

Curriculum Vitæ

as of November 2022

HIGHLIGHTS

is a *directeur de recherches* (research director) of the *Fonds de la Recherche Scientifique - FNRS*, the fund for scientific research of Belgium's Wallonia-Brussels Federation.

He has been awarded an ERC Consolidator Grant for the project "DEMIURGE: Automatic design of robot swarms" (ERC-2015-CoG).

He is the author of the book "Tuning Metaheuristics: A machine learning perspective," published in 2009 by Springer.

His scientific video "Swarmanoid, the movie" won a number of awards including the Best Video Award at the AAAI Video Competition 2011.

His article "A racing algorithm for configuring metaheuristics" received the *SIGEVO Impact Award* 2012.

He co-authored more than 170 peer-reviewed scientific publications in the field of computational intelligence. His works have been cited about twenty-five thousand times in the scientific literature. His *h-index* is 53 (Source: Google Scholar).

He is an associate editor for "Frontiers in Robotics and AI: Multi-Robot Systems" and an academic editor for "PeerJ Computer Science". He is also a member of the editorial board of "Swarm Intelligence", "International Journal of Metaheuristics", "International Journal of Intelligent Computing and Cybernetics", and "International Journal of Applied Metaheuristic Computing". In the past, he has served as an associate editor for "Swarm Intelligence", as an area editor for "Computers & Industrial Engineering", and as a member of the editorial board of "Evolutionary Computation".

He served as a member of the organizing committee (program chair, track chair, publication chair, and local arrangement chair) for 17 international conferences, and as a member of the program committee for more than 50 international conferences in the last five years.

RESEARCH INTERESTS

Computational intelligence, automatic design, swarm intelligence, and swarm robotics.

Application of statistical methods, design of experiments, and machine learning techniques in robotics and operations research, notably for assessing the performance of algorithms and for fine-tuning their parameters.

Epistemology and philosophical foundations of computational intelligence.

EDUCATION

Ph.D. in Applied Sciences. Université Libre de Bruxelles. Belgium. December 2004. Dissertation title: *The Problem of Tuning Metaheuristics as Seen from a Machine Learning Perspective*. Supervisor: Prof. M. Dorigo.

Diplôme d'Etudes Approfondies en Sciences Appliquées. Université Libre de Bruxelles. Belgium. June 2001. Dissertation title: *On the Formal Foundation of Ant Programming*. Supervisor: Prof. M. Dorigo.

Laurea di Dottore in Ingegneria Elettronica. Politecnico di Milano. Italy. July 1997. Dissertation title: *Modelli Locali per l'Apprendimento: dall'approccio neuro-fuzzy al lazy learning*. Supervisors: Prof. A. Bonarini and G. Bontempi.

RESEARCH EXPERIENCE

Research Director of the fund for scientific research F.R.S.-FNRS of Belgium's Wallonia-Brussels Federation at **IRIDIA**, Institut de Recherches Interdisciplinaires et de Développe-

ments en Intelligence Artificielle, Université Libre de Bruxelles, Belgium. Since October 2019.

Senior Research Associate of the fund for scientific research F.R.S.-FNRS of Belgium's Wallonia-Brussels Federation at **IRIDIA**, Institut de Recherces Interdisciplinaires et de Développements en Intelligence Artificielle, Université Libre de Bruxelles, Belgium. From October 2015 to September 2019.

Research Associate of the fund for scientific research F.R.S.-FNRS of Belgium's Wallonia-Brussels Federation at **IRIDIA**, Institut de Recherces Interdisciplinaires et de Développements en Intelligence Artificielle, Université Libre de Bruxelles, Belgium. From October 2007 to September 2015.

Senior Researcher at **IRIDIA**, Institut de Recherces Interdisciplinaires et de Développements en Intelligence Artificielle, Université Libre de Bruxelles, Belgium. Since January 2005.

Researcher at **IRIDIA**, Institut de Recherces Interdisciplinaires et de Développements en Intelligence Artificielle, Université Libre de Bruxelles, Belgium. From April 2002 to December 2004. Senior scientist in charge: Prof. M. Dorigo.

Researcher at **Intellektik**, Computer Science Department, Darmstadt University of Technology, Germany. From April 2001 to March 2002. Senior scientist in charge: Prof. W. Bibel.

Researcher at **AASS**, Applied Autonomous Sensor Systems, Department of Technology, Örebro University, Sweden. From October 2000 to March 2001. Senior scientist in charge: Prof. A. Saffiotti.

Researcher at **IRIDIA**, Institut de Recherces Interdisciplinaires et de Développements en Intelligence Artificielle, Université Libre de Bruxelles, Belgium. From August 1997 to September 2000. Senior scientist in charge: Prof. H. Bersini.

Visiting Student at **IRIDIA**, Institut de Recherces Interdisciplinaires et de Développements en Intelligence Artificielle, Université Libre de Bruxelles, Belgium. From October 1996 to July 1997. Senior scientist in charge: Prof. H. Bersini.

Visiting Student at **IDSIA**, Istituto dalle Molle, Lugano, Switzerland. From June 1996 to September 1996. Senior scientist in charge: Prof. L. M. Gambardella.

Master Student at **AI&R Project**, Dipartimento di Elettronica e Informazione, Politecnico di Milano, Italy. From April 1996 to July 1997. Senior scientist in charge: Prof. A. Bonarini.

AWARDS AND PRIZES

Best Paper Award [P87] at BNAIC 2019, the 31st Belgium-Netherlands Conference on Artificial Intelligence Brussels, Belgium Nov 2019.

ERC Consolidator Grant for the project *DEMIURGE: Automatic design of robot swarms*. European Research Council, October 2016.

Prix Wernaers 2012 *pour la recherche et la diffusion des connaissances*, with Rehan O'Grady and Marco Dorigo, for the video **Swarmanoid, the movie**. F.R.S.-FNRS, August 2012.

Innovative Technology Award at the Robot Film Festival for the video **Swarmanoid, the movie**. New York, July 14, 2012.

SIGEVO Impact Award 2012 for the GECCO 2002 paper: *A racing algorithm for configuring metaheuristics* [P18]. July 11, 2012.

Best Video Award at the AAI-11 AI Video Competition for the video **Swarmanoid, the movie** [P57], written and directed by Mauro Birattari and Rehan O'Grady. San Francisco, CA, August 2011.

2009 Outstanding Reviewer Award, "for work on International Journal of Intelligent Computing and Cybernetics, 2008". Emerald Literati Network, June 2009.

Best Performing Algorithm [J10] at the International Timetabling Competition organized by the *Metaheuristics Network* and sponsored by PATAT, the international series of conferences on the practice and theory of automated timetabling. Manno, Switzerland. March 2003.

Best Paper Award [P11] at BNAIC'99: The Eleventh Belgium-Netherlands Conference on Artificial Intelligence. Maastricht, The Netherlands. November 1999.

