CURRICULUM VITAE, LUCA MARIA GAMBARDELLA, 2024

Vice-Rector for Innovation and Corporate Relations, USI,
Università della Svizzera italiana, Via Buffi 13, CH-6900, Lugano
Full Professor, Facoltà di scienze informatiche, USI
Dalle Molle Institute for Artificial Intelligence, USI-SUPSI, Lugano
Artificial Intelligence Master Director, Facoltà di scienze informatiche, USI
Co-Founder & CTO Head of Applied AI, Artificialy SA, Lugano
Phd in Engineering Sciences and Technology
MD Computer Science
luca.gambardella@usi.ch

Professional Appointments:

2023 - now   Vice-President Academic Senate, USI, Lugano

2020 - now   Vice-Rector for Innovation and Corporate Relations, USI, Lugano

2020 - now   Co-Founder & CTO Head of Applied AI, Artificialy SA, Lugano

2016 - now   Co-Director, Artificial Intelligence Master, Facoltà di scienze informatiche, USI, Lugano

2012 - 2020   Director, IDSIA, Dalle Molle Institute for Artificial Intelligence, USI-SUPSI, Manno

2012 - 2020   Director, SUPSI Master MSE Research Unit in Intelligent Systems, Manno

2007 - 2011   Director, Intelligent System Master, USI, Università della Svizzera italiana, Lugano

2001 - 2020   Chief Scientific Officer of AntOptima sa, a spin-off of IDSIA, Lugano

1995 - 2012   co-Director, IDSIA, Lugano-Manno

1988 - 1995   Research Director, IDSIA, Lugano

Academic Appointments:

2020 - now   Full Professor, Facoltà di scienze informatiche, USI, Lugano

2006 - 2020   Adjunct Professor, Facoltà di scienze informatiche, USI, Lugano

2003 - 2020   Professor SUPSI, Scuola universitaria professionale della Svizzera italiana, Manno

1992   Visiting Senior Scientist, the International Computer Science Institute, Berkeley, CA, USA

Professional Preparation:

2015   PhD in Engineering Sciences and Technology, ULB, École Polytechnique de Bruxelles, BE

1985   Master in Computer Science, Faculty of Informatics, University of Pisa, Italy

Lectures (semester courses):

2018 - now   Artificial Intelligence, Master of Artificial Intelligence, Facoltà di scienze informatiche, USI, Lugano

2006 - now   Artificial Intelligence, Bachelor in informatics, Facoltà di scienze informatiche, USI, Lugano

1998 - 2020   Advanced Algorithms, SUPSI Department of Technology and Innovation, Manno

2007 - 2020   Advanced Algorithms, PAP class, SUPSI Department of Technology and Innovation, Manno

2008 - 2010   Heuristics, Intelligent Systems Master, Facoltà di scienze informatiche, USI, Lugano

2006   Applications of Discrete Optimization, Master and PHD course, Milan Polytechnic

Summary of Service and Other Professional Appointments:

2015   President, the EURO Excellence in Practice Award EEPA 2015

2012 - 2015   President and Jury member, the EURO Excellence in Practice Award EEPA 2012-2013

2011 - 2017   President, the Swiss Operations Research Society (SVOR/ASRO)

Research Interests:
- Artificial Intelligence with focus on meta-heuristics, swarm intelligence and machine learning
- Robotics with focus on robotic swarms, mobile robots, drones and educational robotics

Governing Activities:
- ERC Consolidator Grant panel member 2023
- Swiss BRIDGE Discovery Evaluation Panel 2016-2024
- EU Commission Expert for "Future Trends in Artificial Cognitive Systems".
- Swiss National Science Foundation evaluator.
- The Fund for Scientific Research – FNRS, Bruxelles
- Research Grants Evaluators, Hong Kong, Torino, Ireland; Inria, Expert for Inria evaluation, France

Summary of Academic Leadership Activities:
- He has been awarded more than 16.0 million CHF in research funding for his research lab, (including other labs and partners the total amounts to more than 61 million CHF)
- He has been awarded 29 Swiss National Science Foundation projects (22 as principal investigator), 7 European Projects, 15 CTI/Innosuisse Projects (13 as principal investigator), 1 Hasler Foundation Project, 10 Industrial projects (6 as principal investigator)
- Supervisor of 17 PhD theses (six in progress)

Summary Of Scholarly Publications:
- He has proposed and published several state of the art bio-inspired distributed optimization algorithms for the travelling salesman problem, the vehicle routing problem with time windows, the quadratic assignment problem, the sequential ordering problems, and the flexible job shop
- He has published more than 330 papers. The total number of citations to his papers is more than 56'000 (source: Google scholar). His h-number is 79

Recent Awards:

- 2022. Our 2016 paper "A Machine Learning Approach to the Visual Perception of Forest Trails for Mobile Robots" has received the "NCCR Robotics Most Impactful Paper Award". One such award was given for each of the three grand challenges of the 12-year NCCR Robotics.
- in 2021/22/23 he was ranked by Stanford University in the top 2% of scientists in the world in all disciplines.
- HRI 2019 Best demo award and honorable mention for best video award, 2019
- SNF Optimus Agora Prize in 2018 for the project "Introducing People to Research in Robotics through an Extended Peer Community in Southern Switzerland"
- Special Swiss ICT Award 2016: IDSIA it represents one of the best research institutes at the international level in the field of bio-inspired artificial intelligence. (with Juergen Schmidhuber)
- "Watt d'Or", Swiss award for best energy projects 2015
- Top 2% Scientists in all disciplines, Stanford University Names World's, 2021

Patents:
- Patent n.: 13181909.6 Method for recharging an accumulator of an electric vehicle.
- Patent. Sistema di guida di un drone. Patent PCT/IB2016/050192
- European Paten Nr. 16 200 826.2 EP3326749 "Surface Interpreter"

Artistic Production:

- "the sense gallery" - an immersive digital space @ FoxTown in Mendrisio - in collaboration with Tarchini Group and Compagnia Finzi Pasca, 2024

- "NeuralRope#1. Inside an Artificial Brain", with Alex Dorici. Pedestrian Tunnel Lugano-Besso. An interactive permanent installation of 100m reproducing an Artificial Neural Networks, 2019

- "Illusa fingo sogni fasulli", 2020, Bellinzona. A black monolith where, through dreams and a digital dance accompanied by a female voice, the boundary between human and AI is investigated.

- Published novels: "Sei vite" (Zerounoundici Ed., 2013),
  "Il suono dell'alba" (La Feluca Ed. 2019),
  "Segni particolari: tatuaggio con una stella a 5 punte sul polso sinistro", Thriller, Gilgamesh Edizioni, 2024

INTERNATIONAL JOURNALS

103 S Corecco, G Adorni, LM Gambardella, Proximal policy optimization-based reinforcement learning and hybrid approaches to explore the cross array task optimal solution, Machine learning and knowledge extraction 5 (4), 2023

102 A. Pulfer, DU Pizzagalli, PA Gagliardi, L. Hinderling, P. Lopez, R. Zayats, P. Carrillo-Barberà, P. Antonello, M. Palomino-Segura, A. Giusti, Marcus Thelen, LM Gambardella, T. Murooka, O. Pertz, R. Krause, S. Fernandez Gonzalez, Transformer-based spatial-temporal detection of apoptotic cell death in live-cell imaging, eLife 12, 2, 2023

101 D Mantegazza, A Xhyra, LM Gambardella, A Giusti, J Guzzi, Hazards&Robots: A dataset for visual anomaly detection in robotics, Data in Brief 48, 1, 2023

100 E Vercesi, S Gualandi, M Mastrolilli, LM Gambardella, On the generation of metric TSP instances with a large integrality gap by branch-and-cut, Mathematical Programming Computation 15 (2), 2023

99 R Montemanni, GH Carraretto, UJ Mele, LM Gambardella, A constraint programming model for the b-coloring problem, Advances In Transdisciplinary Engineering 35, 1, 2023

98 D Mantegazza, A Giusti, LM Gambardella, J Guzzi, An outlier exposure approach to improve visual anomaly detection performance for mobile robot, IEEE Robotics and Automation Letters 7 (4), 9, 2022

97 A. Piatti, G. Adorni, L. El-Hamamsy, L. Negrini, D. Assaf, LM. Gambardella, F. Mondada, The CT-cube: A framework for the design and the assessment of computational thinking activities, Computers in Human Behavior Reports 5, 15, 2022

96 M Nava, A Paolillo, J Guzzi, LM Gambardella, A Giusti, Learning visual localization of a quadrotor using its noise as self-supervision, IEEE Robotics and Automation Letters 7 (2),5, 2022

95 M Nava, A Paolillo, J Guzzi, LM Gambardella, A Giusti, Uncertainty-aware self-supervised learning of spatial perception tasks, IEEE Robotics and Automation Letters 6 (4), 11, 2021

94 D. Palossi, N. Zimmerman, A. Burrello, F. Conti, H. Müller, LM. Gambardella, L. Benini, A. Giusti, J. Guzzi, Fully onboard ai-powered human-drone pose estimation on ultralow-power autonomous flying nano-uavs, IEEE Internet of Things Journal 9 (3), 51, 2021

93 E Feo-Flushing, LM Gambardella, GA Di Caro, Spatially-distributed missions with heterogeneous multi-robot teams, IEEE Access 9, 3, 2021

92 X Chou, LM Gambardella, R Montemanni, A tabu search algorithm for the probabilistic orienteering problem, Computers & Operations Research 126, 34, 2021

91 J. Saeedi, M. Dotta, A. Galli, A. Nasciuti, U. Maradia, M. Boccadoro, LM Gambardella, A. Giusti, Measurement and inspection of electrical discharge machined steel surfaces using deep neural networks, Machine Vision and Applications 32, 1-15, 2021

90 UJ Mele, LM Gambardella, R Montemanni, A New Constructive Heuristic Driven by Machine Learning for the Traveling Salesman Problem Algorithms 14 (9), 267, 2021

89 M Nava, LM Gambardella, A Giusti, State-Consistency Loss for Learning Spatial Perception Tasks From Partial Labels, IEEE Robotics and Automation Letters 6 (2), 1112-1119, 2021

88 Guzzi, RO Chavez-Garcia, M Nava, LM Gambardella, A Giusti, Path planning with local motion estimations, J, IEEE Robotics and Automation Letters 5 (2), 2586-2593,. 2020

87   J Guzzi, RO Chavez-Garcia, M Nava, LM Gambardella, A Giusti, Path Planning With Local Motion Estimations, IEEE Robotics and Automation Letters 5 (2), 2586-2593, 2020

86   X Chou, LM Gambardella, R Montemanni, Monte Carlo sampling for the tourist trip design problem, Millenium, 83-90, 2019

85   Jeffrey Delmerico, Stefano Mintchev, Alessandro Giusti, Boris Gromov, Kamilo Melo, Tomislav Horvat, Cesar Cadena, Marco Hutter, Auke Ijspeert, Dario Floreano, Luca M. Gambardella, Roland Siegwart, Davide Scaramuzza, "The Current State and Future Outlook of Rescue Robotics", Journal of Field Robotics, 2019

84   M Nava, J Guzzi, R. Chavez-Garcia, L M Gambardella and A Giusti: "Learning Long-range Perception using Self-Supervision from Short-Range Sensors and Odometry". IEEE Robotics and Automation Letters, 4 (2), 1279-1286, 2019

83   J. Banfi, J. Guzzi, , F. Amigoni, E. Feo-Flushing, A. Giusti, L. Gambardella, and G. A. Di Caro. An integer linear programming model for fair multitarget tracking in cooperative multirobot systems. Autonomous Robots, Issue 43 (3), 665-680, 2019

82   R. Omar Chavez-Garcia, J. Guzzi, L. M. Gambardella, A. Giusti: "Learning Ground Traversability from Simulations". IEEE Robotics and Automation Letters vol 1 n.23, pp. 1279-1286, 2019

81   R Montemanni, LM Gambardella, A Study on Pupils Transportation, Journal of Traffic and Logistics Engineering Vol 6 (1), 2018

80   Xiaochen Chou, Luca Maria Gambardella, Roberto Montemanni, "Monte Carlo Sampling for the Probabilistic Orienteering Problem", New Trends in Emerging Complex Real Life Problems, pp. 169-177, 2018

79   M Andries, RO Chavez-Garcia, R Chatila, A Giusti, LM Gambardella, "Affordance equivalences in robotics: a formalism" Frontiers in neurorobotics 12, 26, 2018

78   BS Ahmed, LM Gambardella, W Afzal, KZ Zamli, "Handling constraints in combinatorial interaction testing in the presence of multi objective particle swarm and multithreading" Information and software Technology 86, 20-36, 2017

77   L Nespoli, A Giusti, N Vermes, M Derboni, AE Rizzoli, LM Gambardella, "Distributed demand side management using electric boilers", Computer Science-Research and Development 32 (1-2), 35-47, 2017

76   Giusti, J. Guzzi, D. Ciresan, F. Lin, J. P. Rodriguez, F. Fontana, M. Faessler, C. Forster, J. Schmidhuber, G. A. Di Caro, D. Scaramuzza, L. Gambardella, A machine learning approach to the visual perception of forest trails for mobile robots, IEEE Robotics and Automation Letters, vol. 1, n. 2, pp. 661-667, 2016

75   Bestoun S. Ahmed, Mouayad A. Sahib, Luca M. Gambardella, Wasif Afzal, and Kamal Z. Zamli "Optimum Design of PIλDµ Controller for an Automatic Voltage Regulator System Using Combinatorial Test Design", PLoS One 11(11), 2016

74   M. Veta, P. J. van Diest, S. M. Willems, H. Wang, A. Madabhushi, A. Cruz-Roa, F. Gonzalez, A. B. L. Larsen, J. S. Vestergaard, A. B. Dahl, D. C. Cireșan, J. Schmidhuber, A. Giusti, L. M. Gambardella, F. B. Tek, T. Walter, C. W. Wang, S. Kondo, B. J. Matuszewski, F. Precioso, V. Snell, J. Kittler, T. de Campos, A. M. Khan, N. M. Rajpoot, E. Arkoumani, M. M. Lacle, M. A. Viergever, J. P.W. Pluim, Assessment of algorithms for mitosis detection in breast cancer histopathology images, Medical Image Analysis, 20(1):237-48, 2015

73   N.E. Toklu, V. Papapanagiotou, M. Klumpp, L.M. Gambardella and R. Montemanni Ant Colony Optimization for a 2-Stage Capacitated Vehicle Routing Problem with Probabilistic Demand Increases International Journal of Business Innovation and Research, 11(1): 5–17, 2016

72   Arganda-Carreras, S. C. Turaga, D.R. Berger, D. Cireșan, A. Giusti, L.M. Gambardella, J. Schmidhuber, D. Laptev, S. Dwivedi, J.M. Buhmann, T. Liu, M. Seyedhosseini, T. Tasdizen, L. Kamentsky, R.Burget, V. Uher, X. Tan, C. Sun, T. D. Pham, E. Bas, M. G. Uzunbas, A. Cardona, J. Schindelin and H. S. Seung Crowdsourcing the creation of image segmentation algorithms for connectomics, Frontiers in Neuroanatomy, 05 November 2015

71   Giusti A., Guzzi, J. ; Ciresan, D.C, ; He, Fang-Lin ; Rodriguez, J.P. ; Fontana, F. ; Faessler, M. ; Forster, C. ; Schmidhuber, J. ; Di Caro, G.A. ; Scaramuzza, D. ; Gambardella, L.M.: A Machine Learning Approach to the Visual Perception of Forest Trails for Mobile Robots. IEEE Robotics and Automation Letters, 19, Dec 2015.

70   Reina A., L. M. Gambardella, M. Dorigo & G. Di Caro. zePPeLIN: Distributed Path Planning Using an Overhead Camera Network, International Journal of Advanced Robotic Systems, 1(119), August 2014

69   F. Mastromatteo, R. Montemanni, L.M. Gambardella and A.E. Rizzoli, An exact algorithm for the k-robust shortest paths problem with interval data, Journal of Applied Operations Research, 6(2):124–133, 2014

68   N.E. Toklu, L.M. Gambardella and R. Montemanni, A Multiple Ant Colony System for a Vehicle Routing Problem with Time Windows and Uncertain Travel Times, Journal of Traffic and Logistics Engineering, 2(1):52–58, 2014

67   V. Papapanagiotou, R. Montemanni and L.M. Gambardella, Objective function evaluation methods for the Orienteering problem with stochastic travel and service times, Journal of Applied Operational Research 6(1):16–29, 2014

66   Giusti, M. Salani, G. A. Di Caro, A. E. Rizzoli, L. Gambardella, Restricted neighborhood communication improves decentralized demand-side load management, IEEE Transactions on Smart Grid, vol. 5, n. 1, pp. 92-101, 2014

65   F. Ducatelle,G. A. Di Caro, A. Förster, M. Bonani, M. Dorigo, S. Magnenat, F. Mondada, R. O'Grady, C. Pinciroli, P. Rétornaz, V. Trianni, L. M. Gambardella, Cooperative navigation in robotic swarms, Swarm Intelligence, vol. 8, n. 1, pp. 1-33, 2014

64   Dorigo M., D. Floreano, L. M. Gambardella, F. Mondada, S. Nolfi, T. Baaboura, M. Birattari, M. Bonani, M. Brambilla, A. Brutschy, D. Burnier, A. Campo, A. L. Christensen, A. Decugnière, G. Di Caro, F. Ducatelle, E. Ferrante, A. Förster, J. Guzzi, V. Longchamp, S. Magnenat, J. Martinez Gonzales, N. Mathews, M. Montes de Oca, R. O'Grady, C. Pinciroli, G. Pini, P. Rétornaz, J. Roberts, V. Sperati, T. Stirling, A. Stranieri, T. Stützle, V. Trianni, E. Tuci, A. E. Turgut, and F. Vaussard. Swarmanoid: A Novel Concept for the Study of Heterogeneous Robotic Swarms. IEEE Robotics & Automation Magazine, 20(4): 60–71, 2013.

63   M. Kudelski, L. Gambardella, G. A. Di Caro, RoboNetSim: An integrated framework for multi-robot and network simulation, Robotics and Autonomous Systems, Vol. 61, n.5, pp. 483-496, 2013

62   D. Weyland, R. Montemanni and L.M. Gambardella, Heuristics for the probabilistic traveling salesman problem with deadlines based on quasi-parallel Monte Carlo sampling, Computers & Operations Research, Volume 40, Issue 7, July 2013, Pages 1661–1670

61   G. Corani, M.C. Magli, A. Giusti, L. Gianaroli, L. Gambardella, "A Bayesian Network model for predicting pregnancy after in vitro fertilization", Computers in Biology and Medicine, 2013, 43(11), 1783–-1792. (doi).

