

ALESSANDRO FARINELLI

CURRICULUM VITAE

PERSONAL DATA

Date of Birth: 18 June, 1976

Current Position: Associate Professor, SSD: INF/01

Institution: Università degli Studi di Verona, Dipartimento di Informatica
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CONTACTS

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ABSTRACT

Alessandro Farinelli is associate professor at University of Verona, Department of Computer Science, since December 2014.

His research interests comprise theoretical and practical issues related to the development of Artificial Intelligent Systems applied to robotics and cyber physical systems. In particular, he focuses on optimization, reinforcement learning and data analysis for cyber-physical systems.

He was principal investigator for several national and international research projects in the broad area of Artificial Intelligence for robotic systems. He co-authored more than 100 peer-reviewed scientific contributions. He publishes in top international journals (such as Artificial Intelligence, Autonomous Robots and IEEE Transactions on Cybernetics) and conferences (such as IJCAI, AAMAS and AAAI).

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EDUCATION AND CAREER

Career

2014–present	Associate Professor at Computer Science Department, University of Verona, SSD INF/01.
2008–2014	Assistant Professor at Computer Science Department, University of Verona, SSD INF/01.
2008	Research Fellow at ECS (Electronic and Computer Science) Southampton University (UK), working with the research group headed by Prof. N. R. Jennings on the project “Control and Management of Autonomous Mobile Sensors” funded by SEAS DTC, Principal Investigators Prof. N. R. Jennings and Dr. Alex Rogers; Period: July 2008–December 2008.
2007–2008	Research Fellow at ECS (Electronic and Computer Science) Southampton University (UK), working with the research group headed by Prof. N. R. Jennings on the project “Market Based Control of Complex Computational Systems” funded by Engineering and Physical Sciences Research Council (EPSRC), Principal Investigator Prof. N. R. Jennings; Period: April 2007–July 2008.
2005–2007	two year post-doc at Dipartimento di Informatica e Sistemistica, Università di Roma <i>La Sapienza</i> on the project <i>An integrated framework for situation assessment and task assignment in real rescue scenarios</i> . Post-Doc Supervisor: Prof. Daniele Nardi; Period Aprile 2006–April 2007.

Education

- 2005 PhD in Computer Science at Dipartimento di Informatica e Sistemistica (DIS), University of Rome *La Sapienza*. Thesis title: Distributed Task Assignment for Real World Environments.
- 2001–2004 Phd student with scholarship funded by the ministry of Education at Dipartimento di Informatica e Sistemistica, Università di Roma *La Sapienza*.
- 2001 Master Degree in Compute Science (Ingegneria Informatica) (5 years curriculum) final grade 110/110 cum Laude at University of Rome *La Sapienza*. Thesis title: Tecniche di pianificazione delle traiettorie in ambiente dinamico.
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RESEARCH ACTIVITY

Awards

- 2015 *Nomination as best paper in Innovative Applications Track* at International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS) 2015, Istanbul, Turkey, Paper title: “A Mechanism for Smoothly Handling Human Interrupts in Team Oriented Plans”, A. Farinelli, N. Marchi, M.M. Raeissi, N. Brooks, P. Scerri.
- 2008 *Best Industrial Demo* at International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS) 2008, Estoril, Portogallo, demo title: “Max-Sum Decentralised Coordination for Sensor Systems” W. T. L. Teacy, A. Farinelli, N. J. Grabham, P. Padhy, A. Rogers, N. R. Jennings.
- 2007 winner of the RoboCup Rescue Infrastructure competition with the Aladdin Rescue team, University of Southampton UK. Team Members: Alessandro Farinelli, Sarvapali Ramchurn, Perukrishnen Vytelingum, Ioannis Vetsikas
- 2004 Best paper at the second International Workshop on: Theory and Practice of Open Computational System (TAPOCS) [C.57].

Research Projects – Principal Investigator

International and national research projects funded on the basis of competitive calls with peer reviews

- JP17 Title: Active Malware Analysis based on Reinforcement Learning techniques; Funded by: University of Verona (Joint projects, cooperation scheme with industrial partners), Industrial partner: Cythereal Inc., 2017; Project Duration: 12 months; Role: PI €153K (University contribution: €76K).

- EU15 Title: Development and application of Novel, Integrated Tools for monitoring and managing Catchments (INTCATCH); Funded by: EU, H2020, WATER-1-2014/2015, 2015; Project Duration: 48 months; Role: PI for the UNIVR research unit on AI and robotics, WP leader (WP4) and technical director for the project, €8.7 M (€370 K for the research unit). The project funded one research fellowship position (AdR, INF/01) for 24 months, one research fellowship position (AdR, INF/01) for 12 months and a temporary faculty position (RTDa, ING-INF/05) at the Computer Science Department, University of Verona.
- FSE13 Title: Controllo automatico di processo per risparmio energetico e recupero di risorse dalle acque reflue (automatic process control for energy saving and resource recovery in waste water management); together with INNOVen s.r.l. and EDALab s.r.l. Funded by: Regione Veneto (Fondo Sociale Europeo), 2013; Project duration: 12 months (2 Research contracts of 12 months each) Role: Principal Investigator, €71 K. The project funded two research fellowship positions (AdR, ING-IND/25 and ING-INF/05), 12 months each, at the Computer Science Department, University of Verona.

Research projects funded by qualified public and private institutions

- CSD17 Title: Data collection and analysis for water monitoring with robotic platforms (Analisi e acquisizione dati per il monitoraggio dell'acqua tramite piattaforme robotiche); Partially Funded by: Computer Science Department, University of Verona, 2017; Role: Principal Investigator, €23.5 K (Department contribution €11.75 K). The project funded one research fellowship position (AdR, INF/01) for 12 months.
- CSD15 Title: Artificial Intelligence models and techniques for sustainable mobility (Sviluppo di modelli e tecniche di Intelligenza Artificiale per la mobilità sostenibile); Partially Funded by: Computer Science Department, University of Verona, 2015; Role: Principal Investigator, €24 K (Department contribution €22 K). The project funded one research fellowship position (AdR, INF/01) for 12 months.
- CSD12 Title: Agent-Based Coordination Approaches for Intelligent Sensor Networks (Coordinamento multi-agente per reti di sensori intelligenti); Funded by: Computer Science Department, University of Verona, 2012; Role: Principal Investigator, €19 K. The project funded one research fellowship position (AdR, ING-INF/05) for 12 months.
- RBC12 Title: RMA SBench: Benchmarking Dynamic Multi-Agent Coordination in Urban Search and Rescue; Together with

Linköping University and University of Southampton;
Funded by: RoboCup Federation, 2012; Project duration: 12 months Role: Principal Investigator for the Research Unit of Verona, US\$ 3.9 K.

EOARD05 Title: An integrated framework for situation assessment and task assignment in real rescue scenarios; Funded by: EOARD (European Office of Aerospace Research and Development, Award No. FA8655-05-1-3015), 2005; Project duration: 24 months Role: Co-PI, US\$ 74 K.

