Alessandro Farinelli

Curriculum Vitae

Personal Data

Date of Birth: 18 June, 1976
Current Position: Full Professor, SSD: INF/01
Institution: Università degli Studi di Verona, Dipartimento di Informatica (Computer Science Department)

Contacts

Office: +39-045-802-7842
Email: alessandro.farinelli@univr.it
Home page: `https://www.di.univr.it/?ent=persona&id=6499`

Abstract

Alessandro Farinelli is full professor at University of Verona and Head of the Computer Science Department.

His research interests focus on developing novel methodologies for Artificial Intelligence systems applied to robotics. In particular, he focuses on multi-agent coordination, decentralized optimization, reinforcement learning and data analysis for cyber-physical systems.

Alessandro Farinelli was principal investigator for several national and international research projects in the broad area of Artificial Intelligence. His research contributions target mainly international journals in the area of Artificial Intelligence (e.g., Artificial Intelligence journal and Journal of Artificial Intelligence Research) and Autonomous Robotic Systems (Autonomous Robots and Robotics and Autonomous Systems). The main scientific conferences he contributes to (both as organizer and speaker) include the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS), the International Joint Conference on Artificial Intelligence (IJCAI) and the International Conference on Intelligent Robots and Systems (IROS).

Education and Career

Career

2021- Head of Computer Science Department, University of Verona.

2019-	Full Professor at Computer Science Department, University of Verona, SSD INF/01.
2014–2019	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, Universita' di Roma *La Sapienza* on the project *An integrated framework for situation assessment and task assignment in real rescue scenarios.* Post-Doc Supervisor: Prof. Daniele Nardi; Period April 2005–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 scolarship 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.

Research Activity

Awards

2023	*Nomination as best paper* for the 22nd International Conference on Autonomous Agents and Multi-Agent Systems

(AAMAS) 2023, London, UK, Paper title: "Learning Logic Specifications for Soft Policy Guidance in POMCP", Mazzi G., Meli D., Castellini A., Farinelli A.

2018 *Nomination as best paper* for the 15th International Conference on Intelligent Autonomous Systems, Baden-Baden, Germany, Paper title: "Deep Learning Waterline Detection for Low-cost Autonomous Boats", Steccanella L., Bloisi D., Blum J., Farinelli A.

2018 *Best poster* for the 33rd ACM Sysmposium on Applied Computing (SAC), Pau, France, Poster title: "Unsupervised Activity Recognition for Autonomous Water Drones", Castellini A., Beltrame G., Bicego M., Blum J., Denitto M., Farinelli A.

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", Farinelli, A., Marchi, N., Raeissi, M. M., Brooks, N., Scerri, P.

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" Teacy W. T. L., Farinelli A., Grabham N. J., Padhy P., Rogers A., Jennings N. R.

2007 winner of the RoboCup Rescue Infrastructure competition with the Aladdin Rescue team, University of Southampton UK. Team Members: Farinelli A., Ramchurn S. D., Vytelingum P., Vetsikas I.

Research Projects – Principal Investigator

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

2024-2025 Title: Learning Safe Behaviours for human-robot cooperation (BEHAVE); Funded by: MUR (Ministero dell'Università e della Ricerca, FAIR Cacade Funding); Project Duration: 12 months; Role: PI, €200K.

2024-2027 Title: Development of technologies based on Artificial Intelligence methods for the controlled release of petide-based drugs (Sviluppo di tecnologie basate su metodi di Intelligenza Artificiale per il rilascio controllato di farmaci a base peptidica.) (DigiSprayDrying); Funded by: MIMIT (Ministero dell'Industria e del Made in Italy); Project Duration: 36 months; Role: PI for the University of Verona research unit, €300K. The project funds two research fellowship positions (AdR) for 36 months each.

2020-2021 Title: Intelligent Heating Control based on Reinforcement Learning Techniques; Funded by: University of Verona (Joint projects, cooperation scheme with industrial partners), Industrial partner: Giordano controls s.p.a.; Project Duration: 12 months; Role: PI €160K (University contribution: €80K). The project funded one research contract position (BdR) for 12 months and two research contract positions (BdR) for 6 months.

2017-2018 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). The project funded one research fellowship position (AdR, INF/01) for 12 months, one research contract position (BdR) for 5 months.

2016-2020 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, three 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.

2013-2014 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

2023-2024 Title: Comparative analysis of solutions based on evolutionary algorithms for generalized and multi-objective VRP, within the project AIDESS (L.P. n. 6 del 1999 della Provincia di Trento); Funded by: HPA S.p.A.; Role: Principal Investigator, €20K. The project funded one research scolarship positions (BdR) for 8 months.

2022-2023 Title: Development of Artificial Intelligence methods to support insurance policy sales; Funded by: REVO Insurance

S.p.A.; Role: Principal Investigator, €63K. The project funded two research scolarship positions (BdR) for 11 months each.

2017-2018 Title: Data analysis and high level control for autonomous water drones (Analisi dei dati e controllo di alto livello per droni acquatici autonomi;); Partially Funded by: Computer Science Department, University of Verona, 2017; Role: Principal Investigator, €23.5 K (Department contribution €7.936 K). The project funded one research fellowship position (AdR, INF/01) for 12 months.

2016-2017 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, 2016; Role: Principal Investigator, €23.5 K (Department contribution €11.75 K). The project funded one research fellowship position (AdR, INF/01) for 12 months.

2015-2016 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.

2012-2013 Title: RMASBench: Benchmarking Dynamic Multi-Agent Coordination in Urban Search and Rescue; Together with Linkoeping 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.

2011-2012 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, 2011; Role: Principal Investigator, €19 K. The project funded one research fellowship position (AdR, ING-INF/05) for 12 months.

2005-2007 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

2019-2020 Title: ROS-based design and synthesis of monitors for semi-formal verification of robotics applications; Funded by: Istituto Nazionale di Alta Matematica (INdAM); Role: super-

visor for the development of multi-robot coordination techniques;
Project duration: 12 months.

2019-2020 Title: Model-Based Design and Verification Flow for Embedded Vision Applications; Funded by: Istituto Nazionale di Alta Matematica (INdAM); Role: supervisor for the development of Simultaneous Localization And Mapping (SLAM) techniques that can operate on low-power embedded devices;
Project duration: 12 months.

2018-2022 Title: Computer Engineering for Industry 4.0; Funded by: Ministero dell'Istruzione dell'Università e della Ricerca (MIUR), Dipartimenti di Eccellenza; Role: co-supervisor (together with Paolo Fiorini) for the activities related to the development of intelligent robotic systems for Industry 4.0 (Enabling Technology 1: Advanced Manufacturing Solutions);
Project duration: 60 months.

