, Japan), 1997 (Helsinki, Finland).
- ESANN (European Symposium on Artificial Neural Networks) 1996 until 2006 (Bruges) and 1993 until 1995 (Brussels).
- ACSEG (Connectionist approaches in economic and management sciences) 2005 (Aix-en-

Provence, France), 2004 (Lille, France), 2003 (Nantes, France), 2002 (Boulogne-sur-Mer, France), 2001 (Rennes, France), 2000 (Paris, France), 1999 (Reus, Espagne) and 1998 (Louvain-la-Neuve).

- ICCS (International Conference on Computational Science) 2006 (Reading, UK).
- ISNN (International Symposium on Neural Networks) 2006 (Chengdu, Sichuan, China).
- ASC (IASTED International Conference on Artificial Intelligence and Soft Computing) 2005 (Benidorm, Spain), 2004 (Marbella, Spain).
- CIHSPS (IEEE International Conference on Computational Intelligence for Homeland Security and Personal Safety), 2005 (Orlando, FL, USA), 2004 (Venice (Italy).
- CI (IASTED International Conference on Computational Intelligence), 2005 (Calgary, Canada)
- ICAPR (5th Intl. Conference on Advances in Pattern Recognition), 2003 (Calcutta, India).
- CDC (42nd IEEE Conference on Decision and Control), 2003 (Hawaii, USA).
- TAINN (Turkish Symposium on Artificial Intelligence and Neural Networks) 2003 (Canakkale, Turkey).
- TAISA (Traitement Analogique de l'Information, du Signal et ses Applications) 2005 (Marseille, France), 2004 (Lausanne, Switzerland), 2003 (Louvain-la-Neuve, Belgium).
- ICECS (IEEE International Conference on Electronics, Circuits and Systems) 2001, Malta.
- ECCTD (European Conference on Circuit Theory and Design) 2001 (Espoo, Finland).
- ISCAS (International Symposium on Circuits and Systems) 2001 (Sydney, Australy).
- DCIS (Design of Circuits and Intergrated Systems) 1999 (Palma, Spain).
- Benelearn (Benelux Machine Learning Conference), 1998 (Wageningen, Netherlands).
- NEURAP (Neural Networks and their Applications) 1994 until 1998 (Marseilles, France).
- EuroPar (European Conference on Parallel Computing) 1996 (Lyon, France).
- MicroNeuro 1999 (Granada, Spain), 1997 (Dresden, Germany), 1996 (Lausanne, Switzerland) and 1994 (Turin, Italy).
- Neuro-Nîmes 1993, 1992 and 1991 (Nîmes, France).
- Journées NSI (Neurosciences et Sciences de l'Ingénieur), 1993 (St-Jean du Gard, France), pedagogical committee
- Eurasip Workshop on Neural Networks 1990 (Sesimbra, Portugal)

### ***Organization***

- Annual organization and chairman of the ESANN (European Symposium on Artificial Neural Networks) conference, 1993 until 1995 (Brussels), 1996 until 2006 (Bruges)., <http://www.dice.ucl.ac.be/esann>.

### ***Services to the university***

- President of the Applied Science faculty doctoral commission (2004-); previously member (1998-2000) then vice-president (2000-2004).
- President of the "Commission Doctorale du Domaine Sciences de l'Ingénieur", Académie Universitaire Louvain (2005-).
- Electricity department secretary (2003-).
- Electricity diploma commission secretary (2003-).
- Secretary of the departmental commission "prospective plan 2002-2007".
- Member of the faculty commission for the definition of the new "Candis 2000" first cycle programme.
- Ad interim responsible of the UCL clean rooms during one year, after the leave of Prof. Jean-Pierre Colinge.

### ***Languages***

- French (mother language).
- English (fluent).
- Dutch (notions).