Research Projects – Research Collaborator

JP15 Title: “EXPO-AGRI: EXtra-field Plant Observation for monitoring and forecast of agricultural infections”; Funded by: Regione Veneto (Fondo Sociale Europeo), 2015; Role: research manager for the AI and robotics activities; Project duration: 24 months.

SD08 Title: Control and Management of Autonomous Mobile Sensors Funded by: SEAS DTC (Systems Engineering for Autonomous Systems Defence Technology Centre, UK, Contract No. C/WPE/N03751) Project duration: 30 months.

EPSRC07 Title: Market Based Control of Complex Computational Systems Funded by: EPSRC (Engineering and Physical Sciences Research Council - EPSRC Reference GR/T10664/01) Project Duration: 60 months.

MIUR03 Title: Sistemi di simulazione e robotici per l'intervento in scenari di emergenze (Simulation and robotic systems for operation in emergency scenarios) Funded by: MIUR (2003 - prot. 2003097252) Project duration: 24 months.

MIUR03 Title: RoboCare Funded by: MIUR (2002) Project duration: 36 months.

Research Visits

2008–2009 Research visitor in the agent group headed by Prof. N. R. Jennings, ECS (Electronic and Computer Science) University of Southampton, UK; Period: December 2008–May 2009.

2003–2004 Research visitor in the Teamcore Research Group, headed by Prof. Milind Tambe, University of Southern California, Los Angeles, CA, USA; Period: November 2003–June 2004.

National and International collaborations

Barcelona, Spain IIIA-CSIC, Main collaborators: Dr. Juan-Antonio Rodriguez Aguilar, Dr. Jesus Cerquides Bueno, Dr. Pedro Meseguer.

- Bar Ilan, Israele Industrial Engineering and Management, Ben Gurion University of the Negev. Main collaborators: Dr. Roie Zivan, Dr. Harel Yedidsion
- California, US TEAMCORE research group, University of Southern California. Main collaborators: Prof. Milind Tambe.
- Minneapolis, US College of Science and Engineering, University of Minnesota. Main collaborators: Prof. Maria Gini.
- Pittsburgh, US Robotic Institute, Carnegie Mellon University. Main collaborators: Dr. Paul Scerri.
- Padova Intelligent Autonomous System Laboratory (IAS-Lab), Dipartimento di Ingegneria dell'Informazione (DEI), Università degli studi di Padova. Main collaborators: Prof. Enrico Pagello, Prof. Emanuele Menegatti.
- Roma Dipartimento di Ingegneria Informatica, Automatica e Gestionale (DIAG), Sapienza Università di Roma. Main collaborators: Prof. Daniele Nardi, Prof. Luca Iocchi.
- Southampton, UK Cooperation agreement with Southampton University for exchanging PhD students, Post-Docs and researchers.
- Southampton, UK Agents, Interaction and Complexity Group, Electronics and Computer Science (ECS), Faculty of Physical Sciences and Engineering. Main collaborators: Dr. Sarvapali Ramchurn, Dr. Alex Rogers, Prof. Nick Jennings.

Publications

Bibliometric Indices

Bibliometric indicators according to google scholar and scopus databases (last updated 13th January 2018)

	Google Scholar	Scopus
Number of publications	157	104
H-index	23	14
Number of citations	2610	1047

PUBLICATION LIST

International Journals

- [J.1] M. Bicego, A., Farinelli, E., Grosso, D., Paolini, S.D., Ramchurn. On the distinctiveness of the electricity load profile. *Pattern Recognition*, 74, pp. 317-325, 2018.

- [J.2] F., Lezama, J., Palominos, A.Y., Rodríguez-González, A., Farinelli, E., Muñoz de Cote. Agent-Based Microgrid Scheduling: An ICT Perspective. *Mobile Networks and Applications*, pp. 1-17. Article in Press, 2017.
- [J.3] M., Roncalli, F., Bistaffa, A., Farinelli. Decentralized Power Distribution in the Smart Grid with Ancillary Lines: An Approach Based on Distributed Constraint Optimization. *Mobile Networks and Applications*, pp. 1-9. Article in Press, 2017.
- [J.4] M. Denitto, M., Bicego, A., Farinelli, M.A.T., Figueiredo. Spike and slab biclustering. *Pattern Recognition*, 72, pp. 186-195.
- [J.5] F. Bistaffa, A. Farinelli, G. Chalkiadakis, S. D. Ramchurn. A cooperative game-theoretic approach to the social ridesharing problem. *Artificial Intelligence*, 246, pp. 86-117, 2017.
- [J.6] A. Farinelli, N. Boscolo, E. Zanutto, E. Pagello. Advanced approaches for multi-robot coordination in logistic scenarios. *Robotics and Autonomous Systems*, 90, pp. 34-44, 2017.
- [J.7] A. Farinelli, M. Bicego, F. Bistaffa, S. D. Ramchurn. A hierarchical clustering approach to large-scale near-optimal coalition formation with quality guarantees. *Engineering Applications of Artificial Intelligence*, 59, pp. 170-185, 2017.
- [J.8] A. Farinelli, M. M. Raeissi, N. Marchi, N. Brooks, P. Scerri. Interacting with team oriented plans in multi-robot systems. *Autonomous Agents and Multi-Agent Systems*, 31 (2), pp. 332-361, 2017.
- [J.9] M. Denitto, A. Farinelli, M. A. T. Figueiredo, M. Bicego. A biclustering approach based on factor graphs and the max-sum algorithm. *Pattern Recognition*, 62, pp. 114-124, 2017.
- [J.10] F. Bistaffa, A. Farinelli, J. Cerquides, J. Rodríguez-Aguilar, S. D. Ramchurn. Algorithms for graph-constrained coalition formation in the real world. *ACM Transactions on Intelligent Systems and Technology*, 8 (4), art. no. 60, 2017.
- [J.11] F. Bistaffa, N. Bombieri, A. Farinelli. An Efficient Approach for Accelerating Bucket Elimination on GPUs. *IEEE Transactions on Cybernetics*, in Press, pp. 1-13, 2017.
- [J.12] A. Farinelli, L. Iocchi, D. Nardi. Distributed on-line dynamic task assignment for multi-robot patrolling. *Autonomous Robots*, in press, pp. 1-25, 2017.