2017-2020 Title: Global House Thermal & Electrical Energy Management (GHOTEM); funded by: Regione Veneto (POR - Obiettivo "Incremento dell'attività di innovazione delle imprese" Parte FESR fondo europeo di sviluppo regionale 2014-2020); Role: supervisor for one research fellow position (AdR, 12 months) on topics related to the development of data analysis methods and Artificial Intelligence approaches for energy management in the smart grid;
Project duration: 36 months.

2017-2020 Title: "Riposizionamento Competitivo della filiera del legno" (COREWOOD); funded by: Regione Veneto (POR - Obiettivo "Incremento dell'attività di innovazione delle imprese" Parte FESR fondo europeo di sviluppo regionale 2014-2020); Role: supervisor for one research fellow position (AdR, 18 months) on topics related to the development of data analysis methods and Artificial Intelligence approaches for energy management in smart buildings;
Project duration: 36 months.

2016-2018 Title: EXPO-AGRI: EXtra-field Plant Observation for monitoring and forecast of agricultural infections; Funded by: Regione Veneto (Fondo Sociale Europeo); Role: research manager for the AI activities;
Project duration: 24 months.

2008-2009 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); Role: development of decentralized optimization techniques for coordinating low-power devices;
Project duration: 30 months.

2005-2009	Title: Market Based Control of Complex Computational Systems Funded by: EPSRC (Engineering and Physical Sciences Research Council - EPSRC Reference GR/T10664/01); Role: development of decentralized constraint optimization techniques for multi-agent system coordination; Project Duration: 60 months.
2003-2005	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); Role: development of coordination approaches for multi-robot system operating in rescue scenarios; Project duration: 24 months.
2003-2006	Title: RoboCare Funded by: MIUR (2002); Role: development of path planning techniques for service robots; 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

Delft, NL	Delft University of Technology, The Netherlands. Main collaborator: Matthijs Spaan
Chania, GR	Collaboration with Technical University of Crete (TUC). Main collaborator: Prof. Georgios Chalkiadakis.
USRA, US	Research agreement with Universities Space Research Association (USRA) for the use of quantum machines (the D-Wave). Main Collaborator: Dr. Davide Venturelli.
Barcelona, ES	IIIA-CSIC, Main collaborators: Dr. Juan-Antonio Rodriguez Aguilar, Dr. Jesus Cerquides Bueno, Dr. Pedro Meseguer.
Bar Ilan, IL	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, IT	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, IT	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 April 2026)

	Google Scholar	Scopus
Number of publications	339	205
H-index	42	30
Number of citations	7204	3915

Publications

For international journals the classification according to Scimago[1] is reported, indicating also the subject category. The reported classification refers to the year of publication. For the publications of 2026 the last available data is reported (i.e., 2025).

International Journals

[J.1] Marzari, L., Leofante, F., Cicalese, F., Farinelli, A.. Probabilistically robust counterfactual explanations under model changes (2026) *Artificial Intelligence*; **(Q1, Artificial Intelligence, 2024)**; doi: 10.1016/j.artint.2025.104459

[1] `https://www.scimagojr.com/`

[J.2] Marzari, Luca, Trotti, Francesco, Marchesini, Enrico, Farinelli, Alessandro. Designing Control Barrier Function via Probabilistic Enumeration for Safe Reinforcement Learning Navigation (2025) *IEEE Robotics and Automation Letters*; **(Q1, Artificial Intelligence, 2024)**; doi: 10.1109/LRA.2025.3596431

[J.3] Bianchi, F., Castellini, A., Zorzi, E., Simão, T., Spaan, M., Farinelli, A.. Scaling Safe Policy Improvement: Monte Carlo Tree Search and Policy Iteration Strategies (2025) *Journal of Artificial Intelligence Research*; **(Q1, Artificial Intelligence, 2024)**; doi: 10.1613/jair.1.19649

[J.4] Marzari, L., Cicalese, F., Farinelli, A., Amato, C., Marchesini, E.. Verifying Online Safety Properties for Safe Deep Reinforcement Learning (2025) *ACM Transactions on Intelligent Systems and Technology*; **(Q1, Artificial Intelligence, 2024)**; doi: 10.1145/3770068

[J.5] Zhalehmehrabi, A., Meli, D., Dal Santo, F., Trotti, F., Farinelli, A.. Depth-Constrained ASV Navigation With Deep RL and Limited Sensing (2025) *IEEE Robotics and Automation Letters*; **(Q1, Artificial Intelligence, 2024)**; doi: 10.1109/LRA.2025.3625520

[J.6] Marzari, L., Cicalese, F., Farinelli, A.. Probabilistically Tightened Linear Relaxation-based Perturbation Analysis for Neural Network Verification (2025) *Journal of Artificial Intelligence Research*; **(Q1, Artificial Intelligence, 2024)**; doi: 10.1613/jair.1.20808

[J.7] Taioli, F., Giuliari, F., Wang, Y., Berra, R., Castellini, A., Bue, A., Farinelli, A., Cristani, M., Setti, F.. Unsupervised Active Visual Search With Monte Carlo Planning Under Uncertain Detections (2024) *IEEE Transactions on Pattern Analysis and Machine Intelligence*; **(Q1, Artificial Intelligence, 2024)**; doi: 10.1109/TPAMI.2024.3451994

[J.8] Zuccotto, M., Castellini, A., Torre, D., Mola, L., Farinelli, A.. Reinforcement learning applications in environmental sustainability: a review (2024) *Artificial Intelligence Review*; **(Q1, Artificial Intelligence, 2024)**; doi: 10.1007/s10462-024-10706-5

[J.9] Meli, D., Castellini, A., Farinelli, A. Learning Logic Specifications for Policy Guidance in POMDPs: an Inductive Logic Programming Approach (2024) *Journal of Artificial Intelligence Research*; **(Q1, Artificial Intelligence)**; doi: 10.1613/jair.1.15826

[J.10] Fenoy, A., Bistaffa, F., Farinelli, A. An attention model for the formation of collectives in real-world domains (2024) *Artificial Intelligence* **(Q1, Artificial Intelligence)**; doi: 10.1016/j.artint.2023.104064.

[J.11] Castellini, A., Masillo, F., Azzalini, D., Amigoni, F., Farinelli, A. Adversarial Data Augmentation for HMM-Based Anomaly Detection (2023) *IEEE Transactions on Pattern Analysis and Machine Intelligence* **(Q1, Artificial Intelligence)**, 45(12), 2023, 10.1109/TPAMI.2023.3303099.

[J.12] Mazzi, G., Castellini, A., Farinelli, A. Risk-aware shielding of Partially Observable Monte Carlo Planning policies (2023) *Artificial Intelligence* **(Q1, Artificial Intelligence)**, 324, 2023, doi: 10.1016/j.artint.2023.103987.