TEACHING, SUPERVISION, AND EXAMINATION ACTIVITIES	Lecturer: INFO-H-414 <i>Swarm Intelligence</i> (with Prof. Marco Dorigo). Faculté des sciences appliquées, Université Libre de Bruxelles, Belgium. Since Academic Year 2008–2009. Professor in charge: PROJ-H-402 <i>Projet d'informatique</i>. Faculté des sciences appliquées, Université Libre de Bruxelles, Belgium. Since Academic Year 2009–2010. Professor in charge: TRAN-H-201 <i>Projet Multidisciplinaire II</i>. Filière Informatique, Faculté des sciences appliquées, Université Libre de Bruxelles, Belgium. Since Academic Year 2008–2009. Supervisor of one post-doctoral researchers: Dr. Darko Bozhinoski. Supervisor of eight Ph.D. students currently in progress: Ken Hasselmann, Antoine Ligot, Muhammad Salman, David David Alfredo Garzon Ramos, Jonas Kuckling, Miquel Kegeleirs, Guillermo Legarda Herranz, and Ilyes Gharbi, Université Libre de Bruxelles, Belgium. Ph.D. thesis advisor and president of the examination committee: Jean-Philippe Hubinont (2022) <i>Multi-criteria benchmarking: on the generation of long-term improvement strategies</i>. Université Libre de Bruxelles, Belgium. Ph.D. thesis supervisor and member of the examination committee: Lorenzo Garattoni (2021). <i>Cognitive abilities in swarm robotics. Developing a swarm that can collectively sequence tasks</i>. Université Libre de Bruxelles, Belgium. Member of the examination committee: Alberto Franzin (2021) <i>Empirical analysis of stochastic local search behaviour: Connecting structure, components and landscape</i>. Université Libre de Bruxelles, Belgium. Member of the Ph.D. examination committee: Federico Pagnozzi (2019). <i>Automatic Design of Stochastic Local Search Algorithms: Analysis and Application</i>. Université Libre de Bruxelles, Belgium. Ph.D. thesis co-supervisor and member of the Ph.D. examination committee: Zhi “Eric” Yuan (2019). <i>Automated Algorithm Configuration for Hard Optimization Problems</i>. Université Libre de Bruxelles, Belgium. Ph.D. thesis advisor and president of the examination committee: Dimitri Van Assche (2019). <i>New Methodological Perspectives on PROMETHEE Methods</i>. Université Libre de Bruxelles, Belgium. Member of the Ph.D. examination committee: Bernát Wiandt (2018). <i>Optimization of Self Organizing Computing Systems</i>. Budapest University of Technology and Economics, Hungary. Member of the Ph.D. examination committee: Delphine Nicolay (2018) <i>New insight into heuristic optimization using genetic algorithms and neural networks: application to evolutionary learning</i>. Université de Namur, Belgium. Member of the Ph.D. examination committee: Nithin Mathews (2018). <i>Beyond Self-assembly: Mergeable Nervous Systems, Spatially Targeted Communication, and Supervised Morphogenesis for Autonomous Robots</i>. Université Libre de Bruxelles, Belgium. Ph.D. thesis advisor and member of the Ph.D. examination committee: Leslie Angelica Perez Caceres (2017). <i>Automatic Algorithm Configuration – Analysis, Improvements and Applications</i>. Université Libre de Bruxelles, Belgium. Ph.D. thesis supervisor and member of the examination committee: Gianpiero Francesca (2017). <i>A modular approach to the automatic design of control software for robot swarms. From a novel perspective on the reality gap to AutoMoDe</i>. Université Libre de Bruxelles, Belgium. Ph.D. thesis advisor and member of the Ph.D. examination committee: Gaëtan Podevijn (2017). <i>Effects of the interaction with robot swarms on the human psychological state</i>. Université Libre de Bruxelles, Belgium.
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Member of the Ph.D. examination committee: Gabriele Valentini (2016). *The best-of-n problem in robot swarms*. Université Libre de Bruxelles, Belgium.

Ph.D. thesis advisor and member of the Ph.D. examination committee: Leonardo Bezerra (2016). *A component-wise approach to multi-objective evolutionary algorithms: From flexible frameworks to automatic design*. Université Libre de Bruxelles, Belgium.

Ph.D. thesis advisor and member of the Ph.D. examination committee: Andreagiovanni Reina (2016). *Engineering swarm systems: A design pattern for the best-of-n decision problem*. Université Libre de Bruxelles, Belgium.

Member of the Ph.D. examination committee: Miguel António Frade Duarte (2016). *Engineering evolutionary control for real-world robotic systems*. University Institute of Lisbon, Portugal.

Ph.D. thesis advisor and member of the examination committee: Mohamed Saifullah bin Hussin (2015). *Stochastic local search algorithms for single and bi-objective quadratic assignment problems*. Université Libre de Bruxelles, Belgium.

Ph.D. thesis advisor: Stefan Eppe (2015). *Three contributions to the PROMETHEE II method*. Université Libre de Bruxelles, Belgium.

Ph.D. thesis advisor and member of the examination committee: Luca Maria Gambardella (2015). *Coupling ant colony system with local search*. Université Libre de Bruxelles, Belgium.

Member of the Ph.D. examination committee: Manuel Castillo Cagigal (2014). *A swarm intelligence approach based on coupled oscillators: an application in demand side management with photovoltaic distributed generation*. Universidad Politécnica de Madrid, Spain.

Ph.D. thesis co-supervisor and member of the examination committee: Arne Brutschy (2014). *Enabling research on complex tasks in swarm robotics: Novel conceptual and practical tools*. Université Libre de Bruxelles, Belgium.

Ph.D. thesis co-supervisor and member of the examination committee: Jérémie Dubois-Lacoste (2014). *Anytime local search for multi-objective combinatorial optimization: design, analysis and automatic configuration*. Université Libre de Bruxelles, Belgium.

Ph.D. thesis co-supervisor and member of the examination committee: Carlo Pinciroli (2014). *On the design and implementation of an accurate, efficient, and flexible simulator for heterogeneous swarm robotics systems*. Université Libre de Bruxelles, Belgium.

Ph.D. thesis co-supervisor and member of the examination committee: Manuele Brambilla (2014). *Formal methods for the design and analysis of robot swarms*. Université Libre de Bruxelles, Belgium.

Ph.D. thesis advisor and member of the examination committee: Julien Roland (2013). *Inverse multi-objective combinatorial optimization*. Université Libre de Bruxelles, Belgium.

Ph.D. thesis co-supervisor and member of the examination committee: Eliseo Ferrante (2013). *Information transfer in a flocking robot swarm*. Université Libre de Bruxelles, Belgium.

Ph.D. thesis co-supervisor and member of the examination committee: Giovanni Pini (2013). *Towards autonomous task partitioning in swarm robotics*. Université Libre de Bruxelles, Belgium.