- [J.13] M. Tamassia, A. Farinelli, V. Murino, and A. Del Bue. Directional Visual Descriptors and Multirobot Strategies for Large-Scale Coverage Problems. *Journal of Field Robotics*, 33(4): pp. 489-511, 2016.
- [J.14] A. Farinelli, A. Rogers, N. R. Jennings. Agent-based decentralised coordination for sensor networks using the max-sum algorithm. *Journal of Autonomous Agents and Multi-Agent Systems*, 28(3): pp. 337-380, ISSN: 1387-2532, 2014; doi:10.1007/s10458-013-9225-1.
- [J.15] M. Vinyals, K. S. Macarthur, A. Farinelli, S. D. Ramchurn, N. R. Jennings. A message-passing approach to decentralised parallel machine scheduling. *The Computer Journal*, 57(6): pp. 856-874, ISSN: 0010-4620, 2014; doi: 10.1093/comjnl/bxt140.
- [J.16] J. Cerquides, A. Farinelli, P. Meseguer, S. D. Ramchurn. A Tutorial on Optimization for Multi-Agent Systems. *The Computer Journal*, 57(6): pp. 799-824, ISSN: 0010-4620, 2014; doi: 10.1093/comjnl/bxt146
- [J.17] A. Farinelli, D. Nardi, R. Pigliacampo, M. Rossi, and G. P. Settembre. Cooperative situation assessment in a maritime scenario. *International Journal of Intelligent Systems*, 27(5): pp. 477-501, ISSN: 0884-8173, 2012; doi:10.1002/int.21532.
- [J.18] A. Rogers, A. Farinelli, R. Stranders, N. R. Jennings. Bounded approximate decentralised coordination via the max-sum algorithm. *Artificial Intelligence*, 175(2):pp. 730-759, ISSN: 0004-3702, 2011; DOI:10.1016/j.artint.2010.11.001.
- [J.19] S. D. Ramchurn, A. Farinelli, K. S. Macarthur, N. R. Jennings. Decentralized Coordination in RoboCup Rescue. *Computer Journal* 53(9): pp. 1447-1461, ISSN: 0010-4620, 2010; doi:10.1093/comjnl/bxq022.
- [J.20] A. Farinelli, H. Fujii, N. Tomoyasu, M. Takahashi, A. D'Angelo, E. Pagello. Cooperative control through objective achievement. *Robotics and Autonomous Systems* 58(7): pp. 910-920, ISSN: 0921-8890, 2010; doi:10.1016/j.robot.2010.03.012.
- [J.21] D. Calisi, A. Farinelli, L. Iocchi, D. Nardi. Multi-Objective Exploration and Search for Autonomous Rescue Robots. *Journal of Field Robotics, special issue on Quantitative Performance Evaluation of Robotic and Intelligent Systems*, 24(8-9): pp. 763-777, ISSN:1556-4959, 2007; doi:10.1002/rob.20216.
- [J.22] A. Farinelli, L. Iocchi, D. Nardi, and V. A. Ziparo. Assignment of Dynamically Perceived Tasks by Token Passing in Multirobot systems. *Proceedings of the IEEE, Special issue on Multi-Robot Systems*, 94(7): pp.

1271-1288, ISSN:0018-9219, 2006; doi:10.1109/JPROC.2006.876937.

- [J.23] A. Farinelli, G. Grisetti, and L. Iocchi. Design and implementation of modular software for programming mobile robots. *International Journal of Advanced Robotic Systems, special issue on Software Development and Integration in Robotics*, 3(1):pp. 37-42, ISSN 1729-8806, March 2006; doi: 10.5772/5760.
- [J.24] A. Farinelli, L. Iocchi, and D. Nardi. Multirobot systems: A Classification Focused on Coordination. *IEEE Transactions on System Man and Cybernetics, part B*, 34(5): pp. 2015–2028, ISSN:1083-4419, 2004; doi:10.1109/TSMCB.2004.832155.

Book Chapters

- [B.1] A. Farinelli, M. Vinyals, A. Rogers, N. R. Jennings. Chapter 12: Distributed Constraint Handling and Optimization. In *Multiagent Systems*, MIT press, 2013.
- [B.2] A. Rogers, A. Farinelli, N. R. Jennings. Self-organising Sensors for Wide Area Surveillance Using the Max-sum Algorithm. In *n: LNCS 6090 Lecture Notes in Computer Science. Self-Organizing Architectures*, pp. 84-100, Springer, 2010.
- [B.3] A. Farinelli, L. Iocchi, D. Nardi. Monitoring Search and Rescue Operations in Large-Scale Disasters. In *Data Fusion for Situation Monitoring Incident Detection Alert and Response Management*; Shahbazian E., Ragoza G., Valin P. editors. pp. 659-670. ISBN: 1-58603-536-3. Amsterdam: IOS Press (Netherlands), 2005.
- [B.4] A. Farinelli, L. Iocchi, D. Nardi, and F. Patrizi. Task assignment with dynamic token generation. In *Monitoring, Security, and Rescue Techniques. in Multiagent Systems, 2004*. Dunin-Keplicz B., Jankowski A., Skowron, A., Szczuka M. editors. pp. 467–478. ISBN: 3-540-23245-1. Springer Berlin, Heidelberg, 2005.
- [B.5] P. Scerri, D. V. Pynadath, N. Schurr, A. Farinelli, S. Gandhe, M. Tambe. Team Oriented Programming and Proxy Agents: The Next Generation. In *Programming Multi-Agent Systems*. Dastani, M. and Dix, J. and El Fallah-Seghrouchni, A. editors. pp. 131–148. ISBN: 978-3-540-22180-7. Springer Berlin, Heidelberg, 2004.

PhD Thesis

- [T.1] A. Farinelli. *Distributed Task Assignment for Real World Environments*. PhD thesis, Università degli Studi di Roma “La Sapienza” Dipartimento di Informatica e Sistemistica “Antonio Ruberti”, 2004.

International Conferences

- [C.1] L. Bottarelli, J., Blum, M., Bicego, A., Farinelli. Path efficient level set estimation for mobile sensors. *Proceedings of the ACM Symposium on Applied Computing*, Part F128005, pp. 265-267, 2017.

- [C.2] M. Denitto, A., Farinelli, M., Bicego. Biclustering of time series data using factor graphs. *Proceedings of the ACM Symposium on Applied Computing*, Part F128005, pp. 28-30, 2017.

- [C.3] R. Sartea, A. Farinelli. A Monte Carlo Tree Search Approach to Active Malware Analysis. *International Joint Conference on Artificial Intelligence (IJCAI 2017)*, pp. 3831-3837, 2017.

- [C.4] M.M., Raeissi, N., Brooks, A., Farinelli. A Balking Queue Approach for Modeling Human-Multi-Robot Interaction for Water Monitoring. *Lecture Notes in Computer Science* (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 10621 LNAI, pp. 212-223, 2017.

- [C.5] A. Farinelli, G. Franco, R. Rizzi. Minimal multiset grammars for recurrent dynamics. *Lecture Notes in Computer Science* (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 10105 LNCS, pp. 177-189, 2017.

- [C.6] J. Parker, A. Farinelli, M. Gini. Max-sum for allocation of changing cost tasks. *Advances in Intelligent Systems and Computing*, 531, pp. 629-642, 2017.

- [C.7] M., Roncalli, A., Farinelli. Decentralized control for power distribution with ancillary lines in the smart grid. *Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering*, LNICST, 179 LNICST, pp. 39-50, 2017.