60   L. Gianaroli, M.C. Magli, L. Gambardella, A. Giusti, C. Grugnetti and G. Corani, "Objective way to support embryo transfer: a probabilistic decision", Human Reproduction, (2013) 28 (5): 1210-1220.

59   D. Weyland, M. Salani, R. Montemanni and L.M. Gambardella Vehicle routing for exhausted oil collection Journal of Traffic and Logistics Engineering 1(1):5-8, 2013

58   D. Weyland, R. Montemanni and L.M. Gambardella A Metaheuristic Framework for Stochastic Combinatorial Optimization Problems based on GPGPU with a Case Study on the Probabilistic Traveling Salesman Problem with Deadlines Journal of Parallel and Distributed Computing, 73(1), 74-85, 2013

57   R. Montemanni and L.M. Gambardella A note on the article "A robust branch-and-cut approach for the minimum-energy symmetric network connectivity problem" Omega 40, 817, 2012

56   C. Pinciroli, V. Trianni, R. O'Grady, G. Pini, A. Brutschy, M. Brambilla, N. Mathews, E. Ferrante, G. A. Di Caro, F. Ducatelle, M. Birattari, L. M. Gambardella, M. Dorigo, ARGoS: A Modular, Parallel, Multi-Engine Simulator for Multi-Robot Systems, Swarm Intelligence Journal, Volume 6, Issue 4, pp. 271-295, 2012

55   M. Montemanni, M. Mojana, G. A. Di Caro, L. Gambardella, A decomposition-based exact approach for the Sequential Ordering Problem, Journal of Applied Operational Research (JAOR), vol. 5, 2013

54   M. Kudelski, L. Gambardella, G. A. Di Caro, RoboNetSim: An integrated framework for multi-robot and network simulation, Robotics and Autonomous Systems, 2013 (in press)

53   L. M. Gambardella, R. Montemanni, and D. Weyland. Coupling ant colony systems with strong local searches. European Journal of Operational Research, 220(3), 831-843, 2012

52   M. Dorigo, D. Floreano, L. M. Gambardella, F. Mondada, S. Nolfi, T. Baaboura, M. Birattari, M. Bonani, M. Brambilla, A. Brutschy, D. Burnier, A. Campo, A. L. Christensen, A. Decugnière, G. A. Di Caro, F. Ducatelle, E. Ferrante, A. Förster, J. Martinez Gonzales, J. Guzzi, V. Longchamp, S. Magnenat, N. Mathews, M. Montes de Oca, R. O'Grady, C. Pinciroli, G. Pini, P. Rétornaz, J. Roberts, V. Sperati, T. Stirling, A. Stranieri, T. Stützle, V. Trianni, E. Tuci, A. E. Turgut, and F. Vaussard, Swarmanoid: a novel concept for the study of heterogeneous robotic swarms, IEEE Robotics and Automation Magazine, Volume: 20 , Issue: 4 , Dec. 2013

51   A. Giusti, P. Taddei, C. Magli, G. Corani, L. Gambardella, L. Gianaroli, Artificial Defocus for Displaying Markers in Microscopy Z-Stacks. IEEE Transactions on Visualization and Computer Graphics (TVCG), 2012 (to appear)

50   D. Anghinolfi, R. Montemanni, M. Paolucci and L.M. Gambardella, A Hybrid Particle Swarm Optimization approach for the Sequential Ordering Problem Computers and Operations Research 38(7), 1076-1085, 2011

49   A. Giusti, C. Magli, G. Corani, L. Gambardella, L. Gianaroli, Observing the 3-Dimensional Morphology of 4-Cell Embryos using Computer Analysis of Image Z-Stacks. Human Reproduction (Supplement: Abstract book) vol.26 2011.

48   Ducatelle F., Di Caro G.A., Pinciroli C., Gambardella L., Self-organized cooperation in robotic swarms, Swarm Intelligence Journal, Volume 5, Issue 2, pp. 73-96, 2011

47   M. Dorigo, M. Birattari, G. A. Di Caro, R. Doursat, A. Engelbrecht, L. M. Gambardella, R. Gross, E. Sahin, T. Stuetzle (Eds.), Editorial, ANTS 2010 Special Issue , Swarm Intelligence, Springer, Vol. 5, N. 3-4, 2011

46   Ciresan, D. C., U. Meier, L. M. Gambardella & J. Schmidhuber. 2010. Deep Big Simple Neural Nets For Handwritten Digit Recognition. Neural Computation 22(12): 3207-3220.

45   A. de Moura Meneses, L. M. Gambardella, R. Schirru, A Class-Based Search for the In-Core Fuel Management Optimization of a Pressurized Water Reactor, Annals of Nuclear Energy, Volume 37, Issue 11, November 2010, Pages 1554-1560

44   Ducatelle F., Di Caro G.A., Gambardella L.M., Principles and applications of swarm intelligence for telecommunications networks, Swarm Intelligence Journal, Vol. 4, N. 3, pp. 173-198, 2010

43   A. de Moura Meneses,, C. J. G. Pinheiro, P. Rancoita, T. Schaul, L. M. Gambardella, R. Schirru, Assessment of neural networks training strategies for histomorphometric analysis of synchrotron radiation medical images. Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, Volume 621, Issues 1-3, 1 September 2010-21 September 2010, Pages 662-669

42   A de Moura Meneses, L.M. Gambardella, R. Schirru. A new approach for heuristics-guided search in the In-Core Fuel Management Optimization, Progress in Nuclear Energy 52 (2010) 339–351

41   Engelbrecht, A., Li, X., Gambardella, L. and Middendorf, M. (2009), Guest editorial: "Special Issue: Swarm Intelligence", IEEE Transactions on Evolutionary Computation, 13(13): 676-677, August 2009.

40   R. Montemanni, D.H. Smith, A.E. Rizzoli and L.M. Gambardella. Sequential Ordering Problems for Crane Scheduling in Port Terminals. International Journal of Simulation and Process Modelling, Volume 5, Number 4 / 2009 pp. 348 – 361.

39   R. Montemanni and L.M. Gambardella. Ant Colony System for Team Orienteering Problems with Time Windows. Foundations of Computing and Decision Sciences 34, 2009.

38   L.M. Gambardella, A. Hertz, F. Maffray, M. Widmer, 2009, Sixth International Conference on Graphs and Optimization 2007: Foreward, Discrete Applied Mathematics 157(17), 3495-3496.

37   Montemanni R.,Smith D.H., Gambardella L.M, A heuristic manipulation technique for the sequential ordering problem, Computers and Operations Research, Volume 35, Number 12, December 2008, 3931-3944

36   Bianchi L., Dorigo M., Gambardella L.M., and Gutjahr W.j, A survey on metaheuristics for stochastic combinatorial optimization.. Natural Computing, July 2008.

35   Donati A.V., Montemanni R., Casagrande N., Rizzoli A.E. and Gambardella L.M.. Time dependent vehicle routine problem with a multi ant colony system, European Journal of Operational Research, 185 (3), p.1174-1191, March 2008

34   A.E. Rizzoli, R. Montemanni, E. Lucibello and L.M. Gambardella. Ant Colony Optimisation for real world vehicle routing problems: from theory to applications. Swarm Intelligence, Vol. 1, No 2, p. 135-151, December 2007.

33   Montemanni R., Barta J., Mastrolilli M. and Gambardella L.M., The robust traveling salesman problem with interval data, Transportation Science, Vol . 41, No 3, pp. 366-381, August 2007.

32   Babaoglu O., Canright G., Deutsch A., Di Caro G., Ducatelle F., Gambardella L.M., Ganguly N., Jelasity M., Montemanni R., Montresor A. and Urnes T.. Design patterns from biology for distributed computing. ACM Transactions on Autonomous and Adaptive Systems, Vol.1, No.1, 26-66, September 2006.

31   Di Caro G.A., Ducatelle F., Rizzoli A., Gambardella L.M., Building blocks from biology for the design of algorithms for the management of modern dynamic networks European Research Consortium for Informatics and Mathematics (ERCIM) News, Special Issue on Emergent Computing, N. 64, January 2006

30   Montemanni R., Gambardella L.M., Rizzoli A.E. and Donati A.V.. Ant colony system for a dynamic vehicle routing problem. Journal of Combinatorial Optimization,10, 327-343, December 2005.

29   Di Caro G.A., Ducatelle F., Gambardella L.M., BISON: Biology-Inspired techniques for Self-Organization in dynamic Networks, Kuenstliche Intelligenz, Special Issue on Swarm Intelligence, Vol 4, November 2005.

28   Mondada, F., Gambardella, L.M., Floreano, D., Nolfi, S., Deneubourg, J-L., and Dorigo, M., The Cooperation of Swarm-Bots: Physical Interactions in Collective Robotics. IEEE Robotics & Automation Magazine., Vol. 12, No 2, 21-28, 2005

27   Ducatelle, F. and Gambardella, L. M. Survivable Routing in IP-over-WDM Networks: An Efficient and Scalable Local Search Algorithm. Optical Switching and Networking, Volume 2, Pages 86-99, 2005.

26   Montemanni R and Gambardella L.M.. The robust shortest path problem with interval data via Benders decomposition, 4OR, 3(4), 315-328, December 2005.

25   Ducatelle F., Di Caro G., Gambardella L.M. Using Ant Agents to Combine Reactive and Proactive Strategies for Routing in Mobile Ad Hoc Networks. International Journal of Computational Intelligence and Applications (IJCIA), Special Issue on Nature-Inspired Approaches to Networks and Telecommunications, Volume 5, Number 2, Pages 169-184, June 2005.

24   Di Caro G., Ducatelle F., Gambardella L.M., AntHocNet: An Adaptive Nature-Inspired Algorithm for Routing in Mobile Ad Hoc Networks , European Transactions on Telecommunications, Special Issue on Self-Organization in Mobile Networking, Volume 16, Number 5, Pages 443-455, September-October 2005

23   Gambardella L.M, Martello S., Metaheuristics and worst-case guarantee algorithms: relations, provable properties and applications (ECCO XV), European Journal of Operation al Research, 166, 1-2, 2005.

22   Mastrolilli M. Gambardella L.M, Maximum satisfiability: How good are tabu search and plateau moves in the worst-case?. European Journal of Operational Research, 166, 63–76, 2005

21   Montemanni R. and Gambardella L.M. Exact algorithms for the minimum power symmetric connectivity problem in wireless networks. Computers and Operations Research, 32(11), 2891-2904, November 2005.

20   Montemanni, R., Gambardella L.M. A branch and bound algorithm for the robust spanning tree problem with interval data., European Journal of Operational Research, 161(3), 771-779, March 2005.

19   Dorigo, M., Trianni, V., Sahin, E., Labella, T., Grossy R., Baldassarre, G., Nolfi, S., Deneubourg J-L., Mondada, F., Floreano D., Gambardella, L.M., Evolving Self-Organizing Behaviors for a Swarm-bot, Swarm Robotics special issue of the Autonomous Robots Journal, 17(2-3), 223–245, 2004.

18   Mondada, F. Pettinaro,G, Guignard A., Kwee, I., Floreano, D., Deneubour, J-L., Nolfi S., Gambardella, L.M.,Dorigo M., Swarm-Bot: a New Distributed Robotic Concept, Swarm Robotics special issue of the Autonomous Robots Journal, v. 17(2-3), p. 193-221, 2004

17   Montemanni, R Gambardella, L.M. and Donati, A.V. A branch and bound algorithm for the robust shortest path problem with interval data. Operations Research Letters, 32(3), 225-232, May 2004.

16   Montemanni, R., Gambardella L.M. An exact algorithm for the robust shortest path problem with interval data, Computers and Operations Research, 31(10), 1667-1680, September 2004.

15   Gambardella, L.M., Rizzoli E. Funk P, Agent-based Planning and Simulation of Combined Rail/Road Transport, Simulation, Vol. 78, Issue 5, pp. 293-303, May 2002.

14   Gambardella, L.M, Mastrolilli M., Rizzoli A.E., Zaffalon M., Managing resource allocation, scheduling and simulation for an intermodal container terminal, JORBEL, Journal of the Belgian Operations Research Society, Special Issue on OR Models in a Harbour and Maritime Environment vol. 40, no. 3-4, pp. 195-209, 2002.

13   Dorigo M., Gambardella L. M, Middendorf M. and Stützle T. Guest Editorial -- Special Section on Ant Colony Optimization, IEEE Transactions On Evolutionary Computation, vol. 6, no. 4, pp. 317-320, 2002.

12   Gambardella, L.M, Mastrolilli M., Rizzoli A.E., Zaffalon M., An integrated approach to the optimisation of an intermodal terminal based on efficient resource allocation and scheduling, Journal of Intelligent Manufacturing, 12 (5/6):521-534, October 2001.

11   Taillard E.D., Gambardella L.M., Gendreau M., Potvin J.-Y. Adaptive memory programming: A unified view of metaheuristics, European Journal of Operational Research, Vol. 135, Nr 1, pp. 1-16, 2001.

10   Ijspeert A.J., Martinoli A., Billard A., Gambardella L.M., Collaboration through the exploitation of local interactions in autonomous collective robotics: the stick pulling experiment, Autonomous Robots, Nr. 11 (2), pp 149-171, 2001.

9   Rizzoli, A.E., Fornara, N., Gambardella, L.M., A simulation tool for combined rail/road transport in intermodal terminals, Mathematical and Computer Modelling in Simulation, 59/1-3 pp. 57-71, 2002

8   Gambardella L.M, Dorigo M, An Ant Colony System Hybridized with a New Local Search for the Sequential Ordering Problem, INFORMS Journal on Computing, vol.12(3), pp. 237-255, 2000.

7   Mastrolilli, M., Gambardella, L.M., Effective Neighborhood Functions for the Flexible Job Shop Problem, Journal of Scheduling, vol. 3(1), pp. 3-20, 2000.

6   Gambardella L.M, Taillard E., Dorigo M., Ant colonies for the Quadratic Assignment Problem, Journal of the Operational Research Society, 50, pp.167-176,1999

5   Dorigo M., G. Di Caro and Gambardella L. M. Ant Algorithms for Discrete Optimization, Artificial Life 5,2, pp. 137-172, 1999.

4   Gambardella L.M., Rizzoli A., Zaffalon M., Simulation and Planning for Intermodal Container Terminal, SIMULATION Special Issue on Harbour and Maritime Simulation, vol. 71, n. 2,August 1998, pp. 107-116.

3   Taillard É. D., Gambardella L. M., Gendreau M., Potvin J.Y., La Programmation à mémoire adaptative ou l'évolution des algorithmes évolutifs, Calculateurs Paralèlles, v.10 n°2/1998.

2   Dorigo M., Gambardella L.M, Ant Colony System: A Cooperative Learning Approach to the Traveling Salesman Problem, IEEE Transactions on Evolutionary Computation 1,1, pp. 53-66, 1997

1   Dorigo M., Gambardella L.M, Ant Colonies for Traveling Salesman Problem, BioSystem 43, pp. 73-81, 1997

BOOKS

1   L.M.Gambardella, Sei vite, Zerounoundici edizioni, Novel, 2013

2   L.M.Gambardella, Il suono dell'alba, La Feluca edizioni, Novel, 2019

BOOK CHAPTERS

18   V. Papapanagiotou, R. Montemanni and L.M. Gambardella, Sampling-based objective function evaluation techniques for the Orienteering Problem with Stochastic Travel and Service Times In Operations Research Proceedings 2014 – Selected papers of the International Conference on Operations Research, Springer, Heidelberg, pp 445-450, 2016

17   N.E. Toklu, R. Montemanni and L.M. Gambardella Embedding Robust Optimization Techniques into Metaheuristic Algorithms, In Metaheuristics in uncertain environments, Wiley, to appear

16   Montemanni, C. Valeri, S. Nesic, L.M. Gambardella, M. Gioacchini, T. Fumagalli, H. Zeller, K. Meyer, M. Faist and A.E. Rizzoli Supply chain design and sustainability in the textile sector Proceedings of ICAOR 2013 – The 5th International Conference on Applied Operational Research, In Lecture Notes in Management Science 5, J.S. Yeomans et al. eds., Tadbir OR, Vancouver, 67–73, 2013

15   V. Papapanagiotou, D. Weyland, R. Montemanni and L.M. Gambardella A sampling-based approximation of the objective function of the Orienteering problem with stochastic travel and service times Proceedings of ICAOR 2013 – The 5th International Conference on Applied Operational Research, In Lecture Notes in Management Science 5, J.S. Yeomans et al. eds., Tadbir OR, Vancouver, 143–152, 2013

14   M. Mojana, R. Montemanni, G. Di Caro and L.M. Gambardella A Branch and Bound approach for the Sequential Oridering Problem Proceedings of ICAOR 2012 – The 4th International Conference on Applied Operational Research, In Lecture Notes in Management Science 4, P. Luangpaiboon et al. eds., Tadbir OR, Vancouver, 266–273, 2012

13   D. Anghinolfi, L.M. Gambardella, R. Montemanni, C. Nattero, M. Paolucci and N.E. Toklu A matheuristic algorithm for a large-scale energy management problem In Lecture Notes in Computer Science 7116, I. Lirkov et al. eds., Springer, Heidelberg, 173–181, 2012. B6 D. Tulpan, A. Ghiggi and R. Montemanni Computational sequence design techniques for DNA microarray technologies In Systemic Approaches in Bioinformatics and Computational Systems Biology: Recent Advances, P. Lecca et al. eds., IGI Global, 57–91, 2012

12   L.M. Gambardella, R. Montemanni and D. Weyland An Enhanced Ant Colony System for the Sequential Ordering Problem In Operations Research Proceedings 2011 – Selected papers of the International Conference on Operations Research, D. Klatte et al. eds., Springer, Heidelberg, 355–360, 2012

11   D. C. Ciresan, U. Meier, L. M. Gambardella, J. Schmidhuber. Deep Big Multilayer Perceptrons For Digit Recognition. In Neural Networks Tricks of the Trade 2012.

10   D. Weyland, R. Montemanni and L.M. Gambardella Using Statistical Tests for improving state-of-the-art Heuristics for the Probabilistic Traveling Salesman Problem with Deadlines In Computer Aided Systems Theory, Part I, Lecture Notes in Computer Science 6927, R. Moreno-Diaz et al. eds., Springer, Heidelberg, 448–455, 2011

9   Di Caro G., Ducatelle F. and Gambardella L. M. (2009). Routage dans les réseaux mobiles ad hoc en environnement urbain (in French). In: Fourmis artificielles, des bases algorithmiques aux concepts et réalisations avancés, eds. N. Monmarché, F. Guinand and P. Siarry, Edition HERMES-LAVOISIER, To appear in 2009.

8   Di Caro G., Ducatelle F. and Gambardella L. M. (2008). Theory and practice of Ant Colony Optimization for routing in dynamic telecommunications networks. In: Reflecting Interfaces: The Complex Coevolution of Information Technology Ecosystems, eds. N. Sala, F. Orsucci, Idea Group Inc., April 2008.