Member of the Ph.D. examination committee: Tianjun Liao (2013). *Population-based heuristic algorithms for continuous and mixed discrete-continuous optimization problems*. Université Libre de Bruxelles, Belgium.

Ph.D. thesis advisor and president of the examination committee: Marco Montes de Oca Roldan, (2011). *Incremental social learning in swarm intelligence systems*. Université Libre de Bruxelles, Belgium.

Ph.D. thesis advisor and president of the examination committee: Alexandre Campo (2011). *On the design of self-organized decision making in robot swarms*. Université Libre de Bruxelles, Belgium.

Ph.D. thesis advisor and member of the examination committee: Rehan O’Grady (2010). *Morphologically responsive self-assembling robots*. Université Libre de Bruxelles, Belgium.

Member of the Ph.D. examination committee: Matteo Gagliolo (2010). *Online dynamic algorithm portfolios for solving decision problems*. Università della Svizzera Italiana, Lugano, Switzerland.

Member of the Ph.D. examination committee: Emmanuelle Vin (2010). *Genetic algorithm applied to generalized cell formation problems*. Université Libre de Bruxelles, Belgium.

Ph.D. thesis co-supervisor and member of the examination committee: Prasanna Balaprakash (2010). *Estimation-based metaheuristics for stochastic combinatorial optimization: case studies in stochastic routing problems*. Université Libre de Bruxelles, Belgium.

Member of the Ph.D. examination committee: Olivier Caelen (2009). *Sélection séquentielle en environnement aléatoire appliquée à l’apprentissage supervisé*. Université Libre de Bruxelles, Belgium.

Member of the Ph.D. examination committee: Christophe Philemotte (2009). *The Gestalt heuristic: dynamic and online meta-modeling as improvement method to the metaheuristic process*. Université Libre de Bruxelles, Belgium.

Member of the Ph.D. examination committee: Christos Ampatzis (2008). *On the evolution of autonomous time-based decision-making and communication in collective robotics*. Université Libre de Bruxelles, Belgium.

President of the Ph.D. examination committee: Shervin Nouyan (2008) *Teamwork in a swarm of robots – an experiment in search and retrieval*. Université Libre de Bruxelles, Belgium.

Ph.D. thesis advisor and member of the examination committee: Anders Christensen (2008) *Fault detection in autonomous robots: endogenous fault detection through fault injection and learning – exogenous fault detection based on firefly-inspired synchronization*. Université Libre de Bruxelles, Belgium.

Member of the Ph.D. examination committee: Krzysztof Socha (2008) *Ant colony optimization for continuous and mixed-variable domains*. Université Libre de Bruxelles, Belgium.

Ph.D. thesis advisor: Jodelson A. Sabino (2008) *Otimização com colônia de formigas aplicada à programação de operações de locomotivas de manobras*. Pontifícia Universidade Católica do Rio de Janeiro, Rio de Janeiro, Brazil.

Member of the Ph.D. examination committee: Roderich Groß (2007). *Self-assembling robots*. Université Libre de Bruxelles, Belgium.

Ph.D. thesis co-supervisor: Paola Pellegrini (2007). *ACO: parameters, exploration and quality of solutions*. Università Ca’ Foscari, Venice, Italy.

Member of the Ph.D. examination committee: Leonora Bianchi (2006). *Ant colony optimization and local search for the probabilistic traveling salesman problem: a case study in stochastic combinatorial optimization*. Université Libre de Bruxelles, Belgium.

Supervisor of five Master theses currently in progress: Laurent Colpaert, Jeanne Szpirer, Edwige Loems, Arthur Pierrot, and Vladimir Kozlov, Université Libre de Bruxelles, Belgium;

Master thesis supervisor: Ilyes Gharbi (2022) *Intuitive mission specification for robot swarm by learning from demonstration*. Université libre de Bruxelles, Belgium.

Master thesis supervisor: Raffaele Todesco (2022) *RVR: A new robot platform for swarm robotics. The building blocks of new horizons*. Université libre de Bruxelles, Belgium.

Master thesis supervisor: Ammar Hasan (2022) *Building an integrated framework for the automatic modular design of robot swarms*. Université libre de Bruxelles, Belgium.

Master thesis supervisor: Franck Trouilleux (2022) *Robot recognition using a 360-degree vision module for swarm robots: A new view on swarm robotics*. Université libre de Bruxelles, Belgium.

Master thesis supervisor: Iulian-Bogdan Vlad (2021). *Importance sampling with intermediate rewards to estimate the performance of a robot swarm*. Vrije Universiteit Brussel, Belgium.

Master thesis supervisor: Piotr Rochala (2021). *Automatic design of collective behaviors for robots that operate in dynamic environments*. Université libre de Bruxelles, Belgium.

Master thesis supervisor: Vincent van Pelt (2020). *Automatic modular design of control software in robot swarms: Towards exploitation of behaviour trees features*. Université libre de Bruxelles, Belgium.

Master thesis supervisor: Keneth Ubada Arriaza (2019). *Design of robot swarms by optimization: An instance of AutoMoDe based on simulated annealing*. Université libre de Bruxelles, Belgium.

Master thesis supervisor: Julian Ruddick (2019). *Comparison of state-of-the-art evolutionary methods for the design of robot swarms*. Université libre de Bruxelles, Belgium.

Master thesis supervisor: Gaëtan Spaey (2019). *The influence of random walks on automatic design of robot swarms An experiment with AutoMoDe*. Université libre de Bruxelles, Belgium.

Master thesis supervisor: Abdallah AlFaham (2019). *A family of methods based on NEAT for the automatic design of behaviors of single robots and robot swarms*. Vrije Universiteit Brussel, Belgium.

Master thesis supervisor: Miquel Kegeleirs (2018) *Developing ROS-based software for the e-puck: An experiment in exploration and mapping*. Université Libre de Bruxelles, Belgium.

Master thesis supervisor: Antoine Ligot (2016). *A virtual device for situated communication in a swarm of e-pucks*. Université Libre de Bruxelles, Belgium.

Master thesis supervisor: Michael Stevens (2016). *SRML for swarm robotics: specification of a collective behaviour*. Université Libre de Bruxelles, Belgium.

Master thesis supervisor: Brian Delhais (2015). *Automatic design of robots swarm through evolving neural network topologies: a comparison with a standard evolutionary swarm robotics method on multiple tasks*. Université Libre de Bruxelles, Belgium.

Master thesis supervisor: Anthony Debruyne (2015). *Human – robot swarms interaction: an escorting robot swarm that diverts a human away from dangers (s)he cannot perceive*. Université Libre de Bruxelles, Belgium.

Master thesis co-supervisor: Jacopo De Stefani (2015) *Spatial allocation in swarm robotics*. Politecnico di Milano, Italy.