- [C.8] F. Lezama, J. Palominos, A. Y. Rodríguez-González, A. Farinelli, E. M. de Cote. Optimal scheduling of On/Off cycles: A decentralized IoT-microgrid approach. *Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering*, LNICST, 179 LNICST, pp. 79-90, 2017.

- [C.9] R. Sartea, M. Dalla Preda, A. Farinelli, R. Giacobazzi, I. Mastroeni. Active Android Malware analysis: An approach based on stochastic games. *ACM International Conference Proceeding Series*, 05-06-December-2016, art. no. a5, 2016.

- [C.10] L. Bottarelli, M. Bicego, J. Blum, A. Farinelli. Skeleton-Based Orienteering for level set estimation. *Frontiers in Artificial Intelligence and*

- Applications*, 285, pp. 1256-1264, 2016.
- [C.11] F. Bistaffa, N. Bombieri, A. Farinelli. CUBE: A CUDA approach for Bucket Elimination on GPUs. *Frontiers in Artificial Intelligence and Applications*, 285, pp. 125-132, 2016.
- [C.12] A. Bertolaso, M. M. Raeissi, A. Farinelli, R. Muradore. Using petri net plans for modeling UAV-UGV cooperative landing. *Frontiers in Artificial Intelligence and Applications*, 285, pp. 1720-1721, 2016.
- [C.13] L. Bottarelli, M. Bicego, M. Denitto, A. Di Pierro, A. Farinelli. A quantum annealing approach to biclustering. *Lecture Notes in Computer Science* (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 10071 LNCS, pp. 175-187, 2016.
- [C.14] M. Denitto, L. Magri, A. Farinelli, A. Fusiello, M. Bicego. Multiple structure recovery via probabilistic biclustering. *Lecture Notes in Computer Science* (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 10029 LNCS, pp. 274-284, 2016.
- [C.15] M. Denitto, A. Farinelli and M. Bicego. Biclustering gene expressions using factor graphs and the max-sum algorithm. Proceedings of the 24th International Conference on Artificial Intelligence (IJCAI 2015), pp. 925–931, 2015.
- [C.16] A. Farinelli, N. Marchi, M. M. Raeissi, N. Brooks, P. Scerri. A Mechanism for Smoothly Handling Human Interrupts in Team Oriented Plans. Proceedings of the 2015 International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2015), pp 377–385, 2015.
- [C.17] F. Bistaffa, A. Farinelli, G. Chalkiadakis, S. D. Ramchurn. Recommending Fair Payments for Large-Scale Social Ridesharing. Proceedings of the 9th ACM Conference on Recommender Systems (RecSys 2015), pp 139–146, 2015.
- [C.18] M. Pujol-Gonzalez, J. Cerquides, A. Farinelli, P. Meseguer, J. A. Rodriguez-Aguilar. Efficient Inter-Team Task Allocation in RoboCup Rescue. Proceedings of the 2015 International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2015), pp 413–421, 2015.
- [C.19] F. Bistaffa, A. Farinelli, Sarvapali D. Ramchurn. Sharing rides with friends: a coalition formation algorithm for ridesharing. in Proceedings of the 29th AAAI Conference on Artificial Intelligence (AAAI), pp 608-614, 2015.
- [C.20] F. Bistaffa, A. Farinelli, N. Bombieri. Optimising memory management for Belief Propagation in Junction Trees using GPGPUs. In Proceedings of 20th IEEE International Conference on Parallel and Distributed Systems (ICPADS), pp 526-533, 2014.

- [C.21] M. Tamassia, A. Del Bue, V. Murino, A. Farinelli. A Directional Visual Descriptor for Large-Scale Coverage Problems. In Proceedings of International Conference on Intelligent Robots and Systems (IROS2014), pp 1038–1045, 2014.
- [C.22] M. Bicego, F. Recchia, A. Farinelli, S. D. Ramchurn, E. Grosso. Behavioural biometrics using electricity load profiles. In Proceedings of the 22nd International Conference on Pattern Recognition (ICPR 2014), (accepted).
- [C.23] M. Denitto, A. Farinelli, G. Franco, and M. Bicego. A binary Factor Graph model for biclustering. In Proceedings of International Workshop on Statistical Techniques in Pattern Recognition (S+SSPR), 8621 LNCS, pp. 393–403, 2014.
- [C.24] F. Bistaffa, A. Farinelli, J. Cerquides, J. Antonio Rodriguez-Aguilar, S. Ramchurn. Anytime Coalition Structure Generation on Synergy Graphs. In Proceedings of the 2014 international conference on Autonomous agents and multi-agent systems (AAMAS 2014), pp 13–20, ISBN: 978-1-4503-2738-1, 2014.
- [C.25] H. Yedidsion, R. Zivan, A. Farinelli. Explorative Max-sum for Teams of Mobile Sensing Agents. In Proceedings of the 2014 international conference on Autonomous agents and multi-agent systems (AAMAS2014), pp 549–556, ISBN: 978-1-4503-2738-1, 2014.
- [C.26] A. Del Bue, Marco Tamassia, Fabio Signorini, Vittorio Murino, A. Farinelli. Visual Coverage Using Autonomous Mobile Robots for Search and Rescue Applications. In *Proc. of IEEE International Symposium on Safety, Security and Rescue Robotics (SSRR 2013)*, Linkoping, Sweden, October 2013.
- [C.27] F. Bistaffa, A. Farinelli. A fast approach to form core-stable coalitions based on a dynamic model. In: Proceedings of the International Conference on Intelligent Agent Technology (IAT 2013) (November 2013).
- [C.28] A. Farinelli, M. Bicego, R. Sarvapali, and M. Zucchelli. C-Link: a hierarchical clustering approach to large-scale near-optimal coalition formation. In *Proceedings of the 23rd International Joint Conference on Artificial Intelligence (IJCAI)*, pp. 106-112, ISBN: 978-1-57735-633-2, 2013.
- [C.29] A. Kleiner, A. Farinelli, S. Ramchurn, B. Shi, F. Maffioletti, R. Reffato. RMAStBench: benchmarking dynamic multi-agent coordination in urban search and rescue (Extended Abstract). In Proceedings of the 2013 international conference on Autonomous agents and multi-agent systems (AAMAS 2013). International Foundation for Autonomous Agents and Multiagent Systems, pp. 1195-1196, 2013.
- [C.30] F. Maffioletti, R. Reffato, A. Farinelli, A. Kleiner, S. Ramchurn, B. Shi. RMAStBench: a benchmarking system for multi-agent coordination in urban search and rescue (Demonstration Paper). Proceedings of the 2013 international conference on Autonomous agents and multi-agent systems (AAMAS 2013), pp. 1383–1384, 2013