[J.13] Zuccotto, M, Piccinelli, M., Castellini, A., Marchesini, E., Farinelli, A. Learning State-Variable Relationships in POMCP: A Framework for Mobile Robots. (2022) *Frontiers in Robotics and AI* **(Q2, Artificial Intelligence)**, 2022, doi: 10.3389/frobt.2022.819107.

[J.14] Castellini, A., Bianchi, F., Farinelli, A. Generation and interpretation of parsimonious predictive models for load forecasting in smart heating networks (2022) *Applied Intelligence* **(Q2, Artificial Intelligence)**, 52(9), 2022, doi: 10.1007/s10489-021-02949-4.

[J.15] Bistaffa, F., Chalkiadakis, G., Farinelli, A. Efficient Coalition Structure Generation via Approximately Equivalent Induced Subgraph Games (2022) *IEEE Transactions on Cybernetics* **(Q1, Computer Science Applications)**, 52(6), 2022, doi: 10.1109/TCYB.2020.3040622.

[J.16] Bistaffa, F., Blum, C., Cerquides, J., Farinelli, A., Rodriguez-Aguilar, J.A. A Computational Approach to Quantify the Benefits of Ridesharing for Policy Makers and Travellers (2021) *IEEE Transactions on Intelligent Transportation Systems* **(Q1, Computer Science Applications)**, 22 (1), art. no. 8917688, pp. 119-130, doi: 10.1109/TITS.2019.2954982.

[J.17] Denitto, M., Bicego, M., Farinelli, A., Vascon, S., Pelillo, M. Biclustering with dominant sets (2020) *Pattern Recognition* **(Q1, Artificial Intelligence)**, 104, art. no. 107318, doi: 10.1016/j.patcog.2020.107318.

[J.18] Castellini, A., Bicego, M., Masillo, F., Zuccotto, M., Farinelli, A. Time series segmentation for state-model generation of autonomous aquatic drones: A systematic framework (2020) *Engineering Applications of Artificial Intelligence* **(Q1, Artificial Intelligence)**, 90, art. no. 103499, doi: 10.1016/j.engappai.2020.103499.

[J.19] Steccanella, L., Bloisi, D.D., Castellini, A., Farinelli, A. Waterline and obstacle detection in images from low-cost autonomous boats for environmental monitoring (2020) *Robotics and Autonomous Systems* **(Q1, Computer Science Applications)**, 124, art. no. 103346, doi: 10.1016/j.robot.2019.103346.

[J.20] Sartea, R., Farinelli, A., Murari, M. SECUR-AMA: Active Malware Analysis Based on Monte Carlo Tree Search for Android Systems (2020) *Engineering Applications of Artificial Intelligence* **(Q1, Artificial Intelligence)**, 87, art. no. 103303, doi: 10.1016/j.engappai.2019.103303.

[J.21] Raeissi, M. M., Farinelli, A. Cooperative Queuing Policies for Effective Scheduling of Operator Intervention. *Autonomous Robots* **(Q1, Artificial Intelligence)**, 44 (3-4)(first online: 15 July 2019), pp. 617-626, ISSN: 0929-5593, 2020, doi:10.1007/s10514-019-09877-w .

[J.22] Bottarelli, L., Bicego, M., Blum, J., Farinelli, A. Orienteering-based informative path planning for environmental monitoring. *Engineering Applications of Artificial Intelligence* **(Q1, Artificial Intelligence)**, 77, pp. 46-58, ISSN: 0952-1976, 2019, doi:10.1016/j.engappai.2018.09.015

[J.23] Bistaffa, F., Farinelli, A. A COP model for graph-constrained coalition formation. *Journal of Artificial Intelligence Research* **(Q1, Artificial Intelligence)**, 62, pp. 133-153, ISSN: 1076-9757, 2018, doi:10.1613/jair.1.11205

[J.24] Yedidsion, H., Zivan, R., Farinelli, A. Applying max-sum to teams of mobile sensing agents. *Engineering Applications of Artificial Intelligence* **(Q1, Artificial Intelligence)**, 71, pp. 87-99, ISSN: 0952-1976, 2018, doi:10.1016/j.engappai.2018.02.017

[J.25] Bottarelli, L., Bicego, M., Denitto, M., Di Pierro, A., Farinelli, A., Mengoni, R. Biclustering with a quantum annealer. *Soft Computing* **(Q2, Theoretical Computer Science)**, 22 (18), pp. 6247-6260, ISSN: 1432-7643, 2018, doi:10.1007/s00500-018-3034-z

[J.26] Parker, J., Farinelli, A., Gini, M. Lazy max-sum for allocation of tasks with growing costs. *Robotics and Autonomous Systems* **(Q1, Computer Science Applications)**, 110, pp. 44-56, ISSN: 0921-8890, 2018, doi:10.1016/j.robot.2018.08.015

[J.27] Bicego, M., Farinelli, A., Grosso, E., Paolini, D., Ramchurn, S. D. On the distinctiveness of the electricity load profile. *Pattern Recognition*, **(Q1, Artificial Intelligence)**, 74, pp. 317-325, ISSN: 0031-3203, 2018, doi:10.1016/j.patcog.2017.09.039

[J.28] Denitto, M., Farinelli, A., Figueiredo, M. A. T., Bicego, M. A biclustering approach based on factor graphs and the max-sum algorithm. *Pattern Recognition* **(Q1, Artificial Intelligence)**, 62, pp. 114-124, ISSN: 0031-3203, 2017, doi:10.1016/j.patcog.2016.08.033

[J.29] Bistaffa, F., Farinelli, A., Chalkiadakis, G., Ramchurn, S. D. A cooperative game-theoretic approach to the social ridesharing problem. *Artificial Intelligence* **(Q1, Artificial Intelligence)**, 246, pp. 86-117, ISSN: 0004-3702, 2017, doi:10.1016/j.artint.2017.02.004

[J.30] 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* **(Q1, Artificial Intelligence)**, 59, pp. 170-185, ISSN: 0952-1976, 2017, doi:10.1016/j.engappai.2016.12.018

[J.31] A. Farinelli, N. Boscolo, E. Zanotto, E. Pagello. Advanced approaches for multi-robot coordination in logistic scenarios. *Robotics and Autonomous Systems* **(Q1, Artificial Intelligence)**, 90, pp. 34-44, ISSN: 0921-8890, 2017, doi:10.1016/j.robot.2016.08.010

[J.32] F., Lezama, J., Palominos, A.Y., Rodríguez-González, A., Farinelli, E., Munoz de Cote. Agent-Based Microgrid Scheduling: An ICT Perspective. *Mobile Networks and Applications* **(Q1, Computer Networks and Communications)**, pp. 1-17, ISSN: 1383-469X, 2017, doi:10.1007/s11036-017-0894-x.