Master thesis co-supervisor: Mattia Salvaro (2015). *Virtual sensing technology applied to a swarm of autonomous robots*. Università di Bologna, Italy.

Master thesis supervisor: Bernard Mayeur (2014). *Outil automatique de placement de robots pour des expériences de swarm robotics*. Université Libre de Bruxelles, Belgium.

Master thesis supervisor: Jacopo De Stefani (2013). *Spatial allocation in swarm robotics*. Université Libre de Bruxelles, Belgium.

Master thesis supervisor: Xavier Deschuyteneer (2014). *Intégration de l'e-puck et du TAM dans ARGoS3*. Université de Mons, Belgium.

Master thesis co-supervisor: Davide Vichi (2012). *On the design of a Boolean-network robot swarm: Collective recognition of ground patterns*. Università di Bologna, Italy.

Master thesis co-supervisor: Simon Lefort (2012). *TAM, un module d'abstraction de tâches pour la recherche en intelligence d'essaim*. EPHEC, Institut Supérieur des Aumôniers di Travail, Brussels, Belgium.

Master thesis supervisor: Mikaël Lenaertz (2012). *Formal verification of flexibility in swarm robotics*. Université Libre de Bruxelles, Belgium.

Master thesis co-supervisor: Lorenzo Garattoni (2012). *Advanced stochastic local search methods for automatic design of Boolean network robots*. Università di Bologna, Italy.

Master thesis co-supervisor: Matteo Amaducci (2012). *Design of Boolean network robots for dynamics tasks*. Università di Bologna, Italy.

Master thesis co-supervisor: Gianpiero Francesca (2011). *Studio sulla selezione di operatori per un algoritmo memetico applicato al quadratic assignment problem*. Università Degli Studi Del Sannio, Benevento, Italy.

Master thesis supervisor: Laurent Compère (2011). *Self organised task allocation in swarm robotics: Partitionnement de tâches vu comme un problème du bandit à multiples bras*. Université Libre de Bruxelles, Belgium.

Master thesis supervisor: Wenjie Sun (2011). *Self-organized flocking with conflicting target directions*. Université Libre de Bruxelles, Belgium.

Master thesis co-supervisor: Mattia Manfroni (2010). *Towards Boolean network design for robotics applications*. Università di Bologna, Italy.

Master thesis supervisor: Nadir Baiboun (2010). *Allocation des tâches en parallèles dans un essaim de robots: Étude et mise en œuvre sur la plateforme e-puck*. ECAM, Haute École Léonard de Vinci, Brussels, Belgium.

Master thesis supervisor: Nam-Luc Tran (2010). *Robotique en essaim et spécialisation: Etude sur la plateforme e-puck*. Université Libre de Bruxelles, Belgium.

Master thesis co-supervisor: Marco Frison (2010). *Adaptive task partitioning in a homogeneous swarm of robots*. Università di Bologna, Italy.

Master thesis co-supervisor: Manuele Brambilla (2009). *Group size estimation in swarm robotics*. Politecnico di Milano, Italy.

Master thesis supervisor: Avit Sidis (2009). *Etude du déplacement en essaim de robots e-pucks*. Université Libre de Bruxelles, Belgium.

Master thesis supervisor: Charlotte Philippe (2009). *Etude de la conception d'un système d'assemblage pour robots e-pucks*. Université Libre de Bruxelles, Belgium.

Master thesis supervisor: Antal Decugnière (2008). *Conception et réalisation d'une palette de transport intelligente pour le projet d'intelligence en essaim Swarmanoid*. Université Libre de Bruxelles, Belgium.

Master thesis supervisor: Benjamin Poulain (2008). *Développement d'une stratégie de transport collectif dans le cadre du projet d'intelligence en essaim Swarmanoid: spécification d'une palette intelligente et de son environnement de simulation*. Université Libre de Bruxelles, Belgium.

Master thesis co-supervisor: Francesco Cuffaro (2008). *Catene di robot nella robotica a sciame: localizzazione, comunicazione e stima di distanze tramite l'utilizzo di sensori di prossimità*. Politecnico di Milano, Italy.

Master thesis co-supervisor: Mouhcine Zekkri (2007). *Étude d'un mécanisme de mesure collective dans un comportement collectif auto-organisé en robotique en essaim via une tâche d'agrégation avec les robots e-puck*. Université Libre de Bruxelles, Belgium.

Master thesis co-supervisor: Huynh Trung Truc (2007). *An ant colony optimization algorithm for biobjective permutation flowshop problems*. Université Libre de Bruxelles, Belgium.

Master thesis co-supervisor: Antoine Dubois (2007). *Contrôle de la taille de groupe en robotique en essaim: conception et étude d'une méthode scalable et robuste*. Université Libre de Bruxelles, Belgium.

Master thesis co-supervisor: Olivier Colot (2007). *Recherche basée sur un modèle en optimisation continue*. Université Libre de Bruxelles, Belgium.

Master thesis co-supervisor: Olivier Dédriche (2007). *La Prise de décision au sein d'un groupe de robots: conception et développement d'une plateforme de travail libre et gratuite pour les robot e-puck à destination de la communauté académique, et étude d'un comportement collectif auto-organisé via une tâche d'agrégation en robotique en essaim*. Université Libre de Bruxelles, Belgium.

Master thesis co-supervisor: Laurent Bury (2007). *Conception et implémentation en c++ d'un simulateur pour les robot e-puck et réalisation de tests de validation pour la cinématique de base*. Université Libre de Bruxelles, Belgium.

Master thesis co-supervisor: Magny Denis (2005). *Optimization basée sur l'algorithme Race*. Université Libre de Bruxelles, Belgium.

Master thesis co-supervisor: Michela Lunghi (2005). *Il metodo della superficie di risposta per la configurazione di metaeuristiche*. Università degli Studi di Ferrara, Ferrara, Italy.

Master thesis co-supervisor: Denis Darquennes (2005). *Implementation and application of ant colony algorithms*, Facultés Universitaires Notre Dame de la Paix. Namur, Belgium.

Master thesis co-supervisor: Max Manfrin (2003). *Metaeuristiche per la costruzione degli orari dei corsi universitari*. Università degli Studi di Firenze, Florence, Italy. Teaching assistant at Fachbereich Informatik, Technische Universität Darmstadt, Germany. Lecture on the configuration of metaheuristics through design of experiments, for the course *Lokale Suchverfahren und Metaheuristike* of Dr. T. Stützle. Academic Year 2001–2002.

Teaching assistant at Institutionen för Teknik, Örebro Universitet, Sweden. *Labs on Machine Learning*, for the course on Neural Networks of Dr. T. Duckett. Academic Year 2000–2001.

Teaching assistant at Ecole de Commerce Solvay, Faculté des Sciences Sociales, Politiques et Economiques, Université Libre de Bruxelles, Belgium. *Labs on Java and Object Oriented Programming*, for the course on computer science of Prof. H. Bersini. Academic Years 1997–1998 and 1998–1999.