- [C.31] N. Boscolo, Nicolás, R. De Battisti, M. Munaro, A. Farinelli, E. Pagello. A Distributed Kinodynamic Collision Avoidance System under ROS. In *Intelligent Autonomous Systems 12 (IAS)*, pp. 511-521, 2013.
- [C.32] F. Bistaffa, A. Farinelli, M. Vinyals, and A. Rogers. Decentralised stable coalition formation among energy consumers in the smart grid (demonstration). In *Proceedings of the 2012 international conference on Autonomous agents and multi-agent systems (AAMAS Demos)*, 2012, pp. 1461-1462.
- [C.33] F. M. Delle Fave, A. Farinelli, A. Rogers, and N. R. Jennings. A Methodology for Deploying the Max-Sum Algorithm and a Case Study on Unmanned Aerial Vehicles. In *Proceedings of the 24th Innovative Applications of Artificial Intelligence Conference (IAAI)*, Toronto, CA, 2275-2280, 2012.
- [C.34] M. Vinyals, F. Bistaffa, A. Farinelli, and A. Rogers. Coalitional energy purchasing in the smart grid. In *Energy Conference and Exhibition (ENERGYCON)*, 2012 IEEE International, Sep. 2012, pp. 848 -853.
- [C.35] L. Teacy, G. Chalkiadakis, A. Farinelli, A. Rogers, N. Jennings, G. Parr, S. McClean. Decentralized Bayesian Reinforcement Learning for Online Agent Collaboration. In *Proceedings of the 2012 international conference on Autonomous agents and multi-agent systems (AAMAS 2012)*, pp. 417-424, ISBN: 0-9817381-1-7, 2012.
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- [C.39] S. D. Ramchurn, M. Polukarov, A. Farinelli, C. Truong, N. R. Jennings. Coalition Formation with Spatial and Temporal Constraints. In *Proc. of The Ninth International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2010)*, pp. 1181-1188, May 2010, Toronto, Canada.
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- [C.41] A. Chapman, A. Farinelli, J. E. Munoz De Cote Flores Luna, A. Rogers and N. R. Jennings. A Distributed Algorithm for Optimising over Pure Strategy Nash Equilibria. In *Proc. of Twenty-Fourth AAAI Conference on Artificial Intelligence (AAAI 2010)*, pp. 749-755, July, 2010, Atlanta, Georgia, USA.
- [C.42] R. Stranders, A. Farinelli, A. Rogers, N. R. Jennings. Decentralised Coordination of Mobile Sensors Using the Max-Sum Algorithm. In *Proceedings of the 21st International Joint Conference on Artificial Intelligence (IJCAI)*, pp. 299-304, ISBN: 9781577354260, 2009.
- [C.43] R. Stranders, A. Farinelli, A. Rogers, N. R. Jennings. Decentralised Control of Continuously Valued Control Parameters using the Max-Sum Algorithm. In *Proceedings of 8th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2009)*, pp. 601-608, May 2009, Budapest.
- [C.44] G. P., Settembre, A. Farinelli, D. Nardi, R. Pigliacampo, M. Rossi. Solving disagreements in a Multi-Agent System performing Situation Assessment. In: *Proceedings of The International Conference on Information Fusion (IF-09)*, pp. 717-724, July, Seattle, WA, USA.
- [C.45] A. Farinelli, A. Rogers, A. Petcu, N. R. Jennings. Decentralised Coordination of Low-Power Embedded Devices Using the Max-Sum Algorithm. In *Proceedings of the 7th International Conferences on Autonomous and Agents and Multi Agent Systems (AAMAS)*, pp. 639-646, ISBN: 97809817381162008, 2008.
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- [C.51] L. Fanelli, A. Farinelli, L. Iocchi, D. Nardi, G. P. Settembre. Ontology-based Coalition Formation in Heterogeneous MRS. In *Proceedings of International Symposium on Practical Cognitive Agents and Robots*, pp 105–116, Perth, Australia, 2007.
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- [C.53] A. Farinelli, L. Iocchi, D. Nardi. Conflict Resolution with Minimal Communication Bandwidth. In *Proc. of IEEE Workshop on Distributed Intelligent Systems*, Prague. pp. 7–12, Los Alamitos California (USA), ISBN: 0-7695-2589-X 2006.
- [C.54] A. Farinelli, L. Iocchi, D. Nardi, and V. A. Ziparo. Task assignment with Dynamic Perception and Constrained Tasks in a Multi-Robot System. In *Proc. of the IEEE Int. Conf. on Robotics and Automation (ICRA 2005)*, pp. 1535–1540, Barcelona, Spain, ISBN:0-7803-8915-8 2005.
- [C.55] P. Scerri, A. Farinelli, S. Okamoto, and M. Tambe. Allocating Tasks in Extreme Teams. In *Proceedings of the 4th International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 05)*, pp. 727–734, Utrecht, Netherland, ISBN: 1-59593-093-0 2005.
- [C.56] D. Calisi, A. Farinelli, L. Iocchi, and D. Nardi. Autonomous navigation and exploration in a rescue environment. In *Proceedings of the IEEE International Workshop on Safety, Security and Rescue Robotics (SSRR 2005)*, Kobe, Japan, June 2005.
- [C.57] P. Scerri, A. Farinelli, S. Okamoto, and M. Tambe. Token Approach for Role Allocation in Extreme Teams: analysis and experimental evaluation. In *Proc. of 13th IEEE International Workshops on Enabling Technologies: Infrastructures for Collaborative Enterprises (WETICE-2004)*., pp. 397–402, Los Alamitos California (USA) ISBN: 0-7695-2183-5 2004.
- [C.58] F. Cottefogle, A. Farinelli, L. Iocchi, and D. Nardi. Dynamic token generation for constrained tasks in a Multi-Robot System. In *International Conference on Systems, Man and Cybernetics (SMC 2004)*, pp. 911–917, The Hague, The Netherlands, ISBN: 0-7803-8567-5 2004.
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- [C.60] A. Farinelli, G. Grisetti, and L. Iocchi. Spqr-rdk: a modular framework for programming mobile robots. In *RoboCup 2004: Robot Soccer World Cup VIII*, pp. 653–660. ISBN: 3-540-25046-8 Springer Verlag Berlin, Heidelberg 2005.
- [C.61] A. Farinelli, G. Grisetti, L. Iocchi, S. Lo Cascio, and D. Nardi. Design and Evaluation of Multi Agent Systems for Rescue Operations. In

Proc. of IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2003), pp. 3138–3143, Las Vegas, Nevada, ISBN:0-7803-7861-X (USA) 2003.

- [C.62] A. Farinelli, L. Iocchi, and D. Nardi. An Analysis of Coordination in Multi-Robot Systems. In *Proc. of IEEE Int. Conf. on Systems, Man and Cybernetics (SMC 2003)*, pp. 1487–1492, Washington D. C., (USA), ISBN:0-7803-7953-5 2003.
- [C.63] A. Farinelli and L. Iocchi. Planning trajectories in dynamic environments using a gradient method. In *RoboCup 2003: Robot Soccer World Cup VII*, pp. 320–331. Springer Verlag Berlin, Heidelberg, 2004.
- [C.64] A. Farinelli, G. Grisetti, L. Iocchi, S. Lo Cascio, and D. Nardi. Robocup rescue simulation: Methodologies, tools and evaluation for practical applications. In *RoboCup 2003: Robot Soccer World Cup VII*, Padua, Italy, pp. 645–652. Springer Verlag Berlin, Heidelberg, 2004.
- [C.65] F. D’Agostino, A. Farinelli, G. Grisetti, L. Iocchi, and D. Nardi. Monitoring and Information Fusion for Search and Rescue Operations in Large-Scale Disasters. In *Proceedings of IEEE International Conference Information Fusion (IF 2002)*, pp. 672–679, AnnaPolis, Maryland, (USA), ISBN:0-9721844-0-6 July 2002.