7   Ducatelle F., Gambardella L.M., Kurant M., Nguyen H. X. and Thiran P. Algorithms for failure detection in large IP-over-Fiber and Wireless Ad Hoc Networks. In: Dependable Systems: Software, Computing, Networks, eds. J. Kohlas, B. Meyer, A. Schiper, Lecture Notes in Computer Science 4028, Springer, 2006.

6   Montemanni R., Gambardella L.M. and Das A.K.. Mathematical models and exact algorithms for the min-power symmetric connectivity problem: an overview. In Handbook on Theoretical and Algorithmic Aspects of Sensor, Ad Hoc Wireless, and Peer-to-Peer Networks, J. Wu ed., Auerbach Publications, 133-146, 2006.

5   Montemanni R. and Gambardella L.M. Minimum power symmetric connectivity problem in wireless networks: a new approach. In Mobile and wireless communications networks. Series: IFIP International Federation for Information Processing, 162(8), E.M. Belding-Royer, K. Al Agha, G. Pujolle eds., Springer, 496-508, October 2004.

4   Maniezzo V, Gambardella LM., De Luigi F. Ant Colony Optimization, New Optimization Techniques in Engineering, by Onwubolu, G. C., and B. V. Babu, Springer-Verlag Berlin Heidelberg, 101-117, 2004.

3   Gambardella L.M, Taillard E., Agazzi G., MACS-VRPTW: A Multiple Ant Colony System for Vehicle Routing Problems with Time Windows , In D. Corne, M. Dorigo and F. Glover, editors, New Ideas in Optimization, McGraw-Hill, London, UK, pp. 63-76, 1999

2   Versino, C., Gambardella, L.M. Learning Fine Motion in Robotics, Design and Experiments, Recent Advances in Artificial Neural Networks, Desing and Application, CRC press, pp. 127-153, 2000.

1   Versino, C., Gambardella, L.M. Learning Real Team Solutions, DAI Meets Machine Learning, Lecture Notes in Artificial Intelligence, Ed. Weiss, Springer Verlag, pp. 40-61, 1997

INTERNATIONAL CONFERENCES

228   A Bussolan, S Baraldo, LM Gambardella, A Valente, Assessing the Impact of Human-Robot Collaboration on Stress Levels and Cognitive Load in Industrial Assembly Tasks, ISR Europe 2023; 56th International Symposium on Robotics, 78-85, 2023

227   L. M Gambardella, S. Gualandi, M. Mastrolilli, E. Vercesi, "Predicting the Empirical Hardness of Metric TSP Instances". 6th AIROYoung Workshop - Operation Research and Data Science in Public Services, 2023

226   LM Gambardella, A Giusti, J Guzzi, Sensing Anomalies as Potential Hazards: Datasets and Benchmarks, Towards Autonomous Robotic Systems: 23rd Annual Conference, TAROS 2022, Culham, UK, September 7–9, 2022

225   D Mantegazza, C Redondo, F Espada, LM Gambardella, A Giusti, J Guzzi, Sensing anomalies as potential hazards: Datasets and benchmarks, Annual Conference Towards Autonomous Robotic Systems, 205-219, 3, 2022

224   RO Chávez García, MA Estrada, M. Ebrahimi, F. Zuppichini, LM Gambardella, A. Giusti, A J Ijspeert, Gait-dependent Traversability Estimation on the k-rock2 Robot, 26th International Conference on Pattern Recognition (ICPR), 4204-4210,2022

223   G. Abbate, A. Giusti, A. Paolillo, LM Gambardella, AE Rizzoli, J. Guzzi, Selecting Objects on Conveyor Belts Using Pointing Gestures Sensed by a Wrist-worn Inertial Measurement Unit, IEEE 18th International Conference on Automation Science and Engineering, 2022

222   G. Abbate, A. Giusti, A. Paolillo, B. Gromov, LM Gambardella, AE Rizzoli, J. Guzzi, PointIt: A ROS toolkit for interacting with co-located robots using pointing gestures, 17th ACM/IEEE International Conference on Human-Robot Interaction (HRI), 2022

221   LM Gambardella, S Gualandi, M Mastrolilli, E Vercesi, Predicting the Empirical Hardness of Metric TSP Instances, Workshop on Operation Research and Data Science in Public Services, 1-16, 2022

220   T Vitali, UJ Mele, LM Gambardella, R Montemanni, Machine learning constructives and local searches for the travelling salesman problem, International Conference on Operations Research, 59-65, 3, 2021

219   E. Cereda, M. Ferri, D. Mantegazza, N. Zimmerman, LM Gambardella, J. Guzzi, A. Giusti, D. Palossi Improving the generalization capability of DNNs for ultra-low power autonomous nano-UAVs, IEEE 2021 17th International Conference on Distributed Computing in Sensor Systems, 2021

218   G Abbate, B Gromov, LM Gambardella, A Giusti, Pointing at moving robots: Detecting events from wrist IMU data, 2021 IEEE International Conference on Robotics and Automation (ICRA), 3604-3611, 2021

217   U Junior Mele, LM Gambardella, R Montemanni, Machine learning approaches for the traveling salesman problem: A survey, Proceedings of the 2021 8th International Conference on Industrial Engineering and Applications, 2021

216   X. Chou, UJ Mele, LM Gambardella, R. Montemanni UJ Mele, Re-initialising solutions in a random restart local search for the probabilistic orienteering problem, Proceedings of the 2021 8th International Conference on Industrial Engineering and Applications, 2021

215   G Abbate, B Gromov, LM Gambardella, A Giusti, Pointing at Moving Robots: Detecting Events from Wrist IMU Data, IEEE International Conference on Robotics and Automation (ICRA), 3604-3611, 2021

214   U Junior Mele, L Maria Gambardella, R Montemanni, Machine Learning Approaches for the Traveling Salesman Problem: A Survey The 8th International Conference on Industrial Engineering, 2021

213   E Cereda, M Ferri, D Mantegazza, N Zimmerman, LM Gambardella Improving the Generalization Capability of DNNs for Ultra-low Power Autonomous Nano-UAVs, 17th International Conference on Distributed Computing in Sensor, 2021

212   X. Chou, D. Loske, M. Klumpp, LM Gambardella, Roberto Montemanni, In-store picking strategies for online orders in grocery retail logistics Optimization and Decision Science: ODS, Virtual Conference, November 19, 2020

211   UJ Mele, X Chou, LM Gambardella, R Montemanni, Notice of Removal: Reinforcement Learning and Additional Rewards for the Traveling Salesman Problem IEEE 7th International Conference on Industrial Engineering, 2020

210   A Giusti, M Dotta, U Maradia, M Boccadoro, LM Gambardella, A Nasciuti, Image-based Measurement of Material Roughness using Machine Learning Techniques, Procedia CIRP 95, 377-382, 2020

209   Xiaochen Chou, Luca Maria Gambardella, Roberto Montemanni A Metaheuristic Algorithm for the Probabilistic Orienteering Problem Proceedings of the 2019 2nd International Conference on Machine Learning and Machine Intelligence, 30-34, 2019

208   J Guzzi, O Chavez-Garcia, L M Gambardella, and A Giusti: "On the Impact of Uncertainty for Path Planning". ICRA 2019

207   B Gromov, J Guzzi, G Abbate, L Gambardella and A Giusti: "Pointing gestures for proximity interaction". HRI 2019 video track and demo track. Best demo award and honorable mention for best video award, 2019

206   Dario Mantegazza, Jérôme Guzzi, Luca M Gambardella, and Alessandro Giusti: "Video: Learning Vision-Based Quadrotor Control in User Proximity". HRI 2019 Video track

205   Boris Gromov, Gabriele Abbate, Luca Gambardella, and Alessandro Giusti: "Proximity Human-Robot Interaction Using Pointing Gestures and a Wrist-mounted IMU". IROS 2019

204   Dario Mantegazza, Jérôme Guzzi, Luca Maria Gambardella, and Alessandro Giusti: "Vision-based Control of a Quadrotor in User Proximity: Mediated vs End-to-End Learning Approaches". ICRA 2019

203   Mirko Nava, Jérôme Guzzi, R. Omar Chavez-Garcia, Luca M. Gambardella, and Alessandro Giusti: "Demo: Learning to Perceive Long-Range Obstacles Using Self-Supervision from Short-Range Sensors". AAAI 2019 Demo track

202   Simone Mellace, Jérôme Guzzi, Alessandro Giusti, and Luca M. Gambardella: "Realtime Generation of Audible Textures Inspired by a Video Stream". AAAI 2019 Demo track

201   Roberto Montemanni, Federico D'ignazio, Xiaochen Chou, Luca Maria Gambardella, "Machine Learning and Monte Carlo Sampling for the Probabilistic Orienteering Problem", Joint 10th International Conference on Soft Computing and Intelligent Systems (SCIS) and 19th International Symposium on Advanced Intelligent Systems (ISIS), 2018

200   J. Guzzi, A. Giusti, L. Gambardella, G. A. Di Caro: "A model of artificial emotions for behavior modulation and implicit coordination in multi-robot systems". Proc. of the Genetic and Evolutionary Conference (GECCO) 2018, Swarm Intelligence Track (acceptance rate 22%).

199   B. Gromov, L. Gambardella, and A. Giusti, "Robot Identification and Localization with Pointing Gestures," in 2018 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2018.

198   B. Gromov, L. M. Gambardella, A. Giusti: "Landing a drone with pointing gestures". Proc. of Human Robot Interaction (HRI) 2018, video track.

197   S. Toniolo, J. Guzzi, L. M. Gambardella, A. Giusti: "Learning an Image-based Obstacle Detector With Automatic Acquisition of Training Data". Proc. of AAAI Conference on Artificial Intelligence 2018, demo track.

196   A. Giusti, D. Huber, L. M. Gambardella: "Introducing Machine Learning Concepts by Training a Neural Network to Recognize Hand Gestures". Proc. of Symposium on Educational Advances in Artificial Intelligence (EAAI) 2018

195   J. Guzzi, A. Giusti, G. A. Di Caro, L. M. Gambardella: "Mighty Thymio for University-level Educational Robotics". Proc. of Symposium on Educational Advances in Artificial Intelligence (EAAI) 2018

194   D. Broggini, B. Gromov, A. Giusti, L. M. Gambardella: "Learning to Detect Pointing Gestures From Wearable IMUs". Proc. of AAAI Conference on Artificial Intelligence 2018, student abstracts track.

193   J. Guzzi, A. Giusti, L. Gambardella, and G. A. Di Caro. A model of artificial emotions for behavior modulation and implicit coordination in multi-robot systems. In Proceedings of the Genetic and Evolutionary Computation Conference (GECCO), Kyoto, Japan, July 15–19, 2018.

192.   J. Guzzi, A. Giusti, J. Nagi, L. Gambardella, and G. A. Di Caro. Artificial emotions as dynamic modulators of individual and group behavior in multi-robot system (Extended abstract). In Proceedings of the 17th International Conference on Autonomous Agents and Multiagent Systems (AAMAS), Stockholm, Sweden, July 10–15, 2018.

191.   A. Giusti, J. Guzzi, G. A. Di Caro, and L. M. Gambardella. Mighty Thymio for robotics education(poster). In Proceedings of the 8th AAAI Symposium on Educational Advances in Artificial Intelligence (EAAI-18), New Orleans, USA, February 2–5, 2018.

190   J Jamal, Ghassan Shobaki, Vassilis Papapanagiotou, Luca Maria Gambardella, Roberto Montemanni, "Solving the sequential ordering problem using branch and bound", 2017 IEEE Symposium Series on Computational Intelligence (SSCI), 207

189   R. Omar Chavez-Garcia, J. Guzzi, L. M. Gambardella, A. Giusti: "Image Classification for Ground Traversability Estimation in Robotics". Proc. of Advanced Concepts for Intelligent Vision Systems (ACIVS) 2017

188   E. Feo-Flushing, L. Gambardella, and G. A. Di Caro. Simultaneous spatial task allocation, data routing and transmission scheduling in mobile multi-robot teams. In Proceedings of the 30th IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Vancouver, Canada, September 24–28, 2017.

187   B. Gromov, L. Gambardella, G. A. Di Caro, Wearable multi-modal interface for human multi-robot interaction, Proceedings of the 14th IEEE International Symposium on Safety, Security and Rescue Robotic (SSRR), Lausanne, Switzerland, October 23-27, 2016

186   E. Feo-Flushing, L. Gambardella, G. A. Di Caro, Robot rostering: Coalition formation for long-term missions with work shifts, Proceedings of the 14th IEEE International Symposium on Safety, Security and Rescue Robotic (SSRR), Lausanne, Switzerland, October 23-27, 2016

185   E. Feo-Flushing, L. Gambardella, G. A. Di Caro, On using mobile robotic relays for adaptive communications in search and rescue missions, Proceedings of the 14th IEEE International Symposium on Safety, Security and Rescue Robotic (SSRR), Lausanne, Switzerland, October 23-27, 2016

184   B. Gromov, L. Gambardella, G. A. Di Caro, Wearable multi-modal interfaces for mixed-initiative interaction in human multi-robot teams, ICRA Workshop on Fielded multi-robot systems operating on land, sea, and air - Poster with extended abstract, Stockholm, Sweden, May 20, 2016 [BibTeX]

183   Bestoun S. Ahmed, Luca M. Gambardella, and Kamal Z. Zamli, "A New Approach to Speed Up Combinatorial Search Algorithms Using Stack and Hash Table", 3rd IEEE Science and Information Conference (SAI2016), 2016, London, United Kingdome.

182   E. Feo-Flushing, L. Gambardella, and G. A. Di Caro. On decentralized coordination for spatial task allocation and scheduling in heterogeneous teams. In Proceedings of the 15th International Conference on Autonomous Agents and Multiagent Systems (AAMAS), Singapore, May 9-13, 2016

181   A. Giusti, J. Guzzi, D. Ciresan, F.-L. He, J. P. Rodriguez, F. Fontana, M. Faessler, C. Forster, J. Schmidhuber, G. A. Di Caro, D. Scaramuzza, and L. M. Gambardella. A machine learning approach to visual perception of forest trails for mobile robots. In Proceedings of the IEEE International Conference on Robotics and Automation (ICRA) , Stockholm, Sweden, May 16-21, 2016.

180   SWARMIX project team (www.swarmix.org). Finding Linda - A Search and Rescue Mission by SWARMIX in Proceedings of the 10th AAAI Video Competition, Phoenix, AR, USA, February 12-17, 2016. Nominated for Best Video, Best Robot Video, and Most Entertaining Video awards

179   A. Giusti, J. Guzzi, D. Ciresan, F.-L. He, J. P. Rodriguez, G. A. Di Caro, J. Schmidhuber, L. M. Gambardella,F. Fontana, M. Faessler, C. Forster, and D. Scaramuzza. Quadcopter navigation in the forest. InProceedings of the 10th AAAI Video Competition, Phoenix, AR, USA, February 12-17, 2016. (Nominated for Best Robot Video award).

178   V. Papapanagiotou, R. Montemanni and L.M. Gambardella Hybrid sampling-based evaluators for the Orienteering Problem with Stochastic Travel and Service Times, Proceedings of ICTTE 2015.

177   V. Papapanagiotou, R. Montemanni and L.M. GambardellaThe Orienteering Problem with Stochastic Travel and Service Times: new approaches to sampling-based objective function evaluation Proceedings of CMCGS 2015 – The 4th Annual International Conference on Computational Mathematics, Computational Geometry and Statistics, Singapore, 26-27 January 2015

176.   A. Giusti, J. Guzzi, D. Ciresan, F. Lin, J. P. Rodriguez, F. Fontana, M. Faessler, C. Forster, J. Schmidhuber, G. A. Di Caro, D. Scaramuzza, and L. Gambardella. A machine learning approach to the visual perception of forest trails. In IROS Workshop on Vision-based Control and Navigation of Small, Lightweight UAVs, Hamburg, Germany, October 2, 2015.

175   J. Banfi, J. Guzzi, A. Giusti, L. Gambardella, G. A. Di Caro: "Fair Multi-Target Tracking in Cooperative Multi-Robot Systems". Proc. of IEEE International Conference on Robotics and Automation (ICRA) 2015.

174   J. Guzzi, A. Giusti, L. Gambardella, and G. A. Di Caro.Fair multi-target tracking in cooperative multi-robot systems. In Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), Seattle, USA, May 26-30, 2015.

173   J. Nagi, H. Ngo, L. Gambardella, G. A. Di Caro, Wisdom of the Swarm for Cooperative-Decision Making in Human-Swarm Interaction, in Proc. of the IEEE International Conference on Robotics and Automation (ICRA), Seattle, USA, May 26-30, 2015

172   J. Nagi, G. A. Di Caro, A. Giusti, L. M. Gambardella, Learning Symmetric Face Pose Models Online Using Locally Weighted Projectron Regression, in Proc. of the 21st IEEE International Conference on Image Processing (ICIP), Paris, France, Oct. 27-30, 2014, pp. 1400-1404

171   E. Feo Flushing, L.M. Gambardella, and G.A. Di Caro A mathematical programming approach to collaborative missions with heterogeneous teams , Proceedings of the 27th IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Chicago, IL, USA, September 14-18, 2014

170   G.A. Di Caro, E. Feo Flushing, and L.M. Gambardella Use of time-dependent spatial maps of communication quality for network-aware multi-robot path planning , Proceedings of the 8th International Workshop on Wireless Sensor, Actuator and Robot Networks (WiSARN), Benidorm, Spain, June 22-27, 2014

169   E. Feo Flushing, M. Kudelski, L.M. Gambardella, G. A. Di Caro Spatial prediction of wireless links and its application to the path control of mobile robots , Proceedings of the 9th IEEE International Symposium on Industrial Embedded Systems (SIES), Pisa, Italy, June 18-20, 2014

168   E. Feo Flushing, M. Kudelski, L.M. Gambardella, G. A. Di Caro Strategic control of proximity relationships in heterogeneous search and rescue teams, Proceedings of the 3rd IROS Workshop on Robots and Sensors integration in future rescue INformation system (ROSIN), Tokyo, Japan, November 7, 2013

167   J. Funke, J. Martel, S. Gerhard, B. Andres, D. Ciresan, A. Giusti, L.M. Gambardella, J. Schmidhuber, H. Pfister, A. Cardona, M. Cook - Candidate Sampling for Neuron Reconstruction from Anisotropic Electron Microscopy Volumes (accepted at MICCAI 2014)

166   A. Pesenti Gritti, O. Tarabini, A. Giusti, J. Guzzi, G. A. Di Caro, V. Caglioti, L. M. Gambardella: "Perceiving People from a Low-lying Viewpoint" Proc. of ACM/IEEE International Conference on Human Robot Interaction (HRI), 2014.