Invited lecturer at Faculté des Sciences Appliquées, Université Libre de Bruxelles, Belgium. *Seminars on supervised learning, neural networks, and lazy learning*, for the course on artificial intelligence of Prof. H. Bersini. Academic Year 1999–2000.

Invited lecturer at Applied Autonomous Sensor Systems, Institutionen för Teknik, Örebro Universitet, Sweden. *Two lectures on lazy learning for doctoral students*. August 1999.

EDITORIAL
ACTIVITIES

Associate Editor of *Frontiers in Robotics and AI: Multi-Robot Systems*, since March 2015.

Academic Editor of *PeerJ Computer Science*, since November 2014.

Associate Editor of *Swarm Intelligence*, from October 2006 to May 2019.

Area Editor of *Computers & Industrial Engineering*, from December 2007 to December 2013.

Editorial Board Member of the *Swarm Intelligence*, since June 2019.

Editorial Board Member of the *International Journal of Metaheuristics*, since March 2012.

Editorial Board Member of the *International Journal of Applied Metaheuristic Computing*, since January 2009.

Editorial Board Member of the *International Journal of Intelligent Computing and Cybernetics*, since May 2007.

Editorial Board Member of *Evolutionary Computation*, from February 2007 to January 2011.

Vice-general Chair of *ANTS 2018 – Eleventh International Conference on Swarm Intelligence*. Rome, Italie, October 29–31, 2018.

Vice-Chair of *ANTS 2016 – Tenth International Conference on Swarm Intelligence*. Brussels, Belgium, September 7–9, 2016.

Track Co-Chair of the *AAAI-15, AI Video Competition 2015*. Austin, TX, USA, January 26, 2015.

Organization Co-Chair of *ANTS 2014 – Ninth International Conference on Swarm Intelligence*. Brussels, Belgium, September 10–12, 2014.

Track Chair of the *AAAI-14*, AI Video Competition 2014. Québec City, Canada, July 28, 2014.

Track Co-Chair of *AAAI-13*, AI Video Competition 2013. Bellevue, WA, USA, July 14, 2013.

Organization Co-Chair of *ANTS 2012 – Eight International Conference on Swarm Intelligence*. Brussels, Belgium, September 12–14, 2012.

Track Co-Chair of the *AAAI-12*, AI Video Competition 2012. Toronto, Canada, July 23, 2012.

Organization Co-Chair of *ANTS 2010 – Seventh International Conference on Swarm Intelligence*. Brussels, Belgium, September 8–10, 2010.

Program Co-Chair of *SLS 2009 – Engineering Stochastic Local Search Algorithms, Designing, Implementing and Analyzing Effective Heuristics*. Brussels, Belgium, September 3–5, 2009.

Track Co-Chair of *GECCO 2009 – Genetic and Evolutionary Computation Conference*, track on ant colony optimization and swarm intelligence. Montréal, Canada, July 8–12, 2009.

Publication Chair of *ANTS 2008 – Sixth International Conference on Ant Colony Optimization and Swarm Intelligence*. Brussels, Belgium, September 22–24, 2008.

Program Co-Chair of *SLS 2007 – Engineering Stochastic Local Search Algorithms, Designing, Implementing and Analyzing Effective Heuristics*. Brussels, Belgium, September 6–8, 2007.

Track Co-Chair of *GECCO 2007 – Genetic and Evolutionary Computation Conference*, track on ant colony optimization, swarm intelligence, and artificial immune systems. London, UK, July 7–11, 2007.

Publication Chair of *ANTS 2006 – Fifth International Workshop on Ant Colony Optimization and Swarm Intelligence*. Brussels, Belgium, September 4–7, 2006.

Publication Chair of *ANTS 2004 – Fourth International Workshop on Ant Colony Optimization and Swarm Intelligence*. Brussels, Belgium, September 5–8, 2004.

Local Arrangement Chair of *ANTS 2002 – From Ant Colonies to Artificial Ants: Third International Workshop on Ant Algorithms*. Brussels, Belgium, September 12–14, 2002.

Senior Program Committee Member of *IJCAI – 31th International Joint Conference on Artificial Intelligence*. Vienna, Austria. 2022.

Program Committee Member of *CEC 2022 AUTODESIGN4EC – Automated Algorithm Design for Evolutionary Computation*. Padua, Italy. July 18–23, 2022.

Program Committee Member of *ICINCO 2022 – 19th International Conference on Informatics in Control, Automation and Robotics*. Lisbon, Portugal. July 14–16, 2022.

Program Committee Member of *GECCO 2022 – Genetic and Evolutionary Computation Conference*. Boston MA, USA. July 9–13, 2022.

Senior Program Committee Member of *IJCAI – 30th International Joint Conference on Artificial Intelligence*. Montreal, Canada. August 21–26, 2021.

Program Committee Member of *GECCO 2021 – Genetic and Evolutionary Computation Conference*. Lille, France. July 10–14, 2021.

Program Committee Member of *ICINCO 2021 – 18th International Conference on Informatics in Control, Automation and Robotics*. Online. July 6–8, 2021.

Program Committee Member of *DARS-SWARM 2021 – Int. Symposium on Distributed Autonomous Robotic Systems*. Kyoto, Japan. June 1–4, 2021.

Program Committee Member of *DARS 2020 – Int. Symposium on Distributed Autonomous Robotic Systems*. Kyoto, Japan. November 24–27, 2020.

Program Committee Member of *SWARM 2020 — International Symposium on Swarm Behavior and Bio-Inspired Robotics*. Kyoto, Japan. November 24–27, 2020.

Program Committee Member of *PPSN 2020 – Parallel Problem Solving from Nature*. Leiden, The Netherlands. September 7–9, 2020

Program Committee Member of *LOD 2020 – 6th International Conference on machine Learning, Optimization and Data Science*. Siena, Italy. July 19–22, 2020.

Senior Program Committee Member of *IJCAI-PRICAI – 29th International Joint Conference on Artificial Intelligence and the 17th Pacific Rim International Conference on Artificial Intelligence*. Yokohama, Japan. July 11–17, 2020.

Program Committee Member of *GECCO 2020 – Genetic and Evolutionary Computation Conference*. Cancún, Mexico. July 8–12, 2020.

Program Committee Member of *ICINCO 2020 – 17th International Conference on Informatics in Control, Automation and Robotics*. Lieusaint-Paris, France. Jul 7–9, 2020.

Senior Program Committee Member of *ECAI 2020 – European Conference on Artificial Intelligence*. Santiago de Compostela, Spain. June 8–12, 2020.

Program Committee Member of *TPNC 2019 – International Conference on the Theory and Practice of Natural Computing*. Kingston, Canada. December 9–11, 2019.