[J.33] F. Bistaffa, A. Farinelli, J. Cerquides, J. Rodŕiguez-Aguilar, S. D. Ramchurn. Algorithms for graph-constrained coalition formation in the real world. *ACM Transactions on Intelligent Systems and Technology* **(Q1, Artificial Intelligence)**, 8 (4), art. no. 60, pp. 1-24, ISSN: 2157-6904, 2017, doi:10.1145/3040967

[J.34] F. Bistaffa, N. Bombieri, A. Farinelli. An Efficient Approach for Accelerating Bucket Elimination on GPUs. *IEEE Transactions on Cybernetics* **(Q1, Computer Science Applications)**, 47 (11), pp. 3967-3979, ISSN: 2168-2267, 2017, doi:10.1109/TCYB.2016.2593773

[J.35] 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* **(Q1, Computer Networks and Communications)**, pp. 1-9, ISSN:1383-469X, 2017, doi:10.1007/s11036-017-0893-y.

[J.36] A. Farinelli, L. Iocchi, D. Nardi. Distributed on-line dynamic task assignment for multi-robot patrolling. *Autonomous Robots* **(Q1, Artificial Intelligence)**, 41 (6), pp. 1321-1345, ISSN: 0929-5593, 2017, doi:10.1007/s10514-016-9579-8

[J.37] 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* **(Q2, Artificial Intelligence)**, 31 (2), pp. 332-361, ISSN: 1387-2532, 2017, doi:10.1007/s10458-016-9344-6

[J.38] M. Denitto, M., Bicego, A., Farinelli, M.A.T., Figueiredo. Spike and slab biclustering. *Pattern Recognition* **(Q1, Artificial Intelligence)**, 72, pp. 186-195, ISSN: 0031-3203, 2017, doi:10.1016/j.patcog.2017.07.021

[J.39] 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* **(Q1, Computer Science Applications)**, 33(4): pp. 489-511, ISSN: 1556-4959, 2016, doi:10.1002/rob.21612

[J.40] 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* **(Q2, Computer Sci-**

ence (miscellaneous)), 57(6): pp. 856-874, ISSN: 0010-4620, 2014, doi: 10.1093/comjnl/bxt140.

[J.41] J. Cerquides, A. Farinelli, P. Meseguer, S. D. Ramchurn. A Tutorial on Optimization for Multi-Agent Systems. *The Computer Journal* **(Q2, Computer Science (miscellaneous))**, 57(6): pp. 799-824, ISSN: 0010-4620, 2014, doi: 10.1093/comjnl/bxt146

[J.42] 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* **(Q2, Artificial Intelligence)**, 28(3): pp. 337-380, ISSN: 1387-2532, 2014, doi:10.1007/s10458-013-9225-1.

[J.43] A. Farinelli, D. Nardi, R. Pigliacampo, M. Rossi, and G. P. Settembre. Cooperative situation assessment in a maritime scenario. *International Journal of Intelligent Systems* **(Q1, Artificial Intelligence)**, 27(5): pp. 477-501, ISSN: 0884-8173, 2012, doi:10.1002/int.21532.

[J.44] A. Rogers, A. Farinelli, R. Stranders, N. R. Jennings. Bounded approximate decentralised coordination via the max-sum algorithm. *Artificial Intelligence* **(Q1, Artificial Intelligence)**, 175(2):pp. 730-759, ISSN: 0004-3702, 2011, DOI:10.1016/j.artint.2010.11.001.

[J.45] A. Farinelli, H. Fujii, N. Tomoyasu, M. Takahashi, A. D'Angelo, E. Pagello. Cooperative control through objective achievement. *Robotics and Autonomous Systems* **(Q1, Computer Science Applications)**,58(7): pp. 910-920, ISSN: 0921-8890, 2010, doi:10.1016/j.robot.2010.03.012.

[J.46] S. D. Ramchurn, A. Farinelli, K. S. Macarthur, N. R. Jennings. Decentralized Coordination in RoboCup Rescue. *Computer Journal* **(Q1, Computer Science (miscellaneous))**, 53(9): pp. 1447-1461, ISSN: 0010-4620, 2010, doi:10.1093/comjnl/bxq022.

[J.47] 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* **(Q2, Computer Science (miscellaneous))**, 24(8-9): pp. 763-777, ISSN:1556-4959, 2007, doi:10.1002/rob.20216.

[J.48] 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* **(Q1, Electrical and Electronic Engineering)**, 94(7): pp. 1271-1288, ISSN:0018-9219, 2006, doi:10.1109/JPROC.2006.876937.

[J.49] A. Farinelli, L. Iocchi, and D. Nardi. Multirobot systems: A Classification Focused on Coordination. *IEEE Transactions on System Man and Cybernetics, part B* **(Q2, Computer Science Applications)**, 34(5): pp. 2015–2028, ISSN: 1083-4419, 2004, doi:10.1109/TSMCB.2004.832155.

Book Chapters

[B.1] Portugal, D., Iocchi, L., Farinelli, A. A ROS-Based Framework for Simulation and Benchmarking of Multi-robot Patrolling Algorithms. In *Studies in Computational Intelligence*, 778, pp. 3-28, 2019.

[B.2] A. Farinelli, M. Vinyals, A. Rogers, N. R. Jennings. Chapter 12: Distributed Constraint Handling and Optimization. In *Multiagent Systems*, MIT press, 2013.

[B.3] 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.4] 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., Ragova G., Valin P. editors. pp. 659-670. ISBN: 1-58603-536-3. Amsterdam: IOS Press (Netherland), 2005.

[B.5] 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.6] 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] Zuccotto, M., Fusa, E., Castellini, A., Farinelli, A.. Online model adaptation in Monte Carlo tree search planning (2025) *Optimization and Engineering*; doi: 10.1007/s11081-024-09896-2

[C.2] Veronese, C., Meli, D., Farinelli, A.. Online Inductive Learning from Answer Sets for Efficient Reinforcement Learning Exploration (2025) *Communications in Computer and Information Science*; doi: 10.1007/978-3-031-89366-7_7

[C.3] Bonanni, L., Meli, D., Castellini, A., Farinelli, A.. Monte Carlo Tree Search with Velocity Obstacles for safe and efficient motion planning in dynamic environments (2025) *Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems, AAMAS*;

[C.4] Marzari, L., Mastroeni, I., Farinelli, A.. Advancing Neural Network Verification Through Hierarchical Safety Abstract Interpretation (2025) *Frontiers in Artificial Intelligence and Applications*; doi: 10.3233/FAIA251002

[C.5] Villaboni, D., Bazzani, F., Castellini, A., Farinelli, A.. Transformer-Based Anomaly Detection for Mobile Robots (2025) *2025 European Conference on Mobile Robots, ECMR 2025 - Proceedings*; doi: 10.1109/ECMR65884.2025.11163081

[C.6] Veronese, C., Meli, D., Farinelli, A.. Learning Symbolic Persistent Macro-Actions for POMDP Solving Over Time (2025) *Proceedings of Machine Learning Research*;