165   J. Nagi, A. Giusti, F. Nagi, L. Gambardella, G. A. Di Caro, Online Feature Extraction for the Incremental Learning of Gestures in Human-Swarm Interaction, in Proc. of the IEEE International Conference on Robotics and Automation (ICRA), Hong Kong, China, May 31-Jun. 5, 2014, pp. 3331-3338.

164   J. Nagi, H. Ngo, J. Schmidhuber, L. M. Gambardella, G. A. Di Caro, Human-Robot Cooperation: Fast, Interactive Learning from Binary Feedback, in Proc. of the 8th ACM/IEEE International Conference on Human-Robot Interaction (HRI) (Video Session), Bielefeld, Germany, March 3-6, 2014, pp. 107.

163   J. Nagi, A. Giusti, G. A. Di Caro, L. Gambardella, Human Control of UAVs using Face Pose Estimates and Hand Gestures, in Proc. of the 8th ACM/IEEE International Conference on Human-Robot Interaction (HRI) (Late Breaking Report), Bielefeld, Germany, March 3-6, 2014, pp. 252-253.

162   J. Nagi, A. Giusti, L. Gambardella, G. A. Di Caro, Human-Swarm Interaction Using Spatial Gestures, in Proc. of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Chicago, USA, Sep. 14-18, 2014, pp. 3834-3841.

161   A. Giusti, C. Caccia, D. Ciresan, J. Schmidhuber, L. Gambardella: "A Comparison of Algorithms and Humans for Mitosis Detection". Proc. of International Symposium on Biomedical Imaging (ISBI) 2014.

160   N.E. Toklu, L.M. Gambardella and R. Montemanni Vehicle Routing Problem with Uncertain Costs via a Multiple Ant Colony System Proceedings of CMCGS 2014 – The 3rd Annual International Conference on Computational Mathematics, Computational Geometry and Statistics, Singapore, 22-23 April 2014

159   M. Klumpp, N.E. Toklu, V. Papapanagiotou, R. Montemanni and L.M. Gambardella Green Bullwhip Effect Cost Simulation in Distribution Networks Proceedings of LDIC 2014 – 4th International Conference on Dynamics in Logistics, Brehem, Germany, 10-14 February 2014

158   M. Kudelski, L. Gambardella, G. A. Di Caro, A mobility-controlled link quality learning protocol for multi-robot coordination tasks, Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), Hong Kong, China, May 31 - June 5, 2014

157   J. Nagi, A. Giusti, F. Nagi, L. Gambardella, G. A. Di Caro, Online feature extraction for the incremental learning of gestures in human-swarm interaction, Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), Hong Kong, China, May 31 - June 5, 2014

156   H. Ngo, J. Nagi, L. Gambardella, J. Schmidhuber, G. A. Di Caro, Human-robot cooperation: fast, interactive learning from binary feedback, Proceedings of the 8th ACM/IEEE International Conference on Human-Robot Interaction (HRI) (Video Session), Bielefeld, Germany, March 3-6, 2014

155   A. Pesenti Gritti, O. Tarabini, A. Giusti, J. Guzzi, G. A. Di Caro, V. Caglioti, L. Gambardella, Perceiving people from a low-lying viewpoint, Proceedings of the 8th ACM/IEEE International Conference on Human-Robot Interaction (HRI) (Video Session), Bielefeld, Germany, March 3-6, 2014

154   N.E. Toklu, R. Montemanni and L.M. Gambardella A Robust Multiple Ant Colony System for the Capacitated Vehicle Routing Problem Proceedings of IEEE SCM 2013 – International Conference on Systems, Man and Cybernetics 2013, pages 1871-1876, Manchester, United Kingdom, 13-16 October 2013

153   D. Ciresan, A. Giusti, L. Gambardella, J. Schmidhuber: "Mitosis Detection in Breast Cancer Histology Images with Deep Neural Networks". Proc. of International Conference on Medical Image Computing and Computer Assisted Intervention (MICCAI) 2013.

152   A. Giusti, D. Ciresan, J. Masci, L. Gambardella, J. Schmidhuber: "Fast Image Scanning with Deep Max-Pooling Convolutional Neural Networks". Proc. of IEEE International Conference on Image Processing (ICIP) 2013

151   J. Nagi, A. Giusti, G. A. Di Caro, L. Gambardella, HRI in the sky: controlling UAVs using face poses and hand gestures, Proceedings of the 8th ACM/IEEE International Conference on Human-Robot Interaction (HRI) (Late breaking reports), Bielefeld, Germany, March 3-6, 2014

150   D. Weyland, R. Montemanni and L.M. Gambardella Convergence Results for Vehicle Routing Problems with Stochastic Demands, Proceedings of ORS 2013 – The 3rd International Conference on Operations Research and Statistics, Singapore, 22-23 April 2013

149   N.E. Toklu, R. Montemanni and L.M. Gambardella An Ant Colony System for the Capacitated Vehicle Routing Problem with Uncertain Travel Costs Proceedings of IEEE SIS 2013 – Swarm Intelligence Symposium 2013, pages 32-39, Singapore, 16-19,April 2013

148   G. A. Di Caro, A. Giusti, J. Nagi, L. Gambardella, A simple and efficient approach for cooperative incremental learning in robot swarms, Proceedings of the 16th International Conference on Advanced Robotics (ICAR), Montevideo, Uruguay, November 25-29, 2013

147   E. Feo, L. Gambardella, G. A. Di Caro, Strategic control of proximity relationships in heterogeneous search and rescue teams, Proceedings of the 3rd IROS Workshop on Robots and Sensors integration in future rescue INformation system (ROSIN), Tokyo, Japan, November 7, 2013

146   J. Guzzi, A. Giusti, L. Gambardella, G. A. Di Caro, Local reactive robot navigation: a comparison between reciprocal velocity obstacle variants and human-like behavior, Proceedings of the 26th IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Tokyo Big Sight, Japan, November 3-8, 2013

145 E. Feo, M. Kudelski, L. Gambardella, G. A. Di Caro, Connectivity-aware planning of search and rescue missions, Proceedings of the 11th IEEE International Symposium on Safety, Security, and Rescue Robotics (SSRR), Linköping, Sweden, October 21-26, 2013 (Nominated for the Best Paper Award)

144 E. Feo, M. Kudelski, J. Nagi, L. Gambardella, G. A. Di Caro, Link quality estimation: A case study for on-line supervised learning in wireless sensor networks, Extended abstract/Poster, Proceedings of the 5th Workshop on Real-World Wireless Sensor Networks (REALWSN), Como Lake, Italy, September 19-20, 2013

143 G. A. Di Caro, M. Kudelski, E. Feo, J. Nagi, I. Ahmed, L. Gambardella, On-line supervised learning of link quality estimates in wireless networks, Proceedings of the 12th IEEE/IFIP Annual Mediterranean Ad Hoc Networking Workshop (Med-Hoc-Net), Ajaccio, Corsica, France, June 24-26, pp. 69-76, 2013

142 J. Guzzi, A. Giusti, L. Gambardella, G. A. Di Caro, Human-friendly robot navigation in dynamic environments, Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), Karlsruhe, Germany, May 6-10, pp. 423-430, 2013

141 D. Weyland, R. Montemanni and L.M. Gambardella Hardness Results for the Probabilistic Traveling Salesman Problem with Deadlines Proceedings of ISCO 2012 – The 2nd International Symposium on Combinatorial Optimization, Athens, Greece, 17-21 April 2012

140 Ruinelli, L., Salani, M., Gambardella, L.M. (2012). Hybrid Column Generation-based Approach for VRP with Simultaneous Distribution, Collection, Pickup-and-delivery and Realworld Side Constraints, ICORES 2012: 247-255.

139 Ruinelli, L., Salani, M., Gambardella, L.M. (2012). Constraint Violation in Real-World Vehicle Routing . 5 th International Workshop on Freight Transportation and Logistics ODYSSEUS 2012, May 21-25, Mykonos, Greece : 176-179

138 E. Feo, L. Gambardella, G. A. Di Caro, GIS-based Mission Support System for Wilderness Search and Rescue with Heterogeneous Agents, Proceedings of the 2nd IROS Workshop on Robots and Sensors integration in future rescue INformation system (ROSIN), Vilamoura, Portugal, October 7-12, 2012

137 C. Magli, G. Corani, A. Giusti, E. Castelletti, L. Gambardella and L. Gianaroli, "A prognostic model for multiple-embryo transfers", Proc. of the Annual Meeting of the European Society on Human Reproduction and Embryology (ESHRE 2012), published in Human Reproduction (Supplement: Abstract book), vol 27, suppl 2, 2012.http://dx.doi.org/10.1093/humrep/27.s2.77

136 G.Corani, C.Magli, A.Giusti, L. Gianaroli and L. Gambardella, A Bayesian Network model for predicting the outcome of in vitro fertilization. In Cano, A., Gomez-Olmedo,M., Nielsen,T. (Eds), Proc. of the 6th European Workshop on Probabilistic Graphical Models (PGM 2012), pp. 75--82.

135 M. Kudelski, M. Cinus, L. Gambardella, G.A. Di Caro. A framework for realistic simulation of networked multi-robot systems. Proc. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS'12), pages: 5018-5025, Vilamoura, 2012.

134. D. Ciresan, A. Giusti, L. Gambardella, J. Schmidhuber. Deep Neural Networks Segment Neuronal Membranes in Electron Microscopy Images. In Advances in Neural Information Processing Systems (NIPS 2012), Lake Tahoe, 2012.

133A. Giusti, J. Nagi, L. Gambardella, G. Di Caro: "Cooperative Sensing and Recognition by a Swarm of Mobile Robots". Proc. of IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS),2012

132 J. Guzzi, A. Giusti, L. M. Gambardella, G. A. Di Caro: "Bioinspired Obstacle Avoidance Algorithms for Robot Swarms". Proc. of International Conference on Bio-Inspired Models of Network, Information, and Computing Systems (BIONETICS), 2012. Best Paper Award.

131 A. Giusti, J. Nagi, L. Gambardella, S. Bonardi, G. Di Caro: "Distributed Consensus for Interaction between Humans and Mobile Robot Swarms (demonstration)". Proc. of International Conference on Autonomous Agents and Multiagent Systems (AAMAS), 2012.

130 A. Giusti, J. Nagi, L. Gambardella, S. Bonardi, G. Di Caro: "Human-swarm interaction through distributed cooperative gesture recognition". Proc. of ACM/IEEE International Conference on Human Robot Interaction (HRI), 2012.

129 J. Nagi, H. Ngo, A. Giusti, L. Gambardella, G. Di Caro: "Cooperative Interactive Learning and Recognition for Human-Swarm Interaction using Partial Feedback". Proc. of IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN), 2012.

128   J. Nagi, G. Di Caro, A. Giusti, L. Gambardella: "Convolutional Support Vector Machines for Quantifying the Visual Learning and Recognition Progress in Swarm Robotic Systems". Proc. of IEEE International Conference on Machine Learning and Applications, 2012.

127   G. Corani, C. Magli, A. Giusti, L. Gianaroli, L. Gambardella: "A Bayesian Network Model for Predicting the Outcome of In Vitro Fertilization". Proc. of European Workshop on Probabilistic Graphical Models (PGM), 2012

126   J. Barta, A. E. Rizzoli, M. Salani, and L. M. Gambardella. Statistical Modelling of Delays in a Rail Freight Transportation Network. In C. Laroque, J. Himmelspach, R. Pasupathy, O. Rose, and A. Uhrmacher, editors, Proceedings of the 2012 Winter Simulation Conference, Berlin, 2012.

125   E. Rizzoli, M. Salani, C. Valeri, J. Barta, S. Croci-Torti, A. Croci, A. Barbone, and L. M. Gambardella. WHATIF : A Decision Support System for Planning and Management of Rsail Freight Networks. In Bruzzone, Gronalt, Merkuryev, Piera, and Talley, editors, Proceedings of the International Conference on Harbor Maritime and Multimodal Logistics M&S, pages 128–133, 2012.

124   N. E. Toklu, R. Montemanni, G. A. Di Caro, L. M. Gambardella, A Shared Incumbent Environment for the Minimum Power Broadcasting Problem in Wireless Networks, Proceedings of the International Conference on Information and Computer Networks (ICICN 2012), Singapore, February 26-28, 2012, IACSIT Press

123   F. Ducatelle, G. A. Di Caro, L. Gambardella, Spatial awareness in robotic swarms through local wireless communications (Extended abstract), Proceedings of the 11th International Conference on Autonomous Agents and Multiagent Systems (AAMAS), Valencia, Spain, June 4-8, 2012

122   A. Giusti, J. Nagi, L. Gambardella, S. Bonardi, G. A. Di Caro Human-Swarm Interaction through Distributed Cooperative Gesture Recognition 7th ACM/IEEE International Conference on Human-Robot Interaction (Video Session) (HRI), Boston, MA, USA, March 5-8, 2012.

121   D. Ciresan, U. Meier, L. M. Gambardella, J. Schmidhuber - Convolutional Neural Network Committees For Handwritten Character Classification, ICDAR 2011, September 18-12, 2011, Beijing, China.

120   U. Meier, D. Ciresan, L. M. Gambardella, J. Schmidhuber - Better digit recognition with a committee of simple Neural Nets, ICDAR 2011, September 18-12, 2011, Beijing, China.

119   D. Ciresan, U. Meier, J. Masci, L. M. Gambardella, J. Schmidhuber - Flexible, High Performance Convolutional Neural Networks for Image Classification, IJCAI 2011, July, 16-22, Barcellona, Spain.

118   R. Montemanni, D. Weyland and L.M. Gambardella An Enhanced Ant Colony System for the Team Orienteering Problem with Time Windows Proceedings of IEEE ISCCS 2011 – The 2011 International Symposium on Computer Science and Society, pages 381-384, Kota Kinabalu, Malaysia, 15-17 July 2011

117   D. Anghinolfi, L.M. Gambardella, R. Montemanni, C. Nattero, M. Paolucci and N.E. Toklu An optimization model for a large-scale energy management problem Proceedings of CAR 2011 – The Annual International Conference on Control, Automation and Robotics, pages C22-C27, Singapore, 28 February – 1 March 2011

116   Förster, A., Förster, A., Leidi, T., Garg, K., Puccinelli, D., Ducatelle, F., Giordano, S., Gambardella, L.M., MOTEL: Towards Flexible Mobile Wireless Sensor Network Testbeds, 8th European Conference on Wireless Sensor Networks (EWSN 2011), Bonn, Germany, February 23-25, 2011

115   A. Giusti, P. Taddei, C. Magli, G. Corani, L. Gambardella, L. Gianaroli, Artificial Defocus for Displaying Markers in Microscopy Z-Stacks, Proceedings of IEEE Visualization 2011

114   A. Giusti, C. Magli, G. Corani, L. Gambardella, L. Gianaroli, Observing the 3-Dimensional Morphology of 4-Cell Embryos using Computer Analysis of Image Z-Stacks, Proceedings of the Annual Meeting of the European Society on Human Reproduction and Embryology (ESHRE), 2011

113   M. Salani, A. Giusti, G. A. Di Caro, A. Rizzoli, and L. M. Gambardella, Lexicographic multi-objective optimization for the unit commitment problem and economic dispatch in a microgrid, Proceedings of the 2nd IEEE PES (Power & Energy Society) European Conference on Innovative Smart Grid Technologies (ISGT-EUROPE), Manchester, UK, December 5-7, 2011

112   M. Mojana, R. Montemanni, G. A. Di Caro and L. M. Gambardella, An algorithm combining linear programming and an ant system for the sequential ordering problem, Proceedings of the Second Annual International Conference on Advanced Topics in Artificial Intelligence (ATAI), Singapore, November 24-25, 2011 (BEST RESEARCH PAPER AWARD)

111   J. Nagi, F. Ducatelle, G. A. Di Caro, D. Ciresan, U. Meier, A. Giusti, F. Nagi, J. Schmidhuber and L. M. Gambardella, Max-Pooling Convolutional Neural Networks for Vision-based Hand Gesture Recognition,

Proceedings of the 3rd IEEE International Conference on Signal & Image Processing and Applications (ICSIPA), Kual Lumpur, Malaysia, November 16-18, 2011

110   R. Montemanni, M. Mojana, G. A. Di Caro and L. M. Gambardella, A Matheuristic Approach for the Sequential Ordering Problem, 42nd Annual Conference of the Italian Operational Research Society (AIRO), Brescia, Italy, September 6-9, 2011

109   Ducatelle F., Di Caro G. A., Pinciroli C., Mondada F. and Gambardella L. M., Communication assisted navigation in robotic swarms: self-organization and cooperation. Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), San Francisco, USA, September 25-30, 2011

108   Pinciroli C., Trianni V., O'Grady R., Pini G., Brutschy A., Brambilla M., Mathews N., Ferrante E., Di Caro G. A., Ducatelle F., Stirling T., Gutierrez A., Gambardella L. M. and Dorigo M., ARGoS: a Modular, Multi-Engine Simulator for Heterogeneous Swarm Robotics. Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), San Francisco, USA, September 25-30, 2011

107   Reina A., Di Caro G. A., Ducatelle F., Gambardella L. M., Distributed motion planning for ground objects using a network of robotic ceiling cameras. Proceedings of the 12th Conference Towards Autonomous Robotic Systems (TAROS), , Sheffield, UK, August 31 - September 2, 2011 (BEST POSTER AWARD), Springer LNAI vol. 6856, pages 140-151, 2011

106   Ducatelle F., G. Di Caro, A. Foerster and L.M. Gambardella. 2010. Mobile stigmergic markers for navigation in a heterogeneous robotic swarm. Proceedings of the 7th International Conference on Swarm Intelligence (ANTS), Brussels, Belgium.

105   Giusti A., G. Corani, L. Gambardella, C. Magli & L. Gianaroli. 2010. Segmenting Embryo Blastomeres in 3D from Hoffman Modulation Contrast Image Stacks. In Proc. of Medical Image Understanding and Analysis (MIUA) 2010.

104   Dorigo, M., Birattari, M., Di Caro, G.A., Doursat, R., Engelbrecht, A., Floreano, D., Gambardella, L.M., Groß, R., Sahin, E., Sayama, H., Stützle, T. (Eds.) 2010. "Swarm Intelligence, 7th International Conference, ANTS 2010" LNCS 6324, Springer.

103   Giusti A., G. Corani, L. Gambardella, C. Magli & L. Gianarol. 2010. 3D Localization of Pronuclei of Human Zygotes Using Textures from Multiple Focal Planes, Proc. of the Medical Image Computing and Computer-Assisted Intervention (MICCAI 2010), Lecture Notes in Computer Science, 2010, Volume 6362/2010, pages 488-495.

102   Giusti A., G. Corani, L. Gambardella, C. Magli & L. Gianaroli. 2010. Symultaneous Focusing and Contouring of Human Zygotes for In Vitro Fertilization. In Proc. of BIOSIGNALS 2010.