Program Committee Member of *SWARM 2019 — The 3rd International Symposium on Swarm Behavior and Bio-Inspired Robotics*. Okinawa, Japan. November 20–22, 2019.

Program Committee Member of *LOD 2019 – 5th International Conference on machine Learning, Optimization and Data Science*. Siena, Italy. September 10–13, 2019.

Program Committee Member of *ICINCO 2019 – 16th International Conference on Informatics in Control, Automation and Robotics*. Prague, Czech Republic. July 29–31, 2019.

Program Committee Member of *GECCO 2019 – Genetic and Evolutionary Computation Conference*. Prague, Czech Republic. July 13–17, 2019.

Program Committee Member of *TPNC 2018 – International Conference on the Theory and Practice of Natural Computing*. Dublin, Ireland. December 12–14, 2018.

Program Committee Member of *CIE48 – International Conference on Computers & Industrial Engineering*. Lisbon, Portugal. December 2–5, 2018.

Program Committee Member of *DARS 2018 – 14th Int. Symposium on Distributed Autonomous Robotic Systems*. Boulder, CO, USA. October 15–17, 2020.

Program Committee Member of *LOD 2018 – 4th International Conference on machine Learning, Optimization and Data Science*. Volterra, Italy. September 13–16, 2018.

Program Committee Member of *PPSN 2018 – Parallel Problem Solving from Nature*. Coimbra, Portugal. September 8–12, 2018

Program Committee Member of *ICINCO 2018 – 15th International Conference on Informatics in Control, Automation and Robotics*. Porto, Portugal. July 29–31, 2018.

Program Committee Member of *GECCO 2018 – Genetic and Evolutionary Computation Conference*. Kyoto, Japan. July 15–19, 2018.

Senior Program Committee Member of *IJCAI 2018: International Joint Conferences on Artificial Intelligence*. Stockholm, Sweden. July 13–19, 2018.

Program Committee Member of *RoSE 2018: 1st International Workshop on Robotics Software Engineering*. Gothenburg, Sweden. May 28, 2018.

Program Committee Member of *BNAIC 2017 – 29th Benelux Conference on Artificial Intelligence*. Groningen, The Netherlands. November 8–9, 2017.

Program Committee Member of *SWARM 2017 — The 2nd International Symposium on Swarm Behavior and Bio-Inspired Robotics*. Kyoto, Japan. October 29–November 1, 2017.

Program Committee Member of *CIE47 – International Conference on Computers & Industrial Engineering*. Lisbon, Portugal. October 11–13, 2017.

Program Committee Member of *MOD 2017 – 3rd International Workshop on Machine learning, Optimization and big Data*. Volterra, Italy. September 14–17, 2017.

Program Committee Member of *ICINCO 2017 – 14th International Conference on Informatics in Control, Automation and Robotics*. Madrid, Spain. July 29–31, 2017.

Program Committee Member of *GECCO 2017 – Genetic and Evolutionary Computation Conference*. Berlin, Germany. July 15–19, 2017.

Program Committee Member of *AAAI Video Competition 2017 – 11th artificial intelligence video competition*. San Francisco CA, USA. February 4–9, 2017.

Program Committee Member of *BNAIC 2016 – 28th Benelux Conference on Artificial Intelligence*. Amsterdam, The Netherlands. November 10–11, 2016.

Program Committee Member of *DARS 2016 – 13th Int. Symposium on Distributed Autonomous Robotic Systems*. London, UK. November 7–9, 2016.

Program Committee Member of *CIE46 – International Conference on Computers & Industrial Engineering*. Tianjin, China. October 29–31, 2016.

Program Committee Member of *PPSN 2016 – Parallel Problem Solving from Nature*. Edinburgh, UK. September 17–21, 2016.

Program Committee Member of *MOD 2016 – 2nd International Workshop on Machine learning, Optimization and big Data*. Volterra, Italy. August 26–29, 2016.

Program Committee Member of *VALID 2016 – Advances in System Testing and Validation Lifecycle*. Brussels, Belgium. Aug 21–25, 2016

Program Committee Member of *ICINCO 2016 – 13th International Conference on Informatics in Control, Automation and Robotics*. Lisbon, Portugal. July 29–31, 2016.

Program Committee Member of *GECCO 2016 – Genetic and Evolutionary Computation Conference*. Denver CO, USA. July 20–24, 2016.

Program Committee Member of *HM 2015 – 10th International Workshop on Hybrid Metaheuristics*. Plymouth, UK. June 8–10, 2016.

Program Committee Member of *COGNITIVE 2016 – Eighth International Conference on Advanced Cognitive Technologies and Applications*. Rome, Italy. March 20–24, 2016.

Program Committee Member of *AAAI Video Competition 2016 – 10th artificial intelligence video competition*. Phoenix AZ, USA. February 12–17, 2016.

Program Committee Member of *SIS 2015 – IEEE Swarm Intelligence Symposium*. Cape Town, South Africa, December 7–10, 2015.

Program Committee Member of *VALID 2015 – Advances in System Testing and Validation Lifecycle*. Barcelona, Spain. November 15–20, 2015

Program Committee Member of *CIE45 – International Conference on Computers & Industrial Engineering*. Metz, France. October 28–30, 2015.

Program Committee Member of *SWARM 2015 – The First International Symposium on Swarm Behavior and Bio-Inspired Robotics*. Kyoto, Japan. October 28–30, 2015.

Program Committee Member of *IJCAI 2015 – International Joint Conference on Artificial Intelligence*. Buenos Aires, Argentina. July 25–31, 2015.

Program Committee Member of *ICINCO 2015 – 12th International Conference on Informatics in Control, Automation and Robotics*. Colmar, France. July 21–23, 2015.

Program Committee Member of *GECCO 2015 – Genetic and Evolutionary Computation Conference*. Madrid, Spain. July 11–15, 2015.

Program Committee Member of *MIC 2015 – Metaheuristics International Conference*. Agadir, Morocco. June 7–10, 2015.

Program Committee Member of *COGNITIVE 2015 – Seventh International Conference on Advanced Cognitive Technologies and Applications*. Nice, France. March 22–27, 2015.

Program Committee Member of *AlgoConf – AAAI-15 Workshop on Algorithm Configuration*. Austin Texas, USA. January 25, 2015. < **Program Committee Member** of *AAAI-15 – AAAI Conference on Artificial Intelligence*. Austin Texas, USA. January 25–29, 2015.

Program Committee Member of *LION 9 – Learning and Intelligent Optimization*. Lille, France. January 12–16, 2015.

Program Committee Member of *VALID 2014 – Advances in System Testing and Validation Lifecycle*. Nice, France. October 12–16, 2014.

Program Committee Member of *PPSN 2014 – Parallel Problem Solving from Nature*. Ljubljana, Slovenia. September 13–17, 2014.