[C.7] Mayoral-Macau, A., Rodriguez-Soto, M., Marchesini, E., Sánchez-Fibla, M., López-Sánchez, M., Rodríguez-Aguilar, J., Farinelli, A.. An Approximate Embedding for Designing Ethical Reinforcement Learning Environments (2025) *Frontiers in Artificial Intelligence and Applications*; doi: 10.3233/FAIA251093

[C.8] Fenoy, A., Zagoli, J., Bistaffa, F., Farinelli, A.. Attention for the Allocation of Tasks in Multi-Agent Pickup and Delivery (2024) *Proceedings of the ACM Symposium on Applied Computing*; doi: 10.1145/3605098.3635955

[C.9] Taioli, F., Rosa, S., Castellini, A., Natale, L., Del Bue, A., Farinelli, A., Cristani, M., Wang, Y.. Mind the Error! Detection and Localization of Instruction Errors in Vision-and-Language Navigation (2024) *IEEE International Conference on Intelligent Robots and Systems*; doi: 10.1109/IROS58592.2024.10801822

[C.10] Trotti, F., Farinelli, A., Muradore, R.. Path Re-Planning with Stochastic Obstacle Modeling: A Monte Carlo Tree Search Approach (2024) *IEEE International Conference on Intelligent Robots and Systems*; doi: 10.1109/IROS58592.2024.10802254

[C.11] Trotti, F., Farinelli, A., Muradore, R.. A Markov Decision Process Approach for Decentralized UAV Formation Path Planning (2024) *2024 European Control Conference, ECC 2024*; doi: 10.23919/ECC64448.2024.10591307

[C.12] Trotti, F., Farinelli, A., Muradore, R.. Towards Aircraft Autonomy Using a POMDP-Based Planner (2024) *Proceedings of the American Control Conference*; doi: 10.23919/ACC60939.2024.10644435

[C.13] Marzari, L., Leofante, F., Cicalese, F., Farinelli, A.. Rigorous Probabilistic Guarantees for Robust Counterfactual Explanations (2024) *Frontiers in Artificial Intelligence and Applications*; doi: 10.3233/FAIA240597

[C.14] Marzari, L., Corsi, D., Marchesini, E., Farinelli, A., Cicalese, F. Enumerating Safe Regions in Deep Neural Networks with Provable Probabilistic Guarantees (2024) *Proceedings of the AAAI Conference on Artificial Intelligence (AAAI)*; doi: 10.1609/aaai.v38i19.30134

[C.15] Castellini, A., Bianchi, F., Zorzi, E., Simão, T.D., Farinelli, A., Spaan, M.T.J. Scalable Safe Policy Improvement via Monte Carlo Tree Search. (2023). *Proceedings of the 40th International Conference on Machine Learning (ICML)*. PMLR 202:3732-3756

[C.16] Marzari, L., Corsi, D., Cicalese, F., Farinelli, A. The #DNN-Verification Problem: Counting Unsafe Inputs for Deep Neural Networks (2023) *Proceedings of the 32nd International Joint Conference on Artificial Intelligence (IJCAI)*, doi: 10.24963/ijcai.2023/25.

[C.17] Mazzi, G., Meli, D., Castellini, A., Farinelli, A.: Learning Logic Specifications for Soft Policy Guidance in POMCP. (2023) *Proceedings of AAMAS 2023* **Best paper award nominee**

[C.18] Marchesini, E., Marzari, L., Farinelli, A., Amato, C.: Safe Deep Reinforcement Learning by Verifying Task-Level Properties. (2023) *Proceedings of AAMAS 2023*

[C.19] Trotti, F., Farinelli, A., Muradore, R.: An online path planner based on POMDP for UAVs. (2023) *Proceedings of ECC 2023*

[C.20] Castellini, A., Bianchi, F, Zorzi, F., Simão, T. D., Farinelli, A., Spaan, M. T. J.: Scalable Safe Policy Improvement via Monte Carlo Tree Search. (2023) *Proceedings of ICML 2023*

[C.21] Marzari, L., Marchesini, E., Farinelli, A.: Online Safety Property Collection and Refinement for Safe Deep Reinforcement Learning in Mapless Navigation. (2023) *Proceedings of ICRA 2023*

[C.22] Marzari, L., Corsi, D., Cicalese, F., Farinelli, A.: The #DNN-Verification Problem: Counting Unsafe Inputs for Deep Neural Networks. (2023) *Proceedings of IJCAI 2023*

[C.23] Corsi, D., Marzari, L., Pore, A., Farinelli, A., Casals, A., Fiorini, P., Dall'Alba, D.: Constrained Reinforcement Learning and Formal Verification for Safe Colonoscopy Navigation. (2023) *Proceedings of IROS 2023*

[C.24] Amir, G., Corsi, D., Yerushalmi, R., Marzari, L., Harel, D., Farinelli, A., Katz, G.: Verifying Learning-Based Robotic Navigation Systems. (2023) *Proceedings of TACAS 2023*

[C.25] Marchesini, E., Farinelli, A.: Enhancing Deep Reinforcement Learning Approaches for Multi-Robot Navigation via Single-Robot Evolutionary Policy Search. (2022) *Proceedings of ICRA 2022*

[C.26] Marchesini, E., Corsi, D., Farinelli, A.: Exploring Safer Behaviors for Deep Reinforcement Learning. (2022) *Proceedings of AAAI 2022*

[C.27] Mazzi, G., Castellini, A., Farinelli, A.: Identification of Unexpected Decisions in Partially Observable Monte-Carlo Planning: A Rule-Based Approach. (2021) *Proceedings of AAMAS 2021*

[C.28] Mazzi, G., Castellini, A., Farinelli, A.: Rule-based Shielding for Partially Observable Monte-Carlo Planning. (2021) *Proceedings of ICAPS 2021*

[C.29] Marchesini, E., Corsi, D., Farinelli, A.: Genetic Soft Updates for Policy Evolution in Deep Reinforcement Learning. (2021) *Proceedings of ICLR 2021*

[C.30] Giuliari, F., Castellini, A., Berra, R., Del Bue, A., Farinelli, A., Cristani, M., Setti, F., Wang, Y.: POMP++: Pomcp-based Active Visual Search in unknown indoor environments. (2021) *Proceedings of IROS 2021*

[C.31] Pore, A., Corsi, D., Marchesini, E., Dall'Alba, D. Casals, A., Farinelli, A., Fiorini, P.: Safe Reinforcement Learning using Formal Verification for Tissue Retraction in Autonomous Robotic-Assisted Surgery. (2021) *Proceedings of IROS 2021*

[C.32] Marchesini, E., Farinelli, A.: Centralizing State-Values in Dueling Networks for Multi-Robot Reinforcement Learning Mapless Navigation. (2021) *Proceedings of IROS 2021*

[C.33] Marchesini, E., Corsi, D., Farinelli, A.: Benchmarking Safe Deep Reinforcement Learning in Aquatic Navigation. (2021) *Proceedings of IROS 2021*

[C.34] Corsi, D., Marchesini, E., Farinelli, A.: Formal verification of neural networks for safety-critical tasks in deep reinforcement learning. (2021) *Proceedings of UAI 2021*

[C.35] Corsi, D., Marchesini, E., Farinelli, A., Fiorini, P. Formal Verification for Safe Deep Reinforcement Learning in Trajectory Generation (2020) *Proceedings - 4th IEEE International Conference on Robotic Computing*, IRC 2020, art. no. 9287929, pp. 352-359

[C.36] Marchesini, E., Farinelli, A. Discrete Deep Reinforcement Learning for Mapless Navigation (2020) *Proceedings - IEEE International Conference on Robotics and Automation (ICRA)*, art. no. 9196739, pp. 10688-10694.