101   A. Giusti, G. Corani, L. Gambardella, C. Magli and L. Gianaroli ""Blastomere Segmentation and 3D Morphology Measurements of Early Embryos from Hoffman Modulation Contrast Image Stacks", accepted for IEEE International Symposium on Biomedical Imaging (ISBI) 2010.

100   Reina A., Di Caro G. A., Ducatelle F., Gambardella L. M., A distributed approach to holonomic path planning. Proceedings of the Workshop on Motion Planning: From Theory to Practice, at Robotics: Science and Systems (RSS), Zaragoza, Spain, June 27, 2010

99   Ducatelle F., Di Caro G. A., Gambardella L. M. Cooperative Stigmergic Navigation in a Heterogeneous Robotic Swarm. Proceedings of the 11th International Conference on Simulation of Adaptive Behavior (SAB), Paris, France, August 24-28, 2010

98   Ducatelle F., Di Caro G. A., Gambardella L. M. Cooperative Self-Organization in a Heterogeneous Swarm Robotic System. Proceedings of the Genetic and Evolutionary Computation Conference (GECCO-2010), Portland, Oregon, USA, July 7-11, 2010

97   L.M. Gambardella and R. Montemanni. An Enhanced Ant Colony System for two Transportation Problems. Proceedings of TRISTAN VII – The Seventh Triennial Symposium on Transportation Analysis, Tromso, Norvey, June 20-25, 2010.

96   A. Menenes, R. Schirru and L.M. Gambardella, Development and Investigation of a novel metaheuristic for the combinatorial problem of the in-core fuel management optimization, 9h International FLINS Conference on Foundations and Applications of Computational Intelligence (FLINS2010), Hongzhushan Hotel of EMei, China, August 2-4, 2010.

95   A. Giusti, G. Corani, L. Gambardella, C. Magli and L. Gianaroli "Lighting-Aware Segmentation of Microscopy Images for In Vitro Fertilization", Proc. of International Symposium on Visual Computing (ISVC) 2009, Las Vegas, Springer LNCS vol. 5875/2009, 576--585.

94   A. Giusti, G. Corani, L. Gambardella, C. Magli and L. Gianaroli "Segmentation of Human Zygotes in Hoffman Modulation Contrast Images", Proc. of Medical Image Understanding and Analysis (MIUA), 2009, 189--193

93   Dennis Weyland, Leonora Bianchi and Luca Maria Gambardella (2009): New Heuristics for the Probabilistic Traveling Salesman Problem. Proceedings of the MIC 2009 VIII Metaheuristic International Conference. Hamburg - July 13 - 16, 2009

92   D. Anghinolfi, R. Montemanni, M. Paolucci and L.M. Gambardella. A Particle Swarm Optimization approach for the Sequential Ordering Problem. Proceedings of the MIC 2009 VIII Metaheuristic International Conference. Hamburg - July 13 - 16, 2009

91   Menenes, A. A. M. ; Pinheiro, C.J.G. ; Gambardella, L. M.; Schirru, R. ; Barroso, R.C. ; Braz, D. ; Olliveria, L.F. Neural Computing for Quantitative Analysis of Human Bone Trabecular Structures in Synchrotron Radiation X-Ray mCT Images. 2009 IEEE Nuclear Science Symposium and Medical Imaging Conference.

90   Menenes, A. A. M; Gambardella, L. M.; Schirru. A Nuclear Heuristic for Application to Metaheuristics in the In-Core Fuel Management Optimization. 2009 International Nuclear Atlantic Conference.

89   R. Montemanni and L.M. Gambardella. An Ant Colony System for the Orienteering Problem with Time Windows. Proceedings of ODYSSEUS 2009, Cesme, Turkey, 26-29 May 2009.

88   D. Weyland, L. Bianchi, L.M. Gambardella, New Approximation-based Local Search Algorithms for the Probabilistic Traveling Salesman Problem, Twelve International Conference on Computer Aided Systems Theory, February 15-20, 2009, Las Palmas de Gran Canaria Canary Islands, Spain.

87   Ducatelle F., Foerster A., Di Caro G. and Gambardella L. M. (2009). Supporting Navigation in Multi-Robot Systems through Delay Tolerant Network Communication. Accepted to the IFAC Workshop on Networked Robotics (NetRob 2009), Golden, Colorado, October 2009.

86   Ducatelle F., Foerster A., Di Caro G. and Gambardella L. M. (2009). New task allocation methods for robotic swarms. Proceedings of the 9th IEEE/RAS Conference on Autonomous Robot Systems and Competitions, Castelo Branco, Portugal, May 2009.

85   Di Caro G., Ducatelle F. and Gambardella L. M. (2009). Wireless communications for distributed navigation in robot swarms. Proceedings of the Sixth European Workshop on the application of Nature-inspired techniques to Telecommunication Networks and other Connected Systems (EvoCOMNET2009), Tübingen, Germany, April 2009.

84   Ducatelle F., Di Caro G. and Gambardella L. M. (2008). Robot Navigation in a Networked Swarm. Proceedings of the International Conference on Intelligent Robotics and Applications (2008ICIRA), Wuhan, China, October 2008.

83   Ducatelle F., Di Caro G. and Gambardella L. M. (2008). An evaluation of two swarm intelligence MANET routing algorithms in an urban environment. Proceedings of the IEEE Swarm Intelligence Symposium (SIS), St. Louis, Missouri, USA, September 2008.

82   R. Montemanni, A.E. Rizzoli, D.H. Smith and L.M. Gambardella. Sequential ordering problems for crane scheduling in port terminals.Proceedings of HMS 2008– The 11th Intermodal Workshop on Harbor, Maritime and Multimodal Logistic Modeling and Simulation, Bruzzone et al. eds., pages 180-189, Campora San Giovanni, Italy, 17-19 September 2008.

81   Ducatelle F., Di Caro G. and Gambardella L. M. (2008). A New Approach for Integrating Proactive and Reactive Routing in Mobile Ad Hoc Networks. Proceedings of the fifth IEEE International Conference on Mobile Ad Hoc and Sensor Systems (MASS), Atlanta, Georgia, USA, September-October 2008.

80   Di Caro G., Ducatelle F. and Gambardella L. M. (2008). A simulation study of routing performance in realistic urban scenarios for MANETs. Proceedings of the sixth International Workshop on Ant Colony Optimization and Swarm Intelligence (ANTS2008), Brussels, Belgium, September 2008.

79   R. Montemanni, J. Barta, M. Mastrolilli and L.M. Gambardella. Heuristic algorithms for the robust traveling salesman problem with interval data. Proceedings of TRISTAN VI, 10-15 June, Phuket Island, Thailand 2007.

78   Ducatelle F., Roth M. and Gambardella L. M. Design of a user space software suite for probabilistic routing in ad-hoc networks. Proceedings of the Fourth European Workshop on the application of Nature-inspired techniques to Telecommunication Networks and other Connected Systems (EvoCOMNET2007) (poster presentation), Valencia, Spain, April 2007.

77   R. Montemanni, D.H. Smith and L.M. Gambardella. Ant colony systems for large sequential ordering problems. Proceedings of the IEEE Swarm Intelligence Symposium (SIS 2007), Hawaii, April 1-5, 2007.

76   Ducatelle F., Di Caro G.A., Gambardella L.M., An analysis of the different components of the AntHocNet routing algorithm, Proceedings of ANTS 2006,Fifth International Workshop on Ant Algorithms and Swarm Intelligence, , Springer-Verlag, Lecture Notes in Computer Science, 2006

75   Di Caro G., Ducatelle F. and Gambardella L. M. (2006). AI Approaches for Next Generation Telecommunication Networks, The 50th Anniversary Summit of Artificial Intelligence, Monte Verita, Switzerland, July 2006.

74   Montemanni R., Barta J. and Gambardella L.M.. An exact algorithm for the robust traveling salesman problem with interval data. Proceedings of ODYSSEUS 2006, pages 256-258, Altea, Spain, 23-26 May 2006.

73   Babaoglu O., Canright G., Deutsch A., Di Caro G., Ducatelle F., Gambardella L.M., Ganguly N., Jelasity M., Montemanni R. and Montresor A. European Conference on Complex Systems (ECCS'05), Paris, France, 265-272, 14-18 November 2005.

72   Carrillo L., Guadal C., Marzo J.-L., Di Caro G., Ducatelle F., Gambardella L.M., Differentiated Quality of Service scheme based on the use of multiple classes of ant-like mobile agents. Student Workshop at the CoNEXT Conference, Toulouse, France, October 24-27, 2005

71   Montemanni R., Gambardella L.M.. Swarm approach for a connectivity problem in wireless networks. Proceedings of the IEEE Swarm Intelligence Symposium (SIS 2005), Pasadena, U.S.A., June 2005.

70   Di Caro G., Ducatelle F. and Gambardella L. M. Swarm Intelligence for Routing in Mobile Ad Hoc Networks. Proceedings of the 2005 IEEE Swarm Intelligence Symposium (SIS), Pasadena, CA, USA, June 2005.

69   Montemanni R., Gambardella L.M.. A Benders decomposition approach for the robust shortest path problem with interval data. Proceedings of the International Network Opzimization Conference (INOC 2005), Lisbon, Portugal, pages B2.609-B2.614, 20-23 March 2005.

68   Montemanni R., Gambardella L.M. and Das A.K.. The minimum power broadcast problem in wireless networks: a simulated annealing approach. Proceedings of the IEEE Wireless Communications and Networking Conference (WCNC 2005), New Orleans, U.S.A., 13-17 March 2005.

67   Montemanni R., Gambardella L.M.. A Benders decomposition approach for the robust shortest path problem with interval data. To appear.

66   Ducatelle, F., Di Caro, G. and Gambardella, L. M. Ant Agents for Hybrid Multipath Routing in Mobile Ad Hoc Networks. Proceedings of the Second Annual Conference on Wireless On demand Network Systems and Services (WONS 2005), St. Moritz, Switzerland, January 2005.

65   Ducatelle, F. and Gambardella, L. M. FastSurv: A New Efficient Local Search Algorithm for Survivable Routing in WDM Networks. The IEEE Global Communications Conference, GlobeCom, Dallas, TX, USA, November 2004.

64   Ducatelle, F. and Gambardella, L. M. A Scalable Algorithm for Survivable Routing in IP-over-WDM Networks. BroadNets 2004 - Broadband Optical Networking Symposium, San Jose, CA, USA, October 2004.

63   Montemanni R. and Gambardella L.M. Minimum power symmetric connectivity problem in wireless networks: a new approach. Proceedings of MWCN 2004 –The Sixth IFIP IEEE International Conference on Mobile and Wireless Communication Networks, Paris, France, 25-27 October 2004.

62   Di Caro, G., Ducatelle, F. and Gambardella, L.M., AntHocNet: an Ant-Based Hybrid Routing Algorithm for Mobile Ad Hoc Networks., 8th International Conference on Parallel Problem Solving from Nature, PPSN VIII, Birmingham, UK, September 2004, BEST CONFERENCE PAPER AWARD

61   Pettinaro G, Kwee I., Gambardella, L.M., Physics Simulation Environment for Swarms of Self-Assembly Autonomous Robots, Proceedings of the 3rd IFAC Symposium on Mechatronic Systems, IFAC Mechatronics 2004, Manly Beach, Sydney, New South Wales, Australia, September 6-8, 2004.

60   Pettinaro G, Kwee I., Gambardella, L.M., Acceleration of 3D Dynamics Simulation of S-Bot Mobile Robots Using Multi-Level Model Switching, Proceedings of the 10th IEEE International Conference on Methods and Models in Automation and Robotics, MMAR 2004, Miedzyzdroje, Poland, August 30-September 2, 2004.

59   Pettinaro G, Kwee I., Gambardella, L.M., Swarmbot3D: a New Simulating Tool for Swarm Robotics Investigations, Proceedings of the 5th EuroSim Congress on Modelling and Simulations, Eurosim '04, Paris, France, September 6-10, 2004.

58   M. Mastrolilli and L.M. Gambardella, MAX-2-SAT: How Good is Tabu Search in the Worst-Case?, Proceedings of the 19th National Conference on Artificial Intelligence, AAAI-04, July 25-29, 2004, San Jose, California, 173-178, 2004

57   Montemanni R., Gambardella L.M. and Donati A.. A comparison of two new exact algorithms for the robust shortest path problem. Proceedings of TRISTAN V – The Fifth Triennial Symposium on Transportation Analysis, Le Gosier, Guadeloupe, 13-18 June 2004.

56   Gambardella L.M., Engineering Complex Systems: Ant Colony Optimization to Model and to Solve Complex Dynamic Problems, SELF-STAR 2004, Self-* Properties in Complex Information Systems, Ed. O. Babaoglu, M. Jelasity, A. Montresor, M van Steen, A. van Moorsel, C. Fetzer, s. Leonardi. Bertinoro, Italy, 31-May – 2 June 2004.

54   Gambardella, L.M., Rizzoli, A.E., Oliverio, F., Casagrande, N., Donati, A.V., Montemanni R. and Lucibello E.. Ant Colony Optimization for vehicle routing in advanced logistic systems. Proceedings of MAS 2003 – International Workshop on Modelling and Applied Simulation, Bergeggi, Italy, pages 3-9, 2-4 October 2003.

53   Rizzoli, A.E., Casagrande, N., Donati, A.V., Gambardella, L.M., Lepori, D., Montemanni, R., Pina P., and Zaffalon, M. Planning and optimisation of vehicle routes for fuel oil distribution. Proceedings of MODSIM 2003 - Integrative Modelling of Biophysical, Social and Economic Systems for Resource Management Solutions, Townsville, Australia, volume 4 pages 2024-2029, 11-17 July 2003.

52   Gambardella, L.M., Casagrande, N., Mantemanni, R, Oliverio, F., and Rizzoli, A. Ant Colony Optimization applied to industrial vehicle routing problems, ECCO 2003, XVI Conference of the European Chapter on Combinatorial Optimisation, Molde, Norway, 2003, 5 – 7, June 2003.

51   Donati, A.V., Montemanni R., Gambardella, L.M. and Rizzoli, A.E. Integration of a robust shortest path algorithm with a time dependent vehicle routing model and applications. Proceedings of CIMSA 2003 - International Symposium on Computational Intelligence for Measurement Systems and Applications, Lugano, Switzerland, pages 26-31, 29-31 July 2003.

50   R. Montemanni, L.M. Gambardella, A.E. Rizzoli, A.V. Donati. A new algorithm for a Dynamic Vehicle Routing Problem based on Ant Colony System. ODYSSEUS 2003: Second International Workshop on Freight Transportation and Logistics, Palermo, Italy, 27-30 May 2003.

49   L.M. Gambardella, Ant Colony Optimization for ad-hoc networks, First Mobile Information and Communication Systems, MICS Workshop on Routing for Mobile Ad-Hoc Networks, Zurich, February 13, 2003.

48   Pettinaro G.C., Kwee I., Gambardella L.M., Mondada F., Floreano D., Nolfi S., Deneubourg J.-L., Dorigo M., SWARM Robotics: A Different Approach to Service Robotics In Proceedings of the 33rd International Symposium on Robotics, Stockholm, Sweden, October 7-11, 2002. International Federation of Robotics.

47   Mondada F., Pettinaro G.C., Kwee I., Guignard A., Gambardella L.M., Floreano D., Nolfi S., Deneubourg J.-L., Dorigo M. SWARM-BOT: A Swarm of Autonomous Mobile Robots with Self-Assembling Capabilities, in C. K. Hemelrijk and E. Bonabeau, editors, Proceedings of the International Workshop on Self-Organisation and Evolution of Social Behaviour, pages 11-22, Monte Verità, Ascona, Switzerland, September 8-13, 2002. University of Zurich.

46   Sahin E., Labella T.H., Trianni V., Deneubourg J.-L., Rasse P., Floreano D., Gambardella L.M., Mondada F., Nolfi S., Dorigo M. SWARM-BOT: Pattern Formation in a Swarm of Self-Assembling Mobile Robots, in A. El Kamel, K. Mellouli, and P. Borne, editors, Proceedings of the IEEE International Conference on Systems, Man and Cybernetics, Hammamet, Tunisia, October 6-9, 2002. Piscataway, NJ: IEEE Press.

45   Rossi-Doria O, Sampels M, Birattari M, Chiarandini M, Dorigo M., Gambardella L.M., Knowles J., Manfrin J., Mastrolilli M., Paechter B., Paquete L., and Stützle T.. A comparison of the performance of different metaheuristics on the timetabling problem. In Proceedings of the 4th International Conference for the Practice and Theory of Automated Timetabling (PATAT '02), Springer, 2002.

44   Bianchi L., Gambardella L. M., and Dorigo M. Solving the homogeneous probabilistic traveling salesman problem by the ACO metaheuristic. In M. Dorigo, G. Di Caro, and M. Sampels, editors, Proceedings of ANTS 2002 - Third International Workshop on Ant Algorithms, Lecture Notes in Computer Science. Springer Verlag, Berlin, Germany, 2002.

43   Bianchi L., Gambardella L. M., and Dorigo. An ant colony optimization approach to the probabilistic traveling salesman problem. In Proceedings of PPSN-VII, Seventh International Conference on Parallel Problem Solving from Nature, Lecture Notes in Computer Science. Springer Verlag, Berlin, Germany, 2002. pp 883-892

42   Bianchi L., Gambardella L. M., and Dorigo. M, Ant Colony Optimization for the Probabilistic Traveling Salesman Problem" Abstracts of ECCO XV -Conference of the European Chapter on Combinatorial Optimisation, 30 May - 1 June 2002, Lugano, Switzerland

41   Rizzoli A., Gambardella L.M., Metaheuristics for Transport and Logistics, 2nd Swiss Transport Research Conference, Monte Verità, March 20,22, 2002.

40   Casagrande, N., Gambardella L.M., A. E. Rizzoli. Solving the vehicle routing problem for heating oil distribution using Ant-Colony Optimisation. ECCO XIV, Conference of the European Chapter on Combinatorial Optimisation, May 31-June 2 2001, Bonn, Germany.

39   Fornara N. and Gambardella L.M.. An autonomous bidding agent for simultaneous auctions. In Proceedings of the Fifth International Workshop on Cooperative Information Agents (CIA-2001) LNAI 2182, pages 130–141. Springer-Verlag, 2001.

38   Gambardella L.M., Rizzoli A.E., Fornara N., Alessandrini A., Epifani C. The use of simulation in the socio-economical evaluation of the management of an intermodal terminal, HMS2000, Maritime & Industrial Logistics Modelling and Simulation, Portofino, Italy, 5-7th October, 2000.

37   Gambardella L.M., Rizzoli A.E., The Role of Simulation and Optimization in Intermodal Container Terminals, ESS2000, European Simulation Symposium, Hamburg, Germany, 28-30th September 2000.