Program Committee Member of *ICINCO 2014 – 11th International Conference on Informatics in Control, Automation and Robotics*. Vienna, Austria. September 1–3, 2014.

Program Committee Member of *ECAI 2014 – European Conference on Artificial Intelligence*. Prague, Czech Republic. 18–22 August 2014.

Program Committee Member of *GECCO 2014 – Genetic and Evolutionary Computation Conference*. Vancouver, Canada. July 12–16, 2014.

Program Committee Member of *HM 2014 – Ninth International Workshop on Hybrid Metaheuristics*. Hamburg, Germany. June 9–13, 2014.

Program Committee Member of *COGNITIVE 2014 – Sixth International Conference on Advanced Cognitive Technologies and Applications*. Venice, Italy. May 25–29, 2014.

Program Committee Member of *AAMAS 2014 – 13th International Conference on Autonomous Agents and Multiagent Systems*. Paris, France. May 5–9, 2014.

Program Committee Member of *LION 8 – Learning and Intelligent Optimization*. Gainesville FL, USA. February 16–21, 2014.

Program Committee Member of *TPNC 2013 – Theory and Practice of Natural Computing*. Caceres, Spain. December 3–5, 2013.

Program Committee Member of *GCIS 2013 – Global Congress on Intelligent Systems*. Hong Kong. December 3–4, 2013.

Program Committee Member of *BNAIC 2013 – 25th Benelux Conference on Artificial Intelligence*. Delft, The Netherlands. November 7–8, 2013.

Program Committee Member of *CIE43 – International Conference on Computers & Industrial Engineering*. Hong Kong. October 16–18, 2013.

Program Committee Member of *ECAL 2013 – European Conference on Artificial Life*. Taormina, Italy. September 2–6, 2013.

Program Committee Member of *MIC 2013 – Metaheuristics International Conference*. Singapore. August 5–8, 2013.

Program Committee Member of *ICINCO 2013 – 10th International Conference on Informatics in Control, Automation and Robotics*. Reykjavik, Iceland. July 29–31, 2013.

Program Committee Member of *GECCO 2013 – Genetic and Evolutionary Computation Conference*. Amsterdam, The Netherlands. July 6–10, 2013.

Program Committee Member of *COGNITIVE 2013 – Fifth International Conference on Advanced Cognitive Technologies and Applications*. Valencia, Spain. May 27–June 1, 2013.

Program Committee Member of *HM 2013 – Eight International Workshop on Hybrid Metaheuristics*. Ischia, Italy. May 23–25, 2013.

Program Committee Member of *AAMAS 2013 – 12th International Conference on Autonomous Agents and Multiagent Systems*. Saint Paul, MN, USA. May 6–10, 2013.

Program Committee Member of *LION 7 – Learning and Intelligent Optimization*. Catania, Italy. January 7–11, 2013.

Program Committee Member of *IEEE ICDM 2012 PhD Forum – International Conference on Data Mining*. Brussels, Belgium. December 10–13, 2012.

Program Committee Member of *BNAIC 2012 – 24th Benelux Conference on Artificial Intelligence*. Maastricht, The Netherlands. October 25–26, 2012.

Program Committee Member of *TPNC 2012 – Theory and Practice of Natural Computing*. Tarragona, Spain. October 1–5, 2012.

Program Committee Member of *PPSN 2012 – Parallel Problem Solving from Nature*. Taormina, Italy. September 1–5, 2012.

Program Committee Member of *ECAI 2012 – European Conference on Artificial Intelligence*. Montpellier, France. 27–31 August 2012.

Program Committee Member of *ICINCO 2012 – 9th International Conference on Informatics in Control, Automation and Robotics*. Rome, Italy, July 28–31, 2012.

Program Committee Member of *COGNITIVE 2012 – Fourth International Conference on Advanced Cognitive Technologies and Applications*. Nice, France, July 22–27, 2012.

Program Committee Member of *ICIEA 2012 – 7th IEEE Conference on Industrial Electronics and Applications*. Singapore. July 18–20, 2012.

Program Committee Member of *GECCO 2012 – Genetic and Evolutionary Computation Conference*. Philadelphia, USA, July 7–11, 2012.

Program Committee Member of *LION 6 – Learning and Intelligent Optimization*. Paris, France, January 16–20, 2012.

Program Committee Member of the *Workshop on Bayesian Optimization, Experimental Design and Bandits, NIPS 2011*. Sierra Nevada, Spain, December 16, 2011.

Program Committee Member of *COGNITIVE 2011 – Third International Conference on Advanced Cognitive Technologies and Applications*. Rome, Italy, September 25–30, 2011.

Program Committee Member of *ECAL 2011 – European Conference on Artificial Life*. Paris, France, August 8–12, 2011.

Program Committee Member of *ICINCO 2011 – 8th Int. Conference on Informatics in Control, Automation and Robotics*. Noordwijkerhout, The Netherlands, July 28–31, 2011.

Program Committee Member of *MIC 2011 – Metaheuristics International Conference*. Udine, Italy, July 25–28, 2011.

Program Committee Member of *GECCO 2011 – Genetic and Evolutionary Computation Conference*. Dublin, Ireland, July 12–16, 2011.

Program Committee Member of *ICIEA 2011 – 6th IEEE Conference on Industrial Electronics and Applications*. Beijing, China, June 21–23, 2011.

Program Committee Member of *CSIE 2011 – 2nd World Congress on Computer Science and Information Engineering*. Changchun, China, June 17–19, 2011.

Program Committee Member of *AAMAS 2011 – International Joint Conference on Autonomous Agents and Multiagent Systems*. Taipei, Taiwan, May 2–6, 2011.

Program Committee Member of *SIS 2011 – IEEE Swarm Intelligence Symposium*. Paris, France, April 11–15, 2011.

Program Committee Member of *LION 5 – Learning and Intelligent Optimization*. Rome, Italy, January 17–21, 2011.

Program Committee Member of *GCIS 2010 – Global Congress on Intelligent Systems*. Wuhan, China, December 16–17, 2010.

Program Committee Member of *HM 2010 – Seventh International Workshop on Hybrid Metaheuristics*. Vienna, Austria, October 1–2, 2010.

Program Committee Member of *EMACS – Experimental Methods for the Assessment of Computational Systems*. Krakow, Poland, September 11, 2010.

Program Committee Member of *GECCO 2010 – Genetic and Evolutionary Computation Conference*. Portland, Oregon. July 7–11, 2010.

Program Committee Member of *ICINCO 2010 – 7th International Conference on Informatics in Control, Automation and Robotics*. Madeira, Portugal, June 15–18, 2010.

Program Committee Member of *ICIEA 2010 – 5th IEEE Conference on Industrial Electronics and Applications*. Taichung, Taiwan, June 15–17, 2010.

Program Committee Member of *LION 4 – Learning and Intelligent Optimization*. Venice, Italy, January 18–22, 2010.