International Workshops (with peer review)

- [W.1] L. Steccanella, A., Farinelli, L., Iocchi, D., Nardi. Coloured Petri Net Plans for cooperative multi-robot systems. *CEUR Workshop Proceedings*, 1834, pp. 51-55, 2017.
- [W.2] L. Bottarelli, M., Bicego, J., Blum, N., Bombieri, A., Farinelli, L., Veggian. Orienteering-based path selection for mobile sensors. *CEUR Workshop Proceedings*, 1834, pp. 36-40, 2017.
- [W.3] A. Jeradi, M.M., Raeissi, A, Farinelli, N., Brooks, P., Scerri. Focused exploration for cooperative robotic watercraft. In *CEUR Workshop Proceedings*, vol. 1544, pp. 89–93, 2015.
- [W.4] A. Chapman, A. Farinelli, S. D. Ramchurn. Robust Distributed Constraint Optimization. In *International Joint Workshop on Optimisation in Multi-Agent Systems (OPTMAS 15)*, held in conjunction with AAMAS 2015.
- [W.5] J. Parker, A. Farinelli and M. Gini. Decentralized allocation of tasks with costs changing over time. In *Second Workshop on Synergies between Multiagent Systems, Machine Learning and Complex Systems (TRI 2015)*, held in conjunction with IJCAI 2015.
- [W.6] Marc Pujol-Gonzalez, Jesus Cerquides, Alessandro Farinelli, Pedro Meseguer and Juan Antonio Rodriguez Aguilar. Binary max-sum for multi-team task allocation in RoboCup Rescue. In *International Joint Workshop*

- on *Optimisation in Multi-Agent Systems and Distributed Constraint Reasoning (OPTMAS-DCR 14)*, May 5, 2014, Paris, France.
- [W.7] Filippo Bistaffa, Alessandro Farinelli, Jesús Cerquides, Juan A. Rodríguez-Aguilar and Sarvapali D. Ramchurn. Anytime Coalition Structure Generation on Scale-Free and Community Networks. In *International Joint Workshop on Optimisation in Multi-Agent Systems and Distributed Constraint Reasoning (OPTMAS-DCR 14)*, May 5, 2014, Paris, France.
- [W.8] Luca Iocchi, Alessandro Farinelli and Daniele Nardi. Distributed On-Line Coordination for Multi-Robot Patrolling. In *International Workshop on Autonomous Robots and Multirobot Systems (ARMS 14)* May 6, 2014, Paris, France.
- [W.9] M. Vinyals, F. Bistaffa, A. Farinelli, and A. Rogers. Stable coalition formation among energy consumers in the smart grid. Proceedings of the 3rd International Workshop on Agent Technologies for Energy Systems (ATES 2012)
- [W.10] K. Macarthur, M. Vinyals, A. Farinelli, S. Ramchurn, and N. R. Jennings. Decentralised Parallel Machine Scheduling for Multi-Agent Task Allocation. In *Fourth International Workshop on Optimisation in Multi-Agent Systems (OPTMAS 11)*, May 3, 2011, Taipei, Taiwan.
- [W.11] K. Macarthur, A. Farinelli, S. Ramchurn, N. R. Jennings. Efficient, Superstabilizing Decentralised Optimisation for Dynamic Task Allocation Environments. In *Proc. of International Workshop on: Optimisation in Multi-Agent Systems (OptMas)* at the Ninth Joint Conference on Autonomous and Multi-Agent Systems, 10 May 2010, Toronto, Canada. pp. 25-32.
- [W.12] A. Farinelli, A. Rogers, N. R. Jennings Bounded Approximate Decentralised Coordination using the Max-Sum Algorithm. In *In Proc. of IJCAI-09 Workshop on Distributed Constraint Reasoning (DCR)*, 13th July 2009, Pasadena, California, USA.
- [W.13] A. Farinelli, A. Rogers, N. R. Jennings. Maximising Sensor Network Efficiency Through Agent-Based Coordination of Sense/Sleep Schedules In *WEWSN 2008 Workshop on Energy in Wireless Sensor Networks* to be held in conjunction with DCOSS 2008, Santorini Island, Greece, June 2008.
- [W.14] A. Farinelli and P. Scerri. Low-overhead cooperative detection of false sensor readings. In *Proc. of AAMAS workshop: Challenges in the Coordination of Large Scale Multi-Agent Systems (LSMAS)*, pp. 11–16, Utrecht, July 2005.
- [W.15] S. Bahadori, D. Calisi, A. Censi, A. Farinelli, G. Grisetti, L. Iocchi, and D. Nardi. Intelligent systems for search and rescue. In *Proc. of IROS Workshop "Urban search and rescue: from Robocup to real world applications"*, 2004.
- [W.16] A. Farinelli, P. Scerri, and M. Tambe. Building large-scale robot systems: Distributed role assignment in dynamic, uncertain domains. In *Representation and approaches for time-critical decentralized resources/role/task allocation (AAMAS WorkShop)*, 2003.

- [W.17] A. Farinelli, G. Grisetti, L. Iocchi, and D. Nardi. Coordination in dynamic environments with constraint on resources. In *IROS Workshop on Cooperative Robotics*, Lausanne, Switzerland, October 2002.
- [W.18] A. Farinelli, G. Grisetti, L. Iocchi, D. Nardi, and R. Rosati. Generation and execution of partially correct plans in dynamic environments. In *Proc. of 3rd Int. Cognitive Robotics Workshop (COGROB'02)*, Edmonton, Canada, 2002.

Seminars and Presentations

Tutorials

- [T.1] Distributed Constraint Optimization in Multi-Agent Systems Dipartimento di Ingegneria informatica automatica e gestionale Antonio Ruberti, Sapienza Università di Roma. Two lessons, two hours each, PhD course on “Competition and Cooperation in Multi-Agent Systems” course organizers: Stefano Leonardi and Luca Iocchi.
- [T.2] Distributed search and constraint handling two lessons, two hours each, offered for the summer school EASSS 2012 (European Agent Systems Summer School). Tutors: Alessandro Farinelli, Alex Rogers, Meritxell Vinyals. June 2012, Valencia, Spain.
- [T.3] Team Coordination in Multiagent Systems one lesson, two hours, offered for the workshop: Austrian Robotics Workshop. Tutor: Alessandro Farinelli. May 2012, Graz, Austria.
- [T.4] Optimization in Multi Agent Systems Full day tutorial offered at IJCAI 11 (four sessions, two hours each). Tutors: Alessandro Farinelli, Jesús Cerquides, Sarvapali D. Ramchurn, Pedro Meseguer, Juan A. Rodriguez-Aguilar. July 2011, Barcelona, Spain.