36   Rizzoli A.E., Fornara N., Gambardella L.M., A Simulation Tool for Combined Rail-Road Transport in Intermodal Terminals , MODSIM99, Hamilton, New Zealand, 6-9th December 1999.

35   Agazzi G., Gambardella L.M., Taillard É. D, Agazzi, A new Ant Colony System approach to solve an industrial vehicle routing problem with dynamic constraints, AIRO99, Annual Conference of the Operational Research Society of Italy, Napoli, Italy, September 21-24th, 1999

34   Rizzoli A.E., Gambardella L.M., Zaffalon M., Mastrolilli M., Simulation for the evaluation of optimised operations policies in a Container Terminal, HMS99, Maritime & Industrial Logistics Modelling and Simulation, Genoa, Italy, 16-18th September, 1999.

33   Martinoli A., Ijspeert A.J., Gambardella L.M., A Probabilistic Model for Undertanding and Comparing Collective Aggregation Mechanisms, ECAL99, 5th European Conference on ARTIFICIAL LIFE, Lausanne (EPFL), 13-17th September 1999.

32   Zaffalon M., Rizzoli E., Gambardella L.M., Mastrolilli M., Resource Allocation and Scheduling of Operations in an Intermodal Terminal, ESS98, 10th European Simulation Symposium and Exhibition, Simulation in Industry, October 26-28, 1998, Nottingham, United Kingdom.

31   Gambardella L.M, Dorigo M, Taillard É. D., Hybrid Ant Colony Optimization: combining metaheuristics with local search, OR98, International Conference on Operations Research, ETH Zurich, 31 August - 3 September 1998

30   Taillard É. D., Gambardella L., Gendreau M., Potvin J.Y, Adaptive Memory Programming: A Unified View of Metaheuristics , EUROXVI, 16th European Conference on Operational Research BRUSSELS, BELGIUM, JULY 12-15, 1998

29   Gambardella L.M., Dorigo. M, HAS-SOP: Hybrid ant system for the sequential ordering problem, EUROXVI, 16th European Conference on Operational Research BRUSSELS, BELGIUM, JULY 12-15, 1998

28   Mastrolilli M., Gambardella L.M, New Neighborhood Function for the Flexible Job Shop Problem, International Conference on Operations Research, September 1998, Zurich

27   Gambardella L.M, Dorigo M, Taillard É. D., Sequential Ordering Problems with Ants Colonies, INFORMS National Meeting, Montreal, May 1998

26   A.E. Rizzoli, L.M. Gambardella, G. Bontempi, Simulation of an In¬termodal Container Terminal to Assist the Management in the Decision Making Proc¬ess, in Proceedings of MODSIM 9, International Congress on Modeling and Simu¬lation, Hobart, Tasmania, 1997.

25   Taillard É.D., Gambardella L.M, Dorigo M., (1997). Hybrid Ant System for structured quadratic assignment problems, Extended abstract IDSIA-37-97, Lugano, ISMP 97, International Symposium on Mathematical Programming, Lausanne, EPFL, August 24-29, 1997

24   Taillard É. D., Gambardella L.M., An ant approach for structured quadratic assignment problems, Extended abstract IDSIA-22-97, Lugano, 1997, Second Metaheuristic International Conference, Sophia-Antipolis, July 1997.

23   Bontempi G., Gambardella L.M, Rizzoli A.E. Simulation and Optimization for Managment of Intermodal Terminals , European Simulation Multiconference 1997, Instanbul, June 1-4,1997

22   Versino, C., Gambardella, L.M. Ibots Learn Genuine Team Solutions., Proceedings European Machine Learning: ECML-97, Ed. Van Someren, M. and Widmer, G., Springer Verlag, Berlin, 1997

21   Versino, C., Gambardella, L.M. Ibots: Learning Real Team Solutions., Proceedings Workshop on Learning, Interaction and Organizations in Multiagent Environments, Kyoto, Japan, December 1996.

20   Gambardella L.M, Bontempi G., Taillard E., Romanengo D.,Raso G., Piermari P., Simulation and Forecasting in Intermodal Containers Terminal , A.G. Bruzzone, E.J.H. Kerckhoffs (EDS.), Simulation in Industry, Proceedings of the 8th European Simulation Symposium, SCS International, Ghent, Belgium, pp. 626-630,1996

19   Versino, C., Gambardella, L.M. Learning Fine Motion in Robotics: Experiments with the Hierarchical Extended Kohonen Map. Proceedings ICONIP96, International Conference on Neural Information Processing, Hong Kong, 24--27 September, Vol.2, pp. 921-925, 1996

18   Versino, C., Gambardella, L.M. Learning Fine Motion by Using the Hierarchical Extended Kohonen Map. Proceedings ICANN96, International Conference on Artificial Neural Networks, Bochum, Germany, 17--19 July, pp. 221-226, 1996

17   Dorigo M., Gambardella L.M, A Study of some Properties of Ant-Q, Proceedings of PPSN96 International Conference on Parallel Problem Solving from Nature., H.-M. Voigt, W. Ebeling, I. Rechenberg and H.-S. Schwefel (Eds.), Springer-Verlag, Berlin, pp. 656-665.

16   Gambardella L.M, Dorigo M., Solving Symmetric and Asymmetric TSPs by Ant Colonies ,Proceedings of the IEEE Conference on Evolutionary Computation, ICEC96, Nagoya, Japan, May 20-22, 1996, pp. 622-627.

15   Gambardella L.M, Dorigo M, Ant-Q: a reinforcement learning approach to the traveling salesman problem, Proceedings of ML-95, Twelfth International Conference on Machine Learning, A. Prieditis and S. Russell (Eds.), Morgan Kaufmann, 1995, pp. 252–260.

14   Versino C., Gambardella L.M., Learning the Visuomotor Coordination of a Mobile Robot by Using the Invertible Kohonen Map, Proceedings of IWANN95, International Workhop on Neural Networks, Malaga, Spain, June, 1995, pp. 1084-1091.

13   Gambardella L.M., Versino C., Learning High-level Navigation Strategies from Sensor Information and Planner Experience, Proceedings of PERAC 94, From Perception to Action, Lausanne, Swiss, September, 1994.

12   Gambardella L.M., Versino C., Robot Motion Planning Integrating Planning Strategies and Learning Methods, Proceedings of AIPS 94 - The Second International Conference On AI Planning Systems, Chicago, Usa, June, pp. 261-265, 1994.

11   Gambardella L.M., Haex M, Improving Robot Navigation Using Learning Strategies, Proceedings of the 8Th International Conference of Application of Artificial Intelligence in Engineering, Toulouse, France, July, 1993.

10   Gambardella L.M., Haex M., Incorporating Learning in Motion Planning Technique, Proocedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems, IROS'93, Yokohama, Japan, July, 1993.

9   Haex M., Gambardella L.M., Flexible Robot Manipulation Using Artificial Intelligence, Proceedings of the 8Th International Conference of Application of Artificial Intelligence in Engineering, Toulouse, France, July, 1993.

8   Gambardella L.M., Haex M, Grasp Planning for Automatic Assembly Tasks using Artificial Fields, Proceedings of the European Conference on Artificial Intelligence, ECAI 1992, Vienna, Austria, August, 1992, pp.681-682

7   Haex M., Gambardella L.M., Stable Grasp by Path Planning using Artificial Fields, Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems, IROS'92, Raleigh, North Carolina, Usa, July 7-10, 1992, vol2, pp. 712-715.

6   Gambardella L.M., Haex M., A Multi-Agent Analogical Representation for Physical Objects, in Decentralized A.I. 3, ed. E.Werner and Y.Demazeau, Nort-Holland, 1992.

5   Gambardella L.M., Simulation and Planning with Multiple Representations, Proceedings of the 2nd Annual Conference on AI, Simulation and Planning in High Autonomy Systems, Cocoa Beach, Florida, April, 1991, pp 188-194

4   Gambardella L.M, Planning with Artificial System, Proceedings of the First European Workshop of Qualitative Reasining about Physical Systems, Genova, Italy, January, 1991

3   Gambardella L.M, Cattaneo, P., Artificial Life, in Comunication with Men and Machines, Ed. M. King, 1991

2   M. Moroni, Gambardella L.M., An Expert System For Pathology Diagnosis and Quality Control in Buildings Construction, Proceedings of the Second European Conference on Application of Artificial Intelligence and Robotics to Buildings Architectures and Civil Engineering, EuropIA90, Liegi, Belgio, March 1990.
1   Gambardella L.M., Gardin, F. Meltzer, B., Analogical Representation in Modeling Naive Physics, Proceedings of the 2nd Workshop on Qualitative Physics, Paris, July 1988.

DISSERTATION
2   Coupling Ant Colony System with Local Search, Université Libre de Bruxelles, École Polytechnique de Bruxelles. Phd in Engineering Sciences and Technology. Supervisor Prof. Marco Dorigo, June 2015.
1   Un approccio grafico alla fisica Naïve, Università degli studi di Pisa, Facoltà di Scienze Matematiche Fisiche e Naturali, with Prof. Giuseppe Attardi, December 1985.

NATIONAL PUBLICATIONS
4   Di Caro G., Ducatelle F. and Gambardella L. M. Project description: BISON: Biology-Inspired techniques for Self-Organization in dynamic Networks. Zeitschrift Künstliche Intelligenz, Special Issue on Swarm Intelligence, November 2005.
3   Gambardella L.M., Knowledge Representation with Frames, ATED publication, September, 1989.
2   Gambardella L.M., Cattaneo, P., Artificial Life and Genetic Algorithms: an Overview, Proceedings of the 1991 DECUS Symposium, Lugano, Swiss, April, 1991.
1   Gambardella L.M., Haex M, Rappresentazione Diretta e Campi Artificiali per la Pianificazione in Robotica, Proceeding of the Giornata di Lavoro sul Ragionamento Qualitativo della Associazione Italiana di Intelligenza Artificiale, Genova, November, 1992.

TECHNICAL REPORTS
7   Gambardella L.M, Dorigo M., HAS-SOP: Hybrid Ant System for the Sequential Ordering Problem, Technical report IDSIA-33-97, IDSIA, Lugano, 1997.
6   Gambardella L.M., Taillard É. D., Dorigo M., Ant Colonies for the Quadratic Assignment Problems, Technical report IDSIA-4-97, IDSIA, Lugano, 1997.
5   Gambardella L.M, Dorigo M., Ant Colony System, Technical report IDSIA-4-1996.
4   Dorigo M., Gambardella L.M, A Study of some Properties of Ant-Q, Technical report IDSIA-3-1996.
3   Dorigo M., Gambardella L.M., Ant colony optimization applied to the traveling salesman problem, Technical report IDSIA-36-1995.
2   Gambardella L.M, Dorigo M., Ant-Q: A cooperative q-learning approach to the Traveling Salesman Problem, Technical report IDSIA-1-1995.
1   Gambardella L.M, Problem solving with Analogical Representation, Technical Report IDSIA n.7, September, 1990.

PROJECTS and GRANTS
2024-2028   Leader of the project: "Computational methods for integrality gaps analysis".
                with Monaldo Mastrolilli.
                A Swiss National Science Agora Foundation project.
                Emphasis is given to Difficult Problems for Heuristic Algorithms.
                USI grant: 440.000 SFr. (Total grant 876.000 SFr.)
2020-2024   Local PI Investigator for the project: "PNR77: Assessing the development of computational thinking skills through an intelligent tutoring system: an exploratory study in the cantons of St Gallen, Vaud and Ticino".
                A Swiss National Science Foundation project with EPFL, San Gallen, SUPSI
                Emphasis is given to improve computational thinking in young students using swarm robotics.
                USI grant: 270.000 SFr. (Total grant 617.000 SFr.)
2018-2022   Local PI Investigator for the project: "NCCR Robotics phase 3".
                with Alessandro Giusti.
                A Swiss National Science Foundation project for a National competence center in robotics with ETHZ, EPFL, UZH

Emphasis is given to Swarm Intelligence, Robotics.
IDSIA grant: 150.000 SFr.

2018-2020   Leader of the project: "Introducing People to Research in Robotics through an Extended Peer Community in Southern Switzerland".
with Francesco Mondada (EPFL).
A Swiss National Science Agora Foundation project with EPFL
Emphasis is given to improve computational thinking in young students using swarm robotics.
IDSIA grant: 150.000 SFr. (Total grant 192.000 SFr.)

2018-2020   Leader of the project: "Hybrid Sampling-based metaheuristics for Stochastic Optimization Problems with Deadlines".
with Roberto Montemanni.
A Swiss National Science Agora Foundation project.
Emphasis is given to Meta Heuristics and Machine Learning for routing problems.
IDSIA grant: 180.000 SFr. (Total grant 180.000 SFr.)

2018-2020   Leader of the project: Industrial direct mandate.
with Marco Zaffalon.
Direct mandates from Swiss industries
Emphasis is given to Data mining.
IDSIA grant: 550.000 SFr. (Total grant 500.000 SFr.)

2018-2019   Leader of the project: "Robo Wealth Advisory".
with Marco Zaffalon.
A Innosuisse project of 1.5 years concerning Robo Wealth Advisory in Finance
Emphasis is given to Statistics, Data mining.
IDSIA grant: 400.000 SFr. (Total grant 800.000 SFr.)

     2017-2019   Leader of the project: "AI based forecasting models for energy production and price".
with Alessio Benavoli, Claudio Bonesana, Marco Zaffalon.
A Innosuisse project of 1.5 years concerning news aggregation
Emphasis is given to Statistics, Data mining.
IDSIA grant: 350.000 SFr. (Total grant 800.000 SFr.)

2017-2019   Leader of the project: "Intelligent text mining of food-related documents".
with Giorgio Corani, Marco Zaffalon.
A CTI project of 1.5 years concerning news aggregation
Emphasis is given to Statistics, Data mining.
IDSIA grant: 350.000 SFr. (Total grant 900.000 SFr.)

2016-2017   Leader of the project: "Drone Fly Way: smart lightpoles for safe and reliable navigation of Micro Aerial Vehicles in urban environments.".
with Alessandro Giusti, Jerome Guzzi.
A CTI project of 2 years concerning light poles for safe and reliable robot navigation.
Emphasis is given to Drones, Robotics, planning.
IDSIA grant: 109.000 SFr. (Total grant 230.000 SFr.)

2016-2019   Leader of the project: "Lift and Project Methods for Machine Scheduling Through Theory and Experiments"
with Monaldo Mastrolilli.
A Swiss National Foundation project of three years concerning the study of meta-heuristics and approximation Algorithms applied to scheduling problems.
Emphasis is given to Metaheuristics, Job shop, Combinatorial Optimization.
IDSIA grant: 320.000 SFr. (Total grant 320.000 SFr.)

2016-2018   Leader of the project: "VIOLA: VIrtual Operator with self-Learning Ability (VIOLA) for Electrical Discharge Machining (EDM) drilling process optimisation".
with Alessio Benavoli, Claudio Bonesana, Marco Zaffalon.
A CTI project of 1.5 years concerning industry 4.0
Emphasis is given to Statistics, Data mining.

	IDSIA grant: 300.000 SFr. (Total grant 1.100.000 SFr.)
2016-2017	Local Leader of the project: "GR400: Algorithm based approach to decentralized load management"
	with Alessandro Giusti, Andrea Rizzoli, Matteo Salani, Marco Derboni.
	A direct project to design and optimize a smart grid using swarm intelligence.
	Emphasis is given to Swarm Intelligence, Distributed control
	IDSIA grant: 240.000 SFr. (Total grant 240.000 SFr.)
2015-2018	Local PI Investigator of the project: "NCCR Robotics phase 2".
	with Gianni di Caro.
	A Swiss National Science Foundation project for a National competence center in robotics with EPFL, ETHZ, UZH
	Emphasis is given to Swarm Intelligence, Robotics.
	IDSIA grant: 350.000 SFr.
2015-2016	Leader of the project: SortCam: sorting optimization for industrial cutting)".
	with Monaldo Mastrolilli, Matteo Salani, Andrea Zambarda.
	A CTI project of two years concerning cutting sequence optimization
	Emphasis is given to Robust OptimizationPlanning.
	IDSIA grant: 450.000 SFr. (Total grant 950.000 SFr.)
2014-2017	Leader of the project: "New sampling-based metaheuristics for stochastic vehicle routing problems".
	with Roberto Montemanni.
	A Swiss National Foundation project of three years concerning the study of new routing algorithms in case of stochastic and dynamic information
	Emphasis is given to Metaheuristic, Vehicle Routing, Combinatorial Optimization.
	IDSIA grant: 160.000 SFr. (Total grant 160.000 SFr.)
2014-2016	Local Leader of the project: "GridSense: Algorithm based approach to decentralized load management".
	with Alessandro Giusti, Andrea Rizzoli, Matteo Salani.
	A direct project to design and optimize a smart grid using swarm intelligence
	Emphasis is given to Swarm Intelligence, Distributed control
	IDSIA grant: 700.000 SFr. (Total grant 3.000.000 SFr.)
2014-2015	Leader of the project: "Newscron: An Intelligent System for Real-Time News Clustering and Classification.".
	with Alessandro Antonucci, Claudio Bonesana, Marco Zaffalon.
	A CTI project of two years concerning news aggregation
	Emphasis is given to Statistics, Data mining..
	IDSIA grant: 300.000 SFr. (Total grant 600.000 SFr.)
2013-2014	Leader of the project: "Quantitative system for pricing, hedging, and risk-managing for complex derivative products.".
	with Alessio Benavoli, David Huber, Marco Zaffalon.
	A CTI project of two years concerning the risk-management
	Emphasis is given to Statistics, Data mining.
I	DSIA grant: 300.000 SFr. (Total grant 990.000 SFr.)
2013-2014	Leader of the project: "Prediction of visibility and click-through rate of elements within the Google's results pages".
	with Cassio de Campos, Marco Zaffalon, Massimo Maiolo.
	A CTI project of two years concerning the visibility score
	Emphasis is given to Statistics, Data mining.
	IDSIA grant: 300.000 SFr. (Total grant 600.000 SFr.)
2012-2014	Leader of the project: "Utool: a system for evaluation of unsecured credits".
	with Alessio Benavoli, Marco Zaffalon,
	A CTI project of two years concerning the evaluation of unsecured credits
	Emphasis is given to Statistics, Uncertain Reasoning.