Program Committee Member of *ISDA 2009 – 9th International Conference on Intelligent Systems Design and Applications*. Pisa, Italy, November 30–December 2, 2009.

Program Committee Member of *HM 2009 – Sixth International Workshop on Hybrid Metaheuristics*. Udine, Italy, October 16–17, 2009.

Program Committee Member of *SLS-DS 2009 – Second Doctoral Symposium on Engineering Stochastic Local Search Algorithms*. Brussels, Belgium, September 4, 2009.

Program Committee Member of *CIE39 – International Conference on Computers & Industrial Engineering*. Troyes, France, July 6–8, 2009.

Program Committee Member of *ICIEA 2009 – The 4th IEEE Conference on Industrial Electronics and Applications*. Xi'an, China, May 25–27, 2009.

Program Committee Member of *GCIS 2009 – Global Congress on Intelligent Systems*. Xiamen, China, May 19–21, 2009.

Program Committee Member of *CEC 2009 – IEEE Congress on Evolutionary Computation*. Trondheim, Norway, May 18–21, 2009.

Program Committee Member of *SIS 2009 – IEEE Swarm Intelligence Symposium*. Nashville, TN, USA, March 30–April 2, 2009.

Program Committee Member of *LION 3 – Learning and Intelligent Optimization*. Trento, Italy, January 14–18, 2009.

Program Committee Member of *HM 2008 – Fifth International Workshop on Hybrid Metaheuristics*. Málaga, Spain, October 8–9, 2008.

Program Committee Member of *HIS 2008 – 8th International Conference on Hybrid Intelligent Systems*. Barcelona, Spain, September 10–12, 2008.

Program Committee Member of *WCCI 2008 – IEEE World Congress on Computational Intelligence*. Hong Kong, June 1–6, 2008.

Program Committee Member of *HM 2007 – Fourth International Workshop on Hybrid Metaheuristics*. Dortmund, Germany, October 8–9, 2007.

Program Committee Member of *SIS 2007 – IEEE Swarm Intelligence Symposium*. Honolulu, HI, USA, April 1–5, 2007.

Program Committee Member of *EMAA 2006 – Workshop on Empirical Methods for the Analysis of Algorithms*. Reykjavik, Iceland September 9, 2006.

Program Committee Member of *HM 2006 – Third International Workshop on Hybrid Metaheuristics*. Ajaete, Spain, October 13–15, 2006.

Program Committee Member of *HM 2005 – Second International Workshop on Hybrid Metaheuristics*. Barcelona, Spain, August 29–30, 2005.

Referee for several international conferences and for a number of international journals including: *IEEE Transactions on Evolutionary Computation*, *IEEE Transactions on Systems, Man, and Cybernetics*, *Journal of Artificial Intelligence Research*, *Journal of Mathematical Modelling and Algorithms*, *Annals of Operations Research*, *Computers and Operations*

Research, Genetic Programming and Evolvable Machines, Constraints Journal, Connection Science, International Journal of Systems Science, Theoretical Computer Science, ACM Computing Surveys, Environmental Modelling and Software, Fuzzy Sets and Systems, and Autonomous Robots.

ACADEMIC AND PROFESSIONAL SOCIETIES	Senior Member of <i>ACM</i> since 2018; member since 2010. Senior Member of the <i>IEEE</i> since 2012; member since 2005. Member of the <i>IEEE Computational Intelligence Society</i>, of the <i>IEEE Robotic and Automation Society</i>, and of the <i>IEEE AADCS: Task Force on Automated Algorithm Design, Configuration and Selection</i>.
ACADEMIC AND INDUSTRIAL RESEARCH PROJECTS	SwarmUP. Principal investigator of the <i>crédit de recherche</i> F.R.S.–FNRS aiming at realizing robots for studying the automatic design of collective behaviors. Swarm Mapping. Principal investigator of the project funded by the <i>Fondation Jaumotte-Demoulin</i> on the study of collective distributed mapping with a robot swarm. GbO–Guaranteed by Optimization. Principal investigator of the <i>Action de Recherche Concertée</i> aiming at generating automatically robotics systems with guaranteed properties. SwarmSim. Principal investigator of the <i>crédit d'équipement</i> F.R.S.–FNRS aiming at realizing a simulation environment for the automatic off-line design of robot swarms DEMIURGE. Principal investigator of the project on the automatic design of robot swarms selected for funding by the European Research Council via an ERC Consolidator Grant. ASCENS. Member of the project on autonomic service-component ensembles funded by the European Union within the <i>Future and Emerging Technologies</i> (IST-FET) program. Swarm-Morph. Research director of the project on robot morphogenesis funded by the <i>Fonds de la Recherche Fondamentale Collective</i> (FRFC) of Belgium's Wallonia-Brussels Federation. Meta-X. Main investigator of the <i>action de recherche concertée</i> (ARC) on metaheuristics for complex optimization problems funded by Belgium's Wallonia-Brussels Federation. Evolving a Collective Consciousness for a Swarm of Pico-Satellites. Member of the project funded by the <i>Ariadna</i> initiative of the European Space Agency. SWARMANOID. Member of the scientific committee of the <i>future and emerging technologies</i> project funded by the European Commission. COMP²SYS. Member of the training staff of the <i>early stage researchers training site</i> funded by the European Commission within the Marie Curie Actions program. ANTS. Member of the <i>action de recherche concertée</i> (ARC) on the theoretical and experimental analysis of ant algorithms, funded by Belgium's Wallonia-Brussels Federation. METAHEURISTICS. Grant holder in the <i>training and research network</i> on metaheuristics funded by the European Commission. FAMIMO. Contribution to the <i>Esprit</i> project funded by the European Commission, through the implementations of local techniques for nonlinear prediction and control. MARCH. Participation in the <i>action de recherche concertée</i> (ARC) on pattern recognition funded by Wallonia-Brussels Federation. Masterfood. Collaboration with the research center of Masterfood for the prediction of market indices using lazy learning techniques. D'Ieteren. Lazy learning techniques for predicting the annual amount of sales of a Belgian retailer, on the basis of historical data. FaFer Usinor. Lazy learning for modeling the rolling mill process of the steel company FaFer in Charleroi, Belgium. FIRST Project funded by the Walloon Region, Belgium. Honeywell. Collaboration on a data mining project with Honeywell Technology in Minneapolis, MN, USA, and in Prague, Czech Republic.

Tractebel. Feasibility study for the adoption of local lazy learning techniques for forecasting electrical loads. In collaboration with the Belgian electric power company.

CONTACT ADDRESS	
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EXTRA-PROFESSIONAL ACTIVITIES	 holds a black belt 2nd degree in Brazilian jiu-jitsu. He is the president, co-founder, and co-head instructor of Kaizen BJJ Brussels, a Brazilian jiu-jitsu academy that currently counts more than one hundred members. His hobbies include street photography, music, and cooking.
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