Seminars

- [S.1] Recent advances on optimization approaches for joint decision making in Multi-Agent Systems, Università degli Studi di Padova, Padova, Italy, 2014.
- [S.2] A Graphical Model Approach to Decentralized Coordination for Robotic Agents, Institute for Systems and Robotics (ISR) Lisbon, Portugal, 2012.
- [S.3] Agent Coordination Using the Max-Sum Algorithm, Istituto Italiano di Tecnologia (IIT), Genova, Italy, 2011.
- [S.4] Agent Coordination Using the Max-Sum Algorithm, Università degli Studi di Padova, Padova, Italy, 2011.
- [S.5] Factored Decentralised Coordination of embedded Agents, Università degli studi di Sevilla, Sevilla, Spain, 2010.

- [S.6] Decentralised Coordination Using the Max-Sum Algorithm, University of Southern California (USC), Los Angeles, U.S., 2009.
- [S.7] Decentralised Coordination of Low-Power Embedded Devices Using the Max-Sum Algorithm, Southampton University, Science and Engineering of Natural Systems, Southampton, 2008.
- [S.8] Distributed Coordination for Robotic Agents, University of Birmingham, Artificial Intelligence and Natural Computation Seminar, Birmingham, 2008.
- [S.9] Cooperative Behaviors Using Local Interactions, Università La Sapienza di Roma, Dipartimento di Informatica e Sistemistica, Roma, 2007.
- [S.10] Token Passing approach to Task Assignment, Southampton University, Intelligence, Agents and Multimedia group, Agent seminars, Southampton, 2007.
- [S.11] Design, Development and Evaluation of Coordinated Multi-Robot Systems, Università Federico II, Dipartimento di Scienze Matematiche Fisiche e Naturali, Napoli, 2007.
- [S.12] Tool per il coordinamento di sistemi multi-agente, Selex Sistemi Integrati, Roma, 2007.
- [S.13] Distributed Task Assignment for Real World Environment, Dagstuhl Seminars, Multi-Robot Systems: Perception, Behaviors, Learning, and Action, Dagstuhl, N. 06251,19.06.-23.06.06, 2006.

Software and Prototype development

- 2013 Development of a benchmark for coordination algorithms based on the RoboCup Rescue simulator. The benchmark provides Abstract Programming Interface (API) for developing coordination algorithms based on the Distributed Constraint Optimization Problem (DCOP) framework and provides the implementation of a number of state-of-the-art coordination approaches (e.g., DSA, Max-Sum). The framework was used for the RoboCup competitions as well as a tool for teaching and research. Main developers: Marc Pujol, Fabio Maffioletti, Riccardo Reffato. Supervisor: Alessandro Farinelli. Code available on github (<https://github.com/RMASBench/RMASBench>)
- 2011 Development of a java library for the max-sum algorithm. The library provides the main functionalities to implement the max-sum algorithm on factor graphs and is designed to be easily extended for the implementation of other Generalized Distributive Law approaches (e.g., max-product, min-max, etc.). Main developer: Michele Roncalli, Filippo Bistaffa. Supervisor: Alessandro Farinelli. Code available on google code (<https://github.com/mr2c12/jmaxsum>)

- 2008 Development of the demonstrator “Max-Sum Decentralised Coordination for Sensor Systems”, main developers: W. T. L. Teacy, A. Farinelli, N. J. Grabham, P. Padhy, A. Rogers, N. R. Jennings, Presented at AAMAS 2008 in the Industrial Software Demo session. Development of the max-sum algorithm on a Chipcon CC24310 computational board.
- 2008 Development of the demonstrator: “Agent-Based Coordination Technologies in Disaster Management”, main developers: Sarvapali D. Ramchurn, Alex Rogers, Kathryn Macarthur, Alessandro Farinelli, Perukrishnen Vytelingum, Ioannis Vetsikas, Nicholas. R. Jennings, Presented at AAMAS 2008 in the Academic Software Demo session. Framework for simulating emergency scenarios based on the RoboCup Rescue simulator.
- 2006 Teacher and organizer of the hands-on lab: “Communication, Coordination, and Sensor Models in USARSim” held at the Rescue Robotic Camp
Teachers and organizers: Stephen Balakirsky, Stefano Carpin, Alessandro Farinelli. Development of a framework for coordinated exploration with a multi-robot system. The framework allows coordination between real and simulated robots in the UsarSim environment. The framework was used by students to build a coordinated exploration strategy that has been used and evaluated in a standard environment developed by NIST¹.
- 2006 Team Leader for the Rescue Virtual Team SPQR. Participation to the RoboCup competitions in Brema, Germany. Development of a virtual multi-robot system, for semi-autonomous exploration of dangerous environments. Team members: Daniele Calisi, Luigi Fanelli, Stefano LaCesa, Gian Diego Tipaldi, Marco Zaratti.
- 2005 Teacher and organizer of the hands-on lab on Multi-Robot System held at the Rescue Robotic Camp.
Lab organizers: Alessandro Farinelli, Alberto Ingenito. Development of a framework for coordinated exploration in a simulated environment. The framework is based on Player/Stage, and it was used by the students to build a coordinated exploration strategy.
- 2002-2006 Design and development of the Robot Development tooKit (RDK) main developers: Giorgio Grisetti, Alessandro Farinelli, Luca Iocchi. Software framework for programming mobile robots. The framework was used in several activities and research projects of the SIED lab.
- 2003 Developer of the Machinetta framework, main developer: Paul Scerri. Machinetta is a generic coordination framework

¹National Institute of Standards and Technologies

for intelligent agents. It was used as a basic building block in several research project and demos.

- 2002 Development of a simulation environment to test and evaluate role assignment in robotic soccer. The simulator was used in the lab sessions for the summer school on Cooperative Robotics, Lisbon.
- 2001 Development of a path-planner system for mobile robots. The path-planner was used by the SPQR middle-size robot team during the RoboCup competition in Seattle, Washington. Team leader: Luca Iocchi.

ACTIVITY AS SUPERVISOR

PhD Students

- 2014–present Masoume M. Raeissi. Thesis subject: "Human Robot Interaction via Team Oriented Plans". (PhD cycle XXX).
- 2015–present Lorenzo Bottarelli. Thesis subject: "Informative path planning for mobile sensors in environmental monitoring scenarios". (PhD Cycle XXXI).
- 2016–present Riccardo Sarteà. Thesis subject: "Agent-based technologies for cyber security". (PhD cycle XXXII).