	IDSIA grant: 200.000 SFr. (Total grant 400.000 SFr.)
2012-2014	Leader of the project: "HCD 2.0 is an innovative and smart EV home charging system equipped with self-learning algorithms that optimizes energy consumption".
	with Alessandro Giusti, Andrea Rizzoli, Matteo Salani
	A CTI project of two years to design smart algorithms to optimize energy consumption
	Emphasis is given to Swarm Intelligence, Scheduling, Metaheuristics.
	IDSIA grant: 120.000 SFr. (Total grant 850.000 SFr.)
2011-2013	Leader of the project: "Approximation Algorithms for Machine Scheduling Through Theory and Experiments".
	with Monaldo Mastrolilli
	A Swiss National Foundation project of three years concerning the study of meta-heuristics and approximation Algorithms applied to scheduling problems.
	Emphasis is given to Metaheuristics, Job shop, Combinatorial Optimization.
	IDSIA grant: 450.000 SFr. (Total grant 450.000 SFr.)
2011-2013	Local Leader of the project: "Swiss2Grid: Algorithm based approach to decentralized load management".
	with Alessandro Giusti, Andrea Rizzoli, Matteo Salani.
	A Swiss Swisselectric project to design and optimize a smart grid using swarm intelligence.
	Emphasis is given to Swarm Intelligence, Distributed control
	IDSIA grant: 290.000 SFr. (Total grant 1.400.000 SFr.)
2011-2014	Leader of the project: "New sampling-based metaheuristics for stochastic vehicle routing problems II".
	with Roberto Montemanni.
	A Swiss National Foundation project of three years concerning the study of new routing algorithms in case of stochastic and dynamic information.
	Emphasis is given to Metaheuristic, Vehicle Routing, Combinatorial Optimization.
	IDSIA grant: 160.000 SFr. (Total grant 160.000 SFr.)
2010-2012	Local Leader of the project: "SWARMIX: Synergistic Interactions in Swarms of Heterogenous Agents".
	with Gianni di Caro.
	A Swiss National Science Foundation Sinergia project for mixed swarm of robots with ETHZ, EPFL, Uni Budapest
	Emphasis is given to Swarm Intelligence, Robotics.
	IDSIA grant: 250.000 SFr. (Total grant 1.100.000 SFr.)
2010-2014	Local Leader of the project: "NCCR Robotics".
	with Gianni di Caro.
	A Swiss National Science Foundation project for a National competence center in robotics with EPFL, ETHZ, UZH.
	Emphasis is given to Swarm Intelligence, Robotics.
	IDSIA grant: 300.000 SFr.
2010-2011	Local Leader of the project: "Smart Grid concept with PV energy generation and decentralized consumption optimization using a swarm intelligence approach".
	with Alessandro Giusti, Andrea Rizzoli, Matteo Salani
	A Swiss project to design and optimize a smart grid using swarm intelligence.
	Emphasis is given to Swarm Intelligence, Machine Learning and Combinatorial Optimization.
	IDSIA grant: 380.000 SFr. (Total grant 2.530.000 SFr.)
2008-2010	Leader of the project: "IFF Intelligent Fill in Form".
	With Juergen Schmidhuber.
	A CTI project of two years concerning the study of machine learning techniques to analyze hand written text in insurance forms.
	Emphasis is given to Machine Learning.
	IDSIA grant: 366.000 SFr. (Total grant 730.000 SFr.)
2008-2009	Leader of the project: "Train Optimization".

An industrial project in collaboration with HUPAC, to optimize trains composition and displacement along an European train networks.

Emphasis is given Metaheuristics and Operation Research.

2008-2010 Local Leader of the project: "IN3: Intelligent In Vitro Incubator".

A CTI project of two years concerning the study of robotics and machine learning techniques to automate in vitro fertilization process.

Emphasis is given to Machine Learning.

IDSIA grant: 340.000 SFr. (Total grant 2.230.000 SFr.)

2008-2011 Leader of the project: "Approximation Algorithms for Machine Scheduling Through Theory and Experiments III".

with Monaldo Mastrolilli

A Swiss National Foundation project of three years concerning the study of meta-heuristcs and approximation Algorithms applied to scheduling problems.

Emphasis is given to Metaheuristic, Job shop, Combinatorial Optimization.

IDSIA grant: 432.000 SFr. (Total grant 432.000 SFr.)

2008-2011 Leader of the project: "New sampling-based metaheuristics for stochastic vehicle routing problems".

with Roberto Montemanni.

A Swiss National Foundation project of one year concerning the study of new routing algorithms in case of stochastic and dynamic information.

Emphasis is given to Metaheuristic, Vehicle Routing, Combinatorial Optimization.

IDSIA grant: 90.000 SFr. (Total grant 90.000 SFr.)

2007-2009 Local leader of the project: "Power Aware Computing in Embedded Systems".

with Josè Rolim, Monaldo Mastrolilli.

A Swiss National Foundation project of two years in collaboration with UNI-Geneve concerning the study of policies to reduce the power consumption in mobile devices acting at the software level.

Emphasis is given to Metaheuristic, Job shop, Combinatorial Optimization.

IDSIA grant: 80.000 SFr. (Total grant 160.000 SFr.)

2006-2010 Local leader of the project: "Swarmanoid: Towards Humanoid Robotic Swarms", a FET (Future and Emerging Technologies Program), IST project funded by the European Commission with ULB, EPFL, CNR-Rome.

With Gianni di Caro.

The main scientific objective of the Swarmanoid project is the design, implementation and control of a novel distributed robotic system comprising heterogeneous, dynamically connected small autonomous robots.

The project is planned for 42 months

Emphasis given to Swarm Intelligence, robotics, learning, adaptation.

IDSIA grant: 750.000 SFr. (Total grant 3'900.000 SFr.)

2005-2008 Leader of the project: "Approximation Algorithms for Machine Scheduling Through Theory and Experiments II".

with Monaldo Matrolilli

A Swiss National Foundation project of three years concerning the study of meta-heuristcs and approximation Algorithms applied to scheduling problems.

Emphasis is given to Metaheuristic, Job shop, Combinatorial Optimization.

IDSIA grant: 412.000 SFr. (Total grant 412.000 SFr.)

2005-2006 Leader of the project: "Routing Problems with Objective Function of Increasing Complexity".

With Roberto Montemanni.

A Swiss National Foundation project of one year concerning the study of new routing algorithms in case of stochastic and dynamic information.

Emphasis is given to Metaheuristic, Vehicle Routing, Combinatorial Optimization.

IDSIA grant: 90.000 SFr. (Total grant 90.000 SFr.)

2004-2004 Co-leader of the project: "Intelligent Player for Geomag Magnetic Challenge".

Geomag is introducing on the market a new game "Magnetic Challenge" based on the famous Geomag magnetic bars and balls. IDSIA is implementing an automatic player able to play against humans and to learn from experience.

Emphasis is given to Artificial Intelligence, learning, game.

2004-2006 Local leader of the project: "Power Aware Computing".
A Swiss National Foundation project of two years in collaboration with UNI-Geneve concerning the study of policies to reduce the power consumption in mobile devices.
Emphasis is given to Metaheuristic, Job shop, Combinatorial Optimization.
IDSIA grant: 80.000 SFr. (Total grant 250.000 SFr.)

2003-2005 Leader of the project: "Approximation Algorithms for Machine Scheduling Through Theory and Experiments".
With Monaldo Mastrolilli.
A Swiss National Foundation project of two years concerning the study of meta-heuristcs and approximation Algorithms applied to scheduling problems.
Emphasis is given to Metaheuristic, Job shop, Combinatorial Optimization.
IDSIA grant: 180.000 SFr. (Total grant 180.000 SFr.)

2003-2005 Local leader of the project: "BISON: Biology-Inspired Techniques for Self Organization in Dynamic Networks" a EU FET (Future and Emerging Technologies Program), IST project.
The main scientific objective of BISON is to explore the use Ant Colony Optimization and Immune Networks for routing and optimization in Ad-Hoc networks and Grid computing systems with UNI-BO, UNI-DRESDEN, TELENOR
Emphasis given to Ant Colony Optimization, Dynamic Routing, Self-Adaptation.
IDSIA grant: 650'000 SFr. (Total grant 1'700.000 SFr.)

2003-2004 Leader of the project: "Optimization and Simulation course".
A Swiss OPES Virtual Campus project in collaboration with EPFL and IPLNet to design and implement an on-line course in Optimization and simulation
Emphasis given to Simulation and Optimization.
IDSIA grant: 40'000 SFr. (Total grant 80'000 SFr.)

2002-2005 Local leader of project "Failure location, restoration and resilience in optical and ad-hoc networks" a Swiss Hasler Foundation DICS project.
The goal of this project is to to develop efficient algorithms to locate failures in large scale optical and ad-hoc networks. The project is planned for three years.
Emphasis given to Ant Colony Optimization, Self-Adaptation.
IDSIA grant: 100'000 SFr. (Total grant 400.000 SFr.)

2001-2004 Local leader of the project: "SWARM-BOTS, swarm of self assembly artifacts", a FET (Future and Emerging Technologies Program), IST project funded by the European Commission with ULB, EPFL, CNR-ROMA
The main scientific objective of SWARM-BOTS is to study a novel approach to design, implement, test and use self-assembling, self-organizing, metamorphic systems.
Emphasis given to Swarm Intelligence, robotics, learning, adaptation.
IDSIA grant: 736.950 SFr. (Total grant 1'500.000 SFr.)

2001-2003 Local leader of the project: " MOSCA, Decision Support System For Integrated Door-To-Door Delivery: Planning and Control in Logistic Chains", an IST project funded by the European Commission.
Key project objective is to provide a set of tools for improving efficiency of door-to-door transport of goods in urban areas.
Emphasis is given to ant system, combinatorial optimization, routing.
IDSIA grant: 521.353 SFr. (Total grant 1'145.000 SFr.)

2001-2003 Leader of the project "CADIS-ANT-Fleet" a two years project funded by MIGROS, Switzerland.
CADIS-ANT-Fleet is a system that automatically optimizes the routes of the trucks leaving the hub distribution centers.

.2001-2004	Local leader of the project: "SIRTAKI: Safety Improvement in Road&Rail Tunnels using Advanced ICT and Knowledge Intensive Decision Support System". European IST project of three years that develops an integrated prototype of tunnel crisis management. Emphasis is given to learning, planning, simulation. IDSIA grant: 70.000 SFr. (Total grant 2'200.000 SFr.)
2001-2003	Leader of the project: "Resource Allocation and Scheduling in Flexible Manufacturing Systems II". With José Rolim A Swiss National Foundation project of two years (with UNI Geneve, Computer Science) where different job scheduling techniques and resources allocation techniques have been investigated. Emphasis is given to Metaheuristic, Job shop, Combinatorial Optimization. IDSIA grant: 90.000 SFr. (Total grant 150.000 SFr.)
2001-2004	IDSIA local administrator and director of the "Metaheuristics Network". A Research and Training Network project funded by the European Commission within the Improving Human Potential Program. Emphasis is given to Metaheuristics, Ant Systems, Tabu search, Combinatorial Optimization. IDSIA grant: 300.000 SFr. (Total grant 1.200.000 SFr.)
2001-2003	Leader of the project: "DYVO: Dynamic Vehicle Routing and Dispatching by using Optimization, Forecasting and Simulation". CTI project of two years concerning software tools to manage non-homogeneous fleet of vehicles in dynamic environments. Emphasis is given to On-line Vehicles Routing, Ant Systems, Combinatorial Optimization. IDSIA grant: 290.000 SFr. (Total grant 360.000 SFr.)
1999-2001	Leader of the project: "On-line Fleet Management". A Swiss National Foundation project of two years (with EPFL – Mathematics) concerning the application of meta-heuristics and local search to manage dynamic fleets of vehicles. Emphasis is given to On-line Planning, Ant Systems, Combinatorial Optimization. IDSIA grant: 120.000 SFr. (Total grant 120.000 SFr.)
1999-2002	Leader of the project: "Resource Allocation and Scheduling in Flexible Manufacturing Systems". With José Rolim A Swiss National Foundation project of two years (with UNI Geneve, Computer Science) where different job scheduling techniques and resources allocation techniques have been investigated. Emphasis is given to Metaheuristic, Job shop, Combinatorial Optimization. IDSIA grant: 90.000 SFr. (Total grant 150.000 SFr.)
1998-2001	Leader of the project: "Dynamic Memory for Combinatorial Optimization". A Swiss National Foundation project of three years, consisting in analyzing a new approach to combinatorial optimization based on dynamic memory learning. Emphasis is given to Cooperation, Learning, Combinatorial Optimization. IDSIA grant: 100.000 SFr. (Total grant 100.000 SFr.)
1998-2000	IDSIA local administrator and director of the project "PLATFORM: Computer-controlled freight platforms for a time-tabled rail transport system" an European DGVII transport project of 18th moths. The goal of the project is to study intermodality transport. Emphasis is given to Simulation and Optimization IDSIA grant: 400.000 SFr. (Total Cost in kECU:1.127, Total EU contribution in kECU: 534, IDSIA grant in kECU: 250)
1997-1998	Leader of the project: "Optimization of fuel distribution using a non homogeneous fleet of vehicles". An industrial project. The goal is to provide optimization tools and algorithms to support fuel distribution in Canton Ticino. Emphasis is given to Combinatorial Optimization, vehicles routing. IDSIA grant: 100.000 SFr.
1997-1999	IDSIA local administrator and director of the project "A Methodology for Collective Robot Design (2)" A Swiss National Foundation project of two years with the EPFL consisting in studying how learning, planning and adaptation can be used to obtain complex behaviors from a colony of simple robots. Emphasis is given to Robotics, Cooperation, Neural Networks, Planning.

IDSIA grant: 170.000 SFr. (Total grant 256.256 SFr.)

1996-1998   Leader of the project: "Cooperation and Learning for Combinatorial Optimization".
A Swiss National Foundation project of two years, consisting in analyzing and extend ACS (ant colony system) a novel approach to combinatorial optimization. ACS takes its inspiration from real ants and combines cooperative aspects with learning methods.
Emphasis is given to Cooperation, Learning, Combinatorial Optimization.
IDSIA grant: 180.000 SFr. (Total grant 180.000 SFr.)

1995-1996   Leader of the project: "A Methodology for Containers Flow Forecasting and Positioning in Intermodal Terminal".
A CTI project of two concerning the study of containers data flow and positioning for intermodal terminals.
Emphasis is given to terminal simulation and resource and terminal yard optimization
IDSIA grant: 350.000 SFr. (Total grant 700.000 SFr.)

1995-1997   IDSIA local administrator and director of the "A Methodology for Collective Robot Design" project.
A Swiss National Foundation project of two years with the EPFL, consisting in the study of how learning, planning and adaptation can be used to obtain complex behaviors from a colony of simple robots.
Emphasis is given to Robotics, Cooperation, Neural Networks, Planning.
IDSIA grant: 145.000 SFr. (Total grant 215.000 SFr.)

1994-1995   Leader of the project: "Automatic Containers Flow Forecasting".
A project concerning the study of containers data flow for naval companies. The porpoise was to predict the number of containers that will arrive and depart from an intermodal container terminal using statistical and artificial intelligence techniques.
IDSIA grant: 20.000 SFr.

1993-1994   IDSIA local administrator and director of the project: "Integrating Planning and Learning in Robotics".
A Swiss National Foundation project of one year with EPFL, consisting in the integration of learning and planning methods in robot motion and grasping.
Emphasis is given to Robotics, Neural Networks, Reactive Planning, Reinforcement Learning.
IDSIA grant: 106.000 SFr.

1990-1993   IDSIA local administrator and director of the "Automatic Assembly based on Artificial Intelligence" project.
A Swiss National Foundation project of three years with the EPFL e and the University of Neuchatel, consisting the design of a general-purpose robot for assembly.
Emphasis is given to Robotics, Potential Fields, Planning and Analogical Reasoning.
IDSIA grant: 250.000 SFr. (Total grant: 768.000 SFr.)

SCIENTIFIC AWARDS

- HRI 2019 video track and demo track. Best demo award and honorable mention for best video award, 2019 with B Gromov, J Guzzi, G Abbate, L Gambardella and A Giusti: "Pointing gestures for proximity interaction".
- SNF Optimus Agora Prize in 2018 for the project "Introducing People to Research in Robotics through an Extended Peer Community in Southern Switzerland"
- Special Swiss ICT Award 2016: "Istituto Dalle Molle di Studi sull'Intelligenza Artificiale" it represents one of the best research institutes at the international level in the field of bio-inspired artificial intelligence (with Juergen Schmidhuber).
- "Watt d'Or", Swiss award for best energy projects 2015, category "Energy technologies", Scuola universitaria professionale della Svizzera italiana & Alpiq InTec Gruppe with project GridSense.
- Nomination for best conference paper - Awarded to the paper "Connectivity-aware planning of search and rescue missions", E. Feo, M. Kudelski, L. Gambardella, G. A. Di Caro, 11th IEEE International Symposium on Safety, Security, and Rescue Robotics (SSRR), Linkoping, Sweden, October 21-26, 2013.
- Best conference paper - Awarded to the paper "Bioinspired obstacle avoidance algorithms for robot swarms", J. Guzzi, A. Giusti, L. Gambardella, G. A. Di Caro, 7th International Conference on Bio-Inspired

Models of Network, Information, and Computing Systems (BIONETICS), Lugano, Switzerland, December 10-11, 2012.

- Best conference research paper - Awarded to the paper "An algorithm combining linear programming and an ant system for the sequential ordering problem", M. Mojana, R. Montemanni, G.A. Di Caro and L.M. Gambardella, Second Annual International Conference on Advanced Topics in Artificial Intelligence (ATAI), Singapore, November 24-25, 2011.
- Best conference poster - Awarded to the paper "Distributed motion planning for ground objects using a network of robotic ceiling cameras", A. Reina, G.A. Di Caro, F. Ducatelle, L.M. Gambardella, 12th Conference Towards Autonomous Robotic Systems (TAROS), Sheffield, UK, August 31-September 2, 2011.
- Best conference paper - Awarded to the paper "AntHocNet: an Ant-Based Hybrid Routing Algorithm for Mobile Ad Hoc Networks", G. Di Caro, F. Ducatelle and L.M. Gambardella, 8th International Conference on Parallel Problem Solving from Nature (PPSN VIII) , Birmingham, UK, 18-22 September 2004.