[C.37] Farinelli, A., Contini, A., Zorzi, D. Decentralized task assignment for multi-item pickup and delivery in logistic scenarios (2020) *Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2020-May, pp. 1843-1845.

[C.38] Sartea, R., Chalkiadakis, G., Farinelli, A., Murari, M. Bayesian active malware analysis (2020) *Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2020-May, pp. 1206-1214.

[C.39] Azzalini, D., Castellini, A., Luperto, M., Farinelli, A., Amigoni, F. HMMs for anomaly detection in autonomous robots (2020) *Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS)*, 2020-May, pp. 105-113.

[C.40] Olivato, M., Cotugno, O., Brigato, L., Bloisi, D., Farinelli, A., Iocchi, L. A Comparative Analysis on the use of Autoencoders for Robot Security Anomaly Detection. *Proceedings of the 2019 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, accepted for publication, 2019.

[C.41] Aldegheri, S., Bombieri, N., Bloisi, D., Farinelli, A. Data Flow ORB-SLAM for Real-time Performance on Embedded GPU Boards. *Proceedings of the 2019 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, accepted for publication, 2019.

[C.42] Steccanella, L., Bloisi, D., Blum, J., Farinelli, A. Deep learning waterline detection for low-cost autonomous boats. *Advances in Intelligent Systems and Computing (Proceedings of the 15th International Conference IAS-15)*, 867, pp. 613-625, 2019. **Best paper award nominee**

[C.43] Sartea, R., Murari, M., Farinelli, A. Agent Behavioral Analysis Based on Absorbing Markov Chains. *Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems, AAMAS*, pp. 647-655. 2019.

[C.44] Castellini, A., Masillo, F., Sartea, R., Farinelli, A. eXplainable Modeling (XM): Data Analysis for Intelligent Agents. *Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems, AAMAS* (Demonstration paper), pp. 2342-2344. 2019.

[C.45] Castellini, A., Chalkiadakis, G., Farinelli, A. Influence of State-Variable Constraints on Partially Observable Monte Carlo Planning. *International Joint Conference on Artificial Intelligence, IJCAI*, pp. 5540-5546. 2019.

[C.46] Marchesini, E., Corsi, D., Benfatti, A., Farinelli, A., Fiorini, P. Double Deep Q-Network for Trajectory Generation of a Commercial 7DOF Redundant Manipulator. *Proceedings of the IEEE International Conference on Robotic Computing (IRC)* (extended abstract), pp. 421-422. 2019.

[C.47] Castellini, A., Masillo, F., Bicego, M., Bloisi, D., Blum, J., Farinelli, A. Subspace clustering for situation assessment in aquatic drones. *Proceedings of the ACM Symposium on Applied Computing*, pp. 930-937. 2019.

[C.48] Castellini, A., Beltrame, G., Bicego, M., Blum, J., Denitto, M., Farinelli, A. Unsupervised activity recognition for autonomous water drones. *Proceedings of the ACM Symposium on Applied Computing* (extended abstract), pp. 840-842. 2018. **Best poster award**

[C.49] Castellini, A., Farinelli, A., Minuto, G., Quaglia, D., Secco, I., Tinivella, F. EXPO-AGRI: Smart automatic greenhouse control. *2017 IEEE Biomedical Circuits and Systems Conference, BioCAS 2017 - Proceedings*, January, pp. 1-4. 2018.

[C.50] Raeissi, M.M., Farinelli, A. Learning queuing strategies in human-multi-robot interaction. *Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems, AAMAS* (extended abstract), pp. 2207-2209. 2018.

[C.51] Sartea, R., Farinelli, A. Detection of intelligent agent behaviors using Markov chains (extended abstract). *Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems, AAMAS* (extended abstract), pp. 2064-2066. 2018

[C.52] Denitto, M., Melzi, S., Bicego, M., Castellani, U., Farinelli, A., Figueiredo, M.A.T., Kleiman, Y., Ovsjanikov, M. Region-Based Correspondence between 3D Shapes via Spatially Smooth Biclustering. *Proceedings of the IEEE International Conference on Computer Vision*, October, art. no. 8237719, pp. 4270-4279, 2017.

[C.53] 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.54] 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.55] 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.56] 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.57] 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.58] 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.59] 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.60] 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.61] 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.62] 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.63] 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.64] 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.65] 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.66] 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.67] 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.68] 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 **Best paper award nomination (Innovative Applications Track)**.

[C.69] 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.70] 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.71] 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.72] 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.73] 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.74] 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.75] 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.76] 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.77] 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.78] 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.79] 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.80] 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.81] A. Kleiner, A. Farinelli, S. Ramchurn, B. Shi, F. Maffioletti, R. Reffato. RMASBench: 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.82] F. Maffioletti, R. Reffato, A. Farinelli, A. Kleiner, S. Ramchurn, B. Shi. RMASBench: 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.83] N. Boscolo, Nicoló, 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.84] 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.85] 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.86] 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.87] 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.

[C.88] A. Farinelli, M. Denitto, M. Bicego. Biclustering of expression microarray data using Affinity Propagation. In: *Proc. of The 6th IAPR Int. Conf. on Pattern Recognition in Bioinformatics* (PRIB 2011), 2-4 Nov 2011, Delft The Netherlands.

[C.89] N. Stefanovitch, A. Farinelli, A. Rogers, N. R. Jennings. Resource-Aware Junction Trees for Efficient Multi-Agent Coordination. In *Proc. of The Tenth International Conference on Autonomous Agents and Multi-agent Systems (AAMAS 2011)*, pp. 363-370, 2-6 May 2011, Taipei, Taiwan.

[C.90] M. Vinyals, J. Cerquides, A. Farinelli, J. A. Rodríguez-Aguilar. Worst-case bounds on the quality of max-product fixed-points. In *Lafferty, J.. Advances in Neural Information Processing Systems 23: 24th Annual Conference on Neural Information Processing Systems (NIPS)*, pp. 2325-2333, ISBN: 9781617823800, 2010.