Alumni

- 2013–2015 Filippo Bistaffa. Thesis title: "Constraint Optimisation Techniques for Real-World Applications". (PhD Cycle XXVIII). Winner of a Marie Curie grant, title: *Collectiveware: Highly-parallel algorithms for collective intelligence* (Grant N. 751608); host institution: *Artificial Intelligence Research Institute (IIIA-CSIC)*, start date: 16 June 2017, duration 24 months. The PhD thesis of Filippo Bistaffa was awarded the AIxIA honorable mention in 2017.

ACTIVITY AS EDITOR AND REVIEWER

Editor

- Guest Editor Special issue of the International Journal of Autonomous Agents and Multi-Agent Systems (Vol. 22(3) - 2011), special issue title: Optimization in Multi-Agent Systems.

Organization of Workshops and Scientific events

- 2017-2018 Co-chair of the demonstration track at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2018); Co-chair: Iolanda Leite.
- Nov. 2017 Co-organizer for the workshop AIRO-17: Artificial Intelligence and Robotics, co-located with the AIxIA 2017 conference (Associazione Italiana per Intelligenza Artificiale). Co-organizers: Alberto Finzi, Fulvio Mastrogiovanni, Salvatore Anzalone.
- 2016-2017 Co-chair of the robotics track at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2017); Co-chair: Chris Amato.
- Nov. 2016 Co-organizer for the workshop AIRO-16: Artificial Intelligence and Robotics, co-located with the AIxIA 2016 conference (Associazione Italiana per Intelligenza Artificiale). Co-organizers: Alberto Finzi, Fulvio Mastrogiovanni.
- May 2016 Co-organizer for the workshop ARMS16: Autonomous Robots and Multi-Robot Systems co-located with the International Conference on Autonomous Agents and Multi-Agent systems (AAMAS 16). Co-organizers: G. Kaminka, K. Hindriks, N. Agmon, Manuela Veloso, Maria Gini, Daniele Nardi, Pedro Lima, Erol Sahin.
- May 2015 Co-organizer for the workshop ARMS15: Autonomous Robots and Multi-Robot Systems co-located with the International Conference on Autonomous Agents and Multi-Agent systems (AAMAS 15). Co-organizers: G. Kaminka, K. Hindriks, N. Agmon, Manuela Veloso, Maria Gini, Daniele Nardi, Pedro Lima, Erol Sahin.
- 2016-2015 Co-chair of the robotics track at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2015); Co-chair: Gal Kaminka.
- May 2014 Mentor for the Doctoral Symposium at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2014)
- May 2014 Co-organizer for the workshop ARMS14: Autonomous Robots and Multi-Robot Systems co-located with the International Conference on Autonomous Agents and Multi-Agent systems (AAMAS 14). Co-organizers: G. Kaminka, K. Hindriks, N. Agmon, Manuela Veloso, Maria Gini, Daniele Nardi, Pedro Lima, Erol Sahin.
- 2012-2013 Exhibition Chair for the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2013).

June 2013	Co-organizer for the workshop OPTMAS13: Optimisation in Multi-Agent Systems co-located with the International Conference on Autonomous Agents and Multi-Agent systems (AAMAS 13). Co-organizers: J.C. Bueno, J.A. Aguilar-Rodriguez, A. Chapman, S. Ramchurn, M. Vinyals.
June 2013	Co-organizer for the workshop ARMS13: Autonomous Robots and Multi-Robot Systems co-located with the International Conference on Autonomous Agents and Multi-Agent systems (AAMAS 13). Co-organizers: G. Kaminka, K. Hindriks, J. Boerkoel, N. Agmon.
June 2012	Co-organizer for the workshop OPTMAS12: Optimisation in Multi-Agent Systems co-located with the International Conference on Autonomous Agents and Multi-Agent systems (AAMAS 12). Co-organizers: J.C. Bueno, J.A. Aguilar-Rodriguez, S. Ramchurn, M. Vinyals.
June 2011	Co-organizer for the workshop OPTMAS11: Optimisation in Multi-Agent Systems co-located with the International Conference on Autonomous Agents and Multi-Agent systems (AAMAS 11). Co-organizers: J.C. Bueno, J.A. Aguilar-Rodriguez, S. Ramchurn.
May 2010	Co-organizer for the workshop OPTMAS10: Optimisation in Multi-Agent Systems co-located with the International Conference on Autonomous Agents and Multi-Agent systems (AAMAS 10). Co-organizers: J.C. Bueno, J.A. Aguilar-Rodriguez, S. Ramchurn.
May 2009	Co-organizer for the workshop OPTMAS09: Optimisation in Multi-Agent Systems co-located with the International Conference on Autonomous Agents and Multi-Agent systems (AAMAS 09). Co-organizers: J.C. Bueno, J.A. Aguilar-Rodriguez, S. Ramchurn.
May 2009	Co-organizer for the workshop ADAPT: Agent Design: Advancing from Theory to Practice co-located with the International Conference on Autonomous Agents and Multi-Agent systems (AAMAS 09). Co-organizers: N. Schurr, R. Maheswaran,
2006–2007	Member of the technical committee for the organization of the RoboCup Rescue Virtual Robot competitions

Programme Committee and Reviewing

- Senior Programme Committee for the International Joint conference on Artificial Intelligence (IJCAI 2017).
- Senior Programme Committee for the International Joint conference on Artificial Intelligence (IJCAI 2016).

- Senior Programme Committee for the European Conference on Artificial Intelligence (ECAI 2016).
- Senior Programme Committee for the International Joint conference on Artificial Intelligence (IJCAI 2015).
- Senior Programme Committee for the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2014).
- Associate Editor for the International Conference IEEE/RSJ Intelligent Robots and Systems (IROS 2012, 2013).
- Programme Committee for international conferences:
 - Autonomous Agent and Multi Agent Systems (AAMAS 2008, 2009, 2010, 2011, 2012, 2013, 2017, 2018);
 - International Joint Conference on artificial Intelligence (IJCAI, 2011, 2013);
 - National Conference on Artificial Intelligence (AAAI 2010, 2012, 2013, 2014, 2018);
 - International Conference on Agents and Artificial Intelligence (ICAART 2011,2012,2013);
 - IEEE International Symposium on Safety, Security, and Rescue Robotics (SSRR 2008, 2009, 2010, 2011, 2012, 2013).
 - European Conference on Artificial Intelligence (2014)
 - Intelligent Autonomous Systems (2013, 2014)
- Reviewer for international journals
 - Artificial Intelligence Journal;
 - International Journal of Artificial Intelligence Research;
 - International Journal of Autonomous Agents and Multi-Agent Systems;
 - IEEE transaction on System, Man and Cybernetics (part A,C);
 - International Journal on Multi-Sensor, Multi-Source Information Fusion;
 - AI Communications;
 - Expert Systems;
 - Advances in Complex Systems;
 - IEEE Transactions on Robotics;
 - Computer Journal.
- Reviewer for several international conferences and workshops (e.g., AAMAS, IJCAI, AAAI, IROS, ICRA).

Expert evaluator for research projects

- Netherlands Organisation for Scientific Research (NWO)
- Israel Science Foundation