INVITED TALKS (out of Ticino)
- Artificial Intelligence, UBS Affluent Conference in Thun (with M. Zaffalon), May 7th, 2019
- Ant Colony Optimization, Workshop in the honor of Walter Gutjahr. September 28-29, 2018, Vienna
- Industrial perspectives through artificial intelligence, 16th Swissmem Symposium August 23, 2018 Zürich
- Internet of things, Big data e Intelligenza Artificiale, Oracle Day, March 26th 2015, Lugano, Switzerland
- Ant Colony Optimization for industrial vehicle routing problems, 15th Metaheuristic Community Workshop: "Metaheuristics and Enginering" 24-25 March 2014, Istanbul
- Ant Colony Optimization for industrial vehicle routing problems, Ant 2008, Sixth Ant Colony Optimization Conference, Bruxelles, 26-28 September 2008
- Ant Colony Optimization, KES2006, 10th International Conference on Knowledge-Based & Intelligent Information & Engineering Systems, Plenary section invited talk, Bournemouth, UK, 9-11 October 2006
- Ant Colony Optimization: from research to the market: new challenge in production & logistic, Tutorial Ant 2006, September 2006, Bruxelles
- Ant Colony Optimization, University of Lugano, October 6th, 2005
- Ant Colony Optimization, OR2005, International Scientific Annual Conference Operations Research 2005, SemiPlenary section invited talk, Bremen, 7-9 September, Germany, 2005
- Ant Colony Optimization for rich VRP problems, Molde University College, 16 June 2005
- Ant Colony Optimization, EUNITE 2004, European Symposium on Intelligent Technologies, Hybrid Systems and their implementation on Smart Adaptive Systems, Plenary section invited talk, Aachen, Germany, 10 - 12 June 2004
- Ant Colony Optimization for vehicle routing problems, University of Bremen, 24 September, 2004
- Ant Colony Optimization, University of Vienna, 29 October 2002
- Ant Colony Optimization, ETHZ, Zurich, 10 December 2001
- Ant Colony Optimization, Federal University of Rio de Janeiro, 10 October 2001

TEACHING ACTIVITIES (short courses)
- Ant Colony Optimization from research to the business, 9-13 September, University of Bari, 2019
- 2008-now Mathematic methods for industrial application, LIUC, Castellanza.(12 hours)
- Goods distribution optimization: a new challenge from research to the market., University of Castellanza, One day course, May 2nd, 2006
- Ant Colony Optimization and Swarm Intelligence, with Gianni di Caro, Summer School on Complex Systems, Bertinoro, Italy, Two days course, July 2005
- Goods distribution optimization: a new challenge from research to the market., University of Castellanza, One day course, June 8nd, 2005
- Optimize logistic flows, December 12 2004, Piacenza, Master Trasporti e Logistica, One day course, Politecnico di Milano
- Industrial Routing Applications, Meta-heuristic Summer School, Tenerife, One day course, March 2003.
- Ant Colony Optimization, Federal University of Rio de Janeiro, Three days course, October 2001
- Vehicle Routing Problems, Eindhoven, One day course, 28-29 November, 2000

- Algoritmi Genetici, Textbook & Course, One day course, Advanced course for Swiss Teachers, 1994.
- Object Oriented Technique with Lepori, C. Textbook & Course, Three days course Advanced course for Swiss Teachers, 1990-1991
- Introduction to Expert Systems, Three days course, Textbook and Courses at IDSIA, March 1989.

PH.D. THESIS SUPERVISION
- Encz, Koppany Istvan (2023-), Faculty of Informatics, University of Lugano, Swiss National Science Foundation Project, co-adv Monaldo Mastrolilli
- Huber Stefano (2023-), Faculty of Informatics, University of Lugano, co-adv Monaldo Mastrolilli
- Tullio Villa (2023-), Faculty of Informatics, University of Lugano, co-adv Monaldo Mastrolilli
- Giorgia Adorni (2020-). Faculty of Informatics, University of Lugano, Swiss National Science Foundation Project, co-adv Alberto Piatti
- Mele Umberto Junior (2019-), Faculty of Informatics, University of Lugano, Swiss National Science Foundation Project, co-adv Roberto Montemanni
- Dario Mantegazza, (2018-), Faculty of Informatics, University of Lugano, Swiss National Science Foundation Project, co-adv Alessandro Giusti
- Mirko Nava (2018-2023), Faculty of Informatics, University of Lugano, Swiss National Science Foundation Project, co-adv Alessandro Giust.
- Chou, Xiaochen (2016-2021), Faculty of Informatics, University of Lugano, Swiss National Science Foundation Project, co-adv Roberto Montemanni
- Boris, Gromov (2015-2019), Faculty of Informatics, University of Lugano, Swiss National Science Foundation Project, co-adv Alessandro Giusti
- Jerome, Guzzi (2013-2018), Faculty of Informatics, University of Lugano. Path planning for mobile robots in the real world: handling multiple objectives, hierarchical structures and partial information, co-adv Alessandro Giusti
- Toklu, Engin Nihat (2010-2014), Faculty of Informatics, University of Lugano, Swiss National Science Foundation Project, Matheuristics for Robust Optimization: Application to Real-World Problems, co-adv Roberto Montemanni
- Nagi, Jawad (2011-2016), Faculty of Informatics, University of Lugano, Swiss National Science Foundation Project, Human-Swarm Interaction and Cooperation, co-adv Gianni di Caro
- Feo, Eduardo (2011-2017), Faculty of Informatics, University of Lugano, Swiss National Science Foundation Project, Collaborative Missions with Heterogeneous Networked Teams, co-adv Gianni di Caro
- Weyland, Dennis (2008-2013), Faculty of Informatics, University of Lugano, Swiss National Science Foundation Project, Stochastic Vehicle Routing - From Theory to Practice, co-adv Roberto Montemanni
- Frederick Ducatelle, (2002-2007), Hasler Foundation Project, Adaptive Routing in Ad Hoc Wireless Multi-hop Networks
- Leonora Bianchi, (2000-2006) Universitè Libre de Bruxelles, Bruxelles, Ant Colony Optimization and Local Search for the Probabilistic Traveling Salesman Problem: A case Study in Stochastic Combinatorial Optimization, main-adv Marco Dorigo
- Nicoletta Fornara, (1998-2003) Facoltà di Scienze della Comunicazione, Lugano, Interaction and Communication among Autonomous Agents in Multiagent Systems, main-adv Marco Colombetti

EXTERNAL REVIEWER FOR the following Ph.D. and Habilitation Thesis
- Mario Ezequiel, 2015, École Polytechnique Fédérale de Lausanne.
- Philippe Rétornaz, 2014, Construction par procédé additif réalisée avec des robots mobiles autonomes hétérogènes, École Polytechnique Fédérale de Lausanne.
- Vaussard Florian Christopher, 2014, A Holistic Approach to Energy Harvesting for Indoor Robots: Theoretical Framework and Experimental Validations, École Polytechnique Fédérale de Lausanne.
- Timothy Stirling, 2011, Energy-Efficient Indoor Search by Swarms of Flying Robots without Global Information., École Polytechnique Fédérale de Lausanne.
- Stéphane Magnenat, 2010, Integration in mobile robotics, a science to scale up machine intelligence, École Polytechnique Fédérale de Lausanne.

- Paola Pellegrini, 2007, PhD., Using and Assessing Ant Colony Optimization, Graduate School of Economics of the University of Venice, Italy.
- Damien Olivier, 2006, Habilitation, Maître de conférences d'informatique à l'université du Havre, Université du Havre, France
- Antoine Dutot, 2005, PhD., Distribution Dynamic Adaptative à l'aide de Mécanismes d'Intelligence Collective, Université du Havre, France
- Frédéric Guinand, 2004, Habilitation, Universite du Havre, France
- Gianni di Caro, 2004, Ph.D., Ant Colony Optimization and its application to routing in telecommunication networks, ULB, Bruxelles.
- Alcherio Martinoli, 1999, Ph.D., Swarm Intelligence in autonomous collective robotics: from tools to the analysis and synthesis of distributed control strategies, École Polytechnique Fédérale de Lausanne, Département d'Informatique
- Michel Mittaz, 1999, Ph.D., Problèmes de cheminements optimaux dans les réseaux avec contraintes associées aux arcs, Ecole Polytechnique Fédérale de Lausanne, Département de Mathématiques.
- Pierguido Caironi, 1998, Ph.D., Gradient-Based reinforcement learning of monolithic and modular control policies for physical autonomous agents, Politecnico di Milano, Facoltà di Ingegneria, Dipartimento di Elettronica e Informazione.

REFEREE Activities

Journals
- Swarm Intelligence Journal, Editorial Board
- IEEE Transactions on Systems, Man, and Cybernetics
- IEEE Transactions on Evolutionary Computation
- IEEE Transactions on Knowledge and Data Engineering,
- IEEE Transactions on Evolutionary Computation.
- Environmental Modelling and Software
- ACM Transactions on Software Engineering and Methodology
- INFORM Journal On Computing
- International Journal of Production Economics
- Computers & Industrial Engineering
- EJOR European Journal of Operational Research
- Management Science
- OR Spektrum, the Journal of the German Operations Research
- Journal of Heuristics
- International Journal of Applied Mathematics and Computer Science
- Discrete Mathematics
- International Transactions in Operational Research.
- Transportation Science.
- Transaction of Software Engineering and Methodology
- Environmental Modelling & Software
- Theoretical Computer Science
- Swarm Intelligence
- Evolutionary Computation Journal
- AIEDAM: Artificial Intelligence for Engineering Design, Analysis and Manufacturing

CONFERENCES (PROGRAM COMMITTEE)
- FTAL Conference Applied Data Science, October 18-19, 2018, Lugano
- MIC 2017, 12nd Metaheuristic International Conference, July 4-7, 2017, Barcellona
- ANTS 2016 - 10th International Conference on Swarm Intelligence (September 7-9, 2016; Brussels
- EvoCOMNET 2015, European Conference on the Applications of Evolutionary Computation, Copenaghen, Denmark, 8-10 April, 2015
- MIC 2015, The 11th edition of the Metaheuristics International Conference will be held in Agadir, Morocco, from the 7 to 10th June 2015.

- RO-MAN15, IEEE International Symposium on Robot and Human Interactive Communication, August 31 to September 4, 2015
- GECCO 2015, Genetic and Evolutionary Computation Conference, July 11-15, 2015, Madrid, Spain
- GECCO 2014, Genetic and Evolutionary Computation Conference July 12-16, 2014, Vancouver, BC, Canada
- DARS 2014, Distributed Autonomous Robotic Systems 2014, Nov 2-5, 2014, Daejeon, Korea.
- EvoApps 2014 : The European Conference on Applications of Evolutionary Computation, Apr 23-25, 2014, Granada
- GECCO 2013, Genetic and Evolutionary Computation Conference, GECCO '13, Amsterdam, The Netherlands, July 6-10, 2013
- PPSN
- GECCO 2012, Genetic and Evolutionary Computation Conference, GECCO '12, Philadelphia, PA, USA, July 7-11, 2012
- Bionetics, 7th International Conference on Bio-Inspired Models of Network, Information, and Computing Systems December 10–11, 2012 Lugano, Switzerland
- Ant-2012, Ant 2012, 8th International Conference Swarm Intelligence, September 12-14 2012, Bruxelles
- International Conference of Operational Research, OR2011, September 1st 2011, Zurich.
- Gecco-2011, Genetic and Evolution Computation Conference, July 12-16, 2011, Dublin, Ireland..
- ECAL 2011, European Conference in Artificial Life, Paris, 8th-11th August, 2011.
- 9th edition of the Metaheuristics International Conference (MIC 2011) , Udine, Italy, 25th - 28th of July, 2011
- DARS2010, 10th International Symposium on Distributed Autonomous Robotic Systems, Lausanne, 1st -3rd November, 2010.
- Ant-2010, Ant 2010, 7th International Conference Swarm Intelligence, September 8-10 2010, Bruxelles
- Sab-2010, The 12th International Conference on the Simulation of Adaptive Behavior, August 24-28 2010, Paris.
- Gecco-2010, Genetic and Evolution Computation Conference, June 7-11, 2010, Portland, Oregon.
- Gecco-2009, Genetic and Evolution Computation Conference, June 8-12, 2009, Montreal, Canada.
- Sab-2008, The tenth International Conference on the Simulation of Adaptive Behavior, July 8-12 2008, Osaka
- BICC 2008, the 2nd IFIP Conference on Biologically Inspired Cooperative Computing, September 7-10, 2008, Milan
- Gecco-2008, Genetic and Evolution Computation Conference, July 12-16, 2008, Atlanta
- Ant-2008, Ant 2008, Six International Conference on Ant Colony Optimization and Swarm Intelligence, September 22-24 2008, Bruxelles
- MIC-2007, The Seventh Metaheuristics International Conference Montreal, June 25-29, 2007
- SASO-2007 First IEEE International Conference on Self-Adaptive and Self-Organizing Systems Boston, Mass., USA, July 9-11, 2007
- GECCO-2007, The Genetic and Evolutionary Computation Conference, July 7-11, 2007, London
- EVO* 2007, Europe's premier co-located events on evolutionary computation, 11-13 April 2007, Valencia, Spain
- From Animal to Animat 9, The Ninth International Conference on the Simulation of Adaptive Behaviour (SAB'06), 25 - 29 September 2006, CNR, Roma, Italy
- PPSN2006, 9th International Conference, Parallel Problem Solving from Nature, Reykjavik, 9-13 September 2006
- Ant 2006, Ant Colony Optimization and Swarm Intelligence – September 2006, Bruxelles.
- SIS 2005, IEEE Swarm Intelligence Symposium 2005, Pasadena, California, June 8-10, 2005.
- WONS 2005, The Second Annual Conference on Wireless On demand Network Systems and Services, St. Moritz, Switzerland, 19-21 January, 2005.
- PPSN 2004, The 8th International Conference on Parallel Problem Solving from Nature (PPSN VIII) will be held in Birmingham, UK, on 18-22 September 2004.
- ANTS 2004, Fourth International Workshop on Ant Colony Optimization and Swarm Intelligence, Brussels, Belgium, Set 5-8, 2004.
- GECCO 2004. Genetic and Evolutionary Computational Conference, June 24-26, 2004

Seattle, Washington, USA
- IJCAI 2003, Eighteenth International Joint Conference on Artificial Intelligence, Acapulco, Mexico, August 9-15, 2003
- HMS2003, Harbour, Maritime & Multimodal Logistics Modelling and Simulation, Riga, September 18-20, 2003.
- IPDPS 2002, International Parallel and Distributed Processing Symposium Marriott Marina, Fort Lauderdale, Florida April 15-19, 2002
- AAMAS-02, First International Joint Conference on Autonomous Agents and MultiAgent Systems, July 15-19, 2002, Bologna, Italy
- HMS2002, Harbour, Maritime & Multimodal Logistics Modelling and Simulation, Italian Riviera, Riviera delle Palme - October 3 - 5, 2002.
- EWRL5, Fifth European Workshop on Reinforcement Learning (EWRL'5) will take place in Utrecht. The proposed date is 5-6 october, 2001
- IJCAI2001, International Joint Conference on Artificial Intelligence, August 4th-10th, 2001, Seattle, Washington, USA
- GECCO-2001, Genetic and Evolutionary Computation Conference, 2001, San Francisco, California, July 7-11, 2001
- ANT2000, From Ant Colonies to Artificial Ants: Second International Workshop on Ant Colony Optimization, Brussels, Belgium, Set 7-9, 2000
- HMS2000, Maritime & Industrial Logistics Modelling and Simulation, Portofino, Italy, 5-7th October, 2000.
- HMS99, Maritime & Industrial Logistics Modelling and Simulation, Genoa, Italy, 16-18th September, 1999.
- EWLR-8 Eighth European Workshop on Learning Robots 1999, EPFL, Lausanne, Switzerland, September 18th 1999
- EWRL4, Fourth European Workshop on Reinforcement Learning, Lugano, Switzerland, Oct 29-30, 1999
- ANT 1998, From Ant Colonies to Artificial Ants: First International Workshop on Ant Colony Optimization, Brussels, Belgium, October 15-16, 1998
- International Workshop Modeling and Simulation within a Maritime Environment, 6-8 September, 1998, Riga, Latvia.
- Computer-Aided Scheduling of Public Transport, CASPT-Proceedings

CONFERENCE ORGANIZATION
- FTAL Conference Applied Data Science, October 18-19, 2018, Lugano
- Joint Operations Research Days, September 8-9, 2016, Lugano
- International Conference of Operational Research, OR2015, September 1st 2015, Vien.
- International Conference of Operational Research, OR2011, September 1st 2011, Zurich.
- ANTS 2010, Seventh International Conference on Swarm Intelligence, Technical Chair, Bruxelles, September 2010.
- Seventh Joint Operations Research Days, September 3-4, 2009, Lugano
- Graph and Optimization, August 19-23, 2007, Lugano.
- GO VI, Graph and Optimization, August 19-23, 2007, Cademario.
- General Chair, Ant 2006, Ant Colony Optimization and Swarm Intelligence – September 2006, Bruxelles
- Technical Chair, IEEE Swarm Intelligence Symposium 2005, Pasadena, California, June 8-10, 2005
- Program Chair, Ant 2004, Ant Colony Optimization and Swarm Intelligence – September 2004, Bruxelles
- Chair, ECCO 2002 XV Conference of the European Chapter on Combinatorial Optimisation, 30 May - 1 June 2002, Lugano, Switzerland
- Program Chair, HMS2000, Maritime & Industrial Logistics Modelling and Simulation, Portofino, Italy, 5-7th October, 2000
- Local Organizer, EWRL4, Fourth European Workshop on Reinforcement Learning, Lugano, Switzerland, Oct 29-30,1999

GUEST EDITOR
- Engelbrecht, A., Li, X., Gambardella, L. and Middendorf, M. (2009), "Special Issue: Swarm Intelligence", IEEE Transactions on Evolutionary Computation, Vol. 13, No.4. August, 2009

- L.M. Gambardella, A. Hertz, F. Maffray, M. Widmer, 2009, Sixth International Conference on Graphs and Optimization 2007: Special Issue, Discrete Applied Mathematics 157(17)
- L. M. Gambardella, S. Martello (a cura di): , Feature Issue: Metaheuristics and worst-case guarantee algorithms: relations, provable properties and applications (ECCO XV), AMSTERDAM, Elsevier, 2005, pp. 292 (European Journal of Operational Research)
- M.Dorigo, L.M. Gambardella, M. Middendorf and T. Stützle, special issue on "Ant Colony Optimization", Vol. 6, No. 4, IEEE Transactions on Evolutionary Computation, July 2002
- Special Issue of EJOR for the EURO Winter Institute, 2002

PROJECT EVALUATOR FOR
- ERC consolidator
- Swiss BRIDGE Discovery Evaluation Panel
- European Commission Expert for "Future Trends in Artificial Cognitive Systems"
- European Commission Projects Evaluator
- The Fund for Scientific Research – FNRS, Bruxelles
- Swiss National Science Foundation
- Research Grants Council, Hong Kong
- Inria, Expert for Inria evaluation, France

COMPUTER BACKGROUND
- Unix Operative System, DOS, X11 window systems, Windows 95/NT.
- Languages C, C++, Common LISP with CLOS, SmallTalk, Visual Basic, Pascal, Java.
- Computer Experience with Sun, Symbolics, Macintosh, Honeywell, Pc MS-DOS, Windows.

LANGUAGES
- Native language Italian.
- Spoken and written English.
- Spoken French.

HOBBIES
- Fly fishing
- Walking in the mountains
- Writing Novels
- Art Installation