[C.91] 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.

[C.92] N. Stefanovitch, A. Farinelli, A. Rogers, N. R. Jennings. Efficient Multi-Agent Coordination Using Resource-Aware Junction Trees. In *Proc. of The Ninth International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2010)*, pp. 1413-1414, May 2010, Toronto Canada. [Short paper]

[C.93] 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.94] 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.95] 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.96] 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.97] 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 International Joint Conferences on Autonomous and Agents and Multi Agent Systems (AAMAS)*, pp. 639–646, 2008.

[C.98] W. T. L. Teacy, A. Farinelli, N. J. Grabham, P. Padhy, A. Rogers, N. R. Jennings Max-sum decentralised coordination for sensor systems. In *Proceedings of the International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS)* (Demonstration paper), pp. 1649–1650, 2008, **Best demo award, Industrial Software**.

[C.99] G. Settembre, P. Scerri, A. Farinelli, K. Sycara, D. Nardi. A Decentralized Approach to Cooperative Situation Assessment in Multi-Robot Systems. In *Proceedings of 7th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2008)*, Estoril, Portugal, pp 31–38, 2008.

[C.100] A. Farinelli, P. Scerri, A. Ingenito, D. Nardi. Dealing with Perception Errors in Multi-Robot System Coordination. In *Proceedings of the Joint International Conference on Artificial Intelligence (IJCAI 2007)*, Hyderabad, India, pp 2091–2096, 2007.

[C.101] A. Farinelli, A. Finzi, T. Lukasiewicz. Team Programming in Golog under Partial Observability. In *Proceedings of the Joint International Conference on Artificial Intelligence (IJCAI 2007)*, Hyderabad, India, pp 2097–2102, 2007.

[C.102] G. D. Tipaldi, A. Farinelli, L. Iocchi, D. Nardi. Heterogeneous Feature State Estimation with Rao-Blackwellized Particle Filters. In *Proceedings of IEEE International Conference on Robotics and Automation (ICRA 2007)*, pp 3850–3855, Rome, Italy, ISBN 1-4244-0601-3, 2007.

[C.103] S. La Cesa, A. Farinelli, L. Iocchi, D. Nardi, M. Sbarigia, M. Zaratti. Semi-Autonomous Coordinated Exploration in Rescue Scenarios. In *RoboCup 2007: Robot Soccer World Cup XI*, pp. 286-293, 2008.

[C.104] 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.

[C.105] V. A. Ziparo, A. Kleiner, L. Marchetti, A. Farinelli, D. Nardi. Cooperative Exploration for USAR Robots with Indirect Communication In *Proceedings of the 6th IFAC Symposium on Intelligent Autonomous Vehicles*, Toulouse, France, September 2007.

[C.106] 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.107] 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.108] 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.109] 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.110] 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, Modena; Italy. ISBN: 0-7695-2183-5, 2004.

[C.111] F. Cottefoglie, 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.

[C.112] P. Scerri, A. Farinelli, S. Okamoto, and M. Tambe. Allocating roles in extreme team. In *Proceedings of the 3rd International Conference on Autonomous Agents and Multi-Agent Sytems (AAMAS 2004)*, pp. 1500–1501, New York, USA, 2004.

[C.113] 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.114] 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.115] 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, Wachington D. C., (USA), ISBN:0-7803-7953-5 2003.

[C.116] 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.117] 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.118] 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] Castellini, A., Blum, J., Bloisi, D., Farinelli, A. Intelligent battery management for aquatic drones based on task difficulty driven POMDPs. In *CEUR Workshop Proceedings*, 2352, pp. 1-5, 2019.

[W.2] Denitto, M., Bicego, M., Farinelli, A., Pelillo, M. Dominant set biclustering. In *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 10746 LNCS, pp. 49-61, 2018.

[W.3] Castellini, A., Beltrame, G., Bicego, M., Bloisi, D., Blum, J., Denitto, M., Farinelli, A. Activity recognition for autonomous water drones based on unsupervised learning methods. In *CEUR Workshop Proceedings*, 2054, pp. 16-21, 2017.

[W.4] L. Steccanella, A., Farinelli, L., Iocchi, D., Nardi. Coloured Petri Net Plans for cooperative multi-robot systems. In *CEUR Workshop Proceedings*, 1834, pp. 51-55, 2017.

[W.5] L. Bottarelli, M., Bicego, J., Blum, N., Bombieri, A., Farinelli, L., Veggian. Orienteering-based path selection for mobile sensors. In *CEUR*

Workshop Proceedings, 1834, pp. 36-40, 2017.

[W.6] 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.7] 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 conjuction with AAMAS 2015.

[W.8] 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.9] 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.10] 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.11] 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.12] 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.13] 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.14] 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.15] 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.16] 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 conjuction with DCOSS 2008, Santorini Island, Greece, June 2008.

[W.17] 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.18] 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.19] 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.20] 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.21] 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] Coordination approaches for teams of mobile robots, two lessons, 3.5 hours in total, offered for the 2019 Advanced Course on AI (ACAI)/ Hellenic Artificial Intelligence Summer School (HAISS), sponsored by EurAI and EETN (Hellenic AI society).

[T.2] 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.3] 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.4] Team Coordination in Multiagent Systems one lesson, two hours, offered for the workshop: Austrian Robotics Workshop. Tutor: Alessandro Farinelli. May 2012, Graz, Austria.

[T.5] 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] Safe Reinforcement Learning for Intelligent Robotic Systems: challenges and current trends, Skema business school, online, 2023.

[S.2] IA per la cooperazione tra sistemi multi-robot nelle fabbriche intelligenti, Biennale Macchine Utensili (BI-MU), panel, Milano, 2022.

[S.3] Safe Reinforcement Learning for Intelligent Robotic Systems, Intelligent Robotics Lab, Birmingham University, online, 2023.

[S.4] Safe Reinforcement Learning for Intelligent Robotic Systems, Invited talk at Artificial Intelligence and RObotics (AIRO) workshop, co-located with AIxIA, Udine, Italy, 2021.

[S.5] Recent advances on optimization approaches for joint decision making in Multi-Agent Systems, Università degli Studi di Padova, Padova, Italy, 2014.

[S.6] A Graphical Model Approach to Decentralized Coordination for Robotic Agents, Istitute for Systems and Robotics (ISR) Lisbon, Portugal, 2012.

[S.7] Agent Coordination Using the Max-Sum Algorithm, Istituto Italiano di Tecnologia (IIT), Genova, Italy, 2011.

[S.8] Agent Coordination Using the Max-Sum Algorithm, Universita' degli Studi di Padova, Padova, Italy, 2011.

[S.9] Factored Decentralised Coordination of embedded Agents, Università degli studi di Sevilla, Sevilla, Spain, 2010.

[S.10] Decentralised Coordination Using the Max-Sum Algorithm, University of Southern California (USC), Los Angeles, U.S., 2009.

[S.11] Decentralised Coordination of Low-Power Embedded Devices Using the Max-Sum Algorithm, Southampton University, Science and Engineering of Natural Systems, Southampton, 2008.

[S.12] Distributed Coordination for Robotic Agents, University of Birmingham, Artificial Intelligence and Natural Computation Seminar, Birmingham, 2008.

[S.13] Cooperative Behaviors Using Local Interactions, Università La Sapienza di Roma, Dipartimento di Informatica e Sistemistica, Roma, 2007.

[S.14] Token Passing approach to Task Assignment, Southampton University, Intelligence, Agents and Multimedia group, Agent seminars, Southampton, 2007.

[S.15] Design, Development and Evaluation of Coordinated Multi-Robot Systems, Università Federico II, Dipartimento di Scienze Matematiche Fisiche e Naturali, Napoli, 2007.

[S.16] Tool per il coordinamento di sistemi multi-agente, Selex Sistemi Integrati, Roma, 2007.

[S.17] Distributed Task Assignment for Real World Environment, Daghstul Seminars, Multi-Robot Systems: Perception, Behaviors, Learning, and Action, Dagstuhl, N. 06251,19.06.-23.06.06, 2006.

Supervision of PhD Students

Supervisor

2022-2024	Luca Marzari. Thesis title: ": Advanced Neural Networks Verification for Safe and Explainable Intelligent Systems". (PhD cycle XXXVIII).
2019-2023	Davide Corsi. Thesis title: "Safe Deep Reinforcement Learning: Enhancing the Reliability of Intelligent Systems". (PhD cycle XXXV). Davide Corsi is a Postdoctoral Associate at University o f California Irvine (updated on 2024).
2019-2023	Adrià Fenoy. Thesis title: "Combining Optimization and Machine Learning for the Formation of Collectives". (PhD cycle XXXV). Adrià Fenoy is an AI engineer at MeteoSim (updated on 2024)
2018-2023	Giulio Mazzi. Thesis title: "Rule-Based Policy Interpretation and Shielding for Partially Observable Monte Carlo Planning" (PhD cycle XXXIV).
2018-2022	Enrico Marchesini. Thesis title: "Enhancing Exploration and Safety in Deep Reinforcement Learning". (PhD cycle XXXIV). Erico Marchesini is a Postdoctoral Associate at Massachusetts Institute of Technology (MIT) (updated on 2024).
2016-2021	Riccardo Sartea. Thesis title: "Active Malware Analysis based on reinforcement learning techniques". (PhD cycle XXXII). Riccardo Sartea is Data Scientist at Amazon Web Services (AWS) (updated on 2024).
2015–2018	Lorenzo Bottarelli. Thesis Title: "Optimizing Information Gathering for Environmental Monitoring Applications". (PhD Cycle XXXI). Lorenzo Bottarelli is head of Machine Learning at Ignitia AB (updated on 2024).
2014–2017	Masoume M. Raeissi. Thesis Title: "Modeling Supervisory Control in Multi-Robot Applications". (PhD cycle XXX). Masoume Raeissi is Research Associate (AI) at Wageningen University & Research (updated on 2024)

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. Filippo Bistaffa is tenured researcher at IIIA-CSIC (updated on 2024)

Co-supervisor

2021-2023	Francesco Trotti. Thesis subject: "A model-based reinforcement learning control system for multi agent planning under uncertainty exploiting agent's dynamic model" (PhD cycle XXXVII); supervisor: Riccardo Muradore.
2021-2023	Federico Bianchi. Thesis subject: "Safe Policy Improvement via Monte Carlo Tree Search" (PhD cycle XXXVII); supervisor: Alberto Castellini.
2020-2022	Maddalena Zuccotto. Thesis subject: "Learning in Monte-Carlo Tree-Search Planning" (PhD cycle XXXVI); supervisor: Alberto Castellini.

Activity as Editor and Reviewer

Editor

2024-	Standard Editor for AIJ (Artificial Intelligence Journal). AIJ is classified as Q1 for the subject category "Artificial Intelligence" (Scimago)
2019-	Associate Editor for JAIR (Journal of Artificial Intelligence Research). JAIR is classified as Q1/Q2 (depending on the year) for the subject category "Artificial Intelligence" (Scimago)
2011	Guest Editor for a special issue of the Journal of Autonomous Agents and Multi-Agent Systems (JAAMAS), Vol. 22(3), 2011. Special issue title: Optimization in Multi-Agent Systems. JAAMAS in 2011 was classified as Q2 for the subject category "Artificial Intelligence" (Scimago).

Organization of International Conferences and Workshops

2019	Area Chair for IEEE MRS (IEEE International Symposium on Multi-robot and Multi-agent Systems), 2019.
2019	Co-Chair for the International Conference on "Smarter Catchment Monitoring, Cleaner Waters", 2019. Co-chair: Mark Scrimshaw.

2018 Mentor for the Doctoral Symposium at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2018)

2018 Co-organizer for the workshop AIRO-18: Artificial Intelligence and Robotics, co-located with the AIxIA 2018 conference (Associazione Italiana per Intelligenza Artificiale). Co-organizers: Alberto Finzi, Fulvio Mastrogiovanni, Salvatore Anzalone.

2018 Co-chair of the demonstration track at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2018); Co-chair: Iolanda Leite.

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.

2017 Co-chair of the robotics track at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2017); Co-chair: Chris Amato.

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.

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.

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.

2015 Co-chair of the robotics track at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2015); Co-chair: Gal Kaminka.

2014 Mentor for the Doctoral Symposium at the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2014)

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.

2013 Associate Editor for the International Conference IEEE/RSJ Intelligent Robots and Systems (IROS 2013).

2013 Exhibition Chair for the International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS 2013).

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.

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.

2013 Associate Editor for the International Conference IEEE/RSJ Intelligent Robots and Systems (IROS 2013).

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.

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.

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.

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.

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 reviewer

- **Programme Committee member for several editions of the following international conferences**
  - Autonomous Agent and Multi Agent Systems (AAMAS);
  - International Joint Conference on artificial Intelligence (ICAI);
  - AAAI conference on Artificial Intelligence (Association for the Advancement of Artificial Intelligence)
  - International Conference of Machine Learning (ICML)
  - IEEE International Symposium on Safety, Security, and Rescue Robotics (SSRR)
  - Neural Information Processing Systems (NeurIPS)
  - Uncertainty in AI (UAI)
  - European Conference on Artificial Intelligence (ECAI)
  - Intelligent Autonomous Systems (IAS 2013, 2014, 2018)
  - ACM Symposium on Applied Computing (ACM-SAC 2018, 2019, 2020)
- **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.

Expert evaluator for research projects

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

9 April 2026
Alessandro Farinelli