Curriculum Vitae – Gabriele Oliva

Research Activity

My work focuses on designing mechanisms that allow or support the decision of humans or autonomous agents. I have approached this broad topic at different scales and considering different typologies of decision makers. In the context of autonomous multi-agent systems, my work has been focused on the development of distributed or decentralized interaction mechanisms to allow autonomous agents to collectively carry out complex decision tasks, such as solving optimization problems, clustering measured data, estimating network parameters or reaching an agreement. With respect to this scale, the main applications considered during my work include sensor networks, indoor localization and mobile agents. In the context of human decision-making, my work has been focused on the development of decision support systems considering innovative ways to combine objective data with possibly incomplete, ambiguous or contradictory information elicited from multiple domain experts. With respect to this dimension, the main applications considered during my work include Critical Infrastructure Protection and Cyber Security.

Current Position

2020–today *Tenure-tracked Assistant Professor* (RTD-B) in Automatic Control (ING-INF/04) at University Campus Bio–Medico of Rome, Italy.

Scientific Habilitation

2018–2024 Italian Habilitation to the role of associate professor in Automatic Control (scientific sector ING-INF/04).

Quantitative Metrics

Citations: **659** – **954**
h-index: **12** – **15**
source: **Scopus** – **Google Scholar**, last update March 24, 2022.

Roles and Memberships

2022 Associate Editor of the IEEE Control Systems Letters.

2020–today PLOS ONE Editorial Board Member (Subject Areas: Graph theory, Systems science, Complex systems, Optimization, Decision theory).

2019–2022 Scientific responsible for the University Campus Bio-Medico of Rome of the collaboration with INAIL (Italian National Institute for Insurance against Accidents at Work) on cyber-security and on the effect of cyber menaces on the workers' safety, with particular reference to Seveso plants.

2019–today Member of the Conference Editorial Board of the Control Systems Society of the Institute of Electrical & Electronic Engineers (IEEE CSS CEB).

2019–today Member of the workgroup on cyber-security of UNINDUSTRIA (Lazio region industry association). The workgroup involves, among others, companies such as Enel, Poste Italiane, Tim and Almaviva.

2019–today Local Coordinator for the Lazio Region of the Italian Chapter of the Complex Systems Society.

2018–today Member of the Campus Bio-Medico local node of the CINI National Cybersecurity Laboratory.

Honors & Awards

2021 Best session presenter at the 2021 10th International Conference on Mechatronics and Control Engineering.

2019 Senior Member of the Institute of Electrical & Electronic Engineers (IEEE).

2016 "Domenico Razzé" prize for the best PhD thesis in the field of Critical Infrastructure Protection, Italian Association of Critical Infrastructures' Experts (AIIC), Rome, April 28th, 2016.

2015 Finalist at the CIPRNet Young CRITIS Award, 10th International Conference on Critical Information Infrastructures Security, Berlin, Germany, October 5–7, 2015 (CRITIS2015).

Job experiences

2015−2019 *Assistant Professor* (RTD-A) in Automatic Control (ING-INF/04) at University Campus Bio–Medico of Rome, Italy.

2012−2014 *Post–doctorate research fellow* at University Campus Bio–Medico of Rome, Italy, within European FP7 Project CIPRNET, European DG-HOME Projects FACIES and REFIRE.

Education

2008 −2012 *Ph.D in Computer Science and Automation* (Doctoral School in Engineering, Computer Science and Automation Section) at University Roma Tre of Rome, Italy. Advisor: prof. Stefano Panzieri.

2005 −2008 *M.Sc Degree in Computer Science and Automation Engineering* at University Roma Tre of Rome, Italy. Passing grade: 110/110 with honors.

2002 −2005 *B.Sc in Computer Science Engineering* at University Roma Tre of Rome, Italy. Passing grade: 110/110 with honors.

Linguistic proficiency


Italian: mother tongue


English: professional proficiency


Japanese: advanced proficiency (JLPT Level N2 ≈ Level C1)


Modern Greek: intermediate proficiency (Level B2)


French: limited proficiency (DELF Level A2)

EMI Skills

2019 Certificate in *EMI Skills* (English as a Medium of Education), issued by Cambridge English Language Assessment (University of Cambridge).

Research Projects

Principal Investigator

2020 −2021 National Project: **Interdependency Analysis in electrical and transportation infrastructures for decision support** – Grant: 30 k€
The project, in collaboration with ENEA, has been funded by the Italian Ministry for the Economic Development and aims at developing a decision support system for the reconfiguration of a power network, taking into account dependencies and interdependency phenomena with the transportation infrastructure. In particular, the project considers the effects of natural events on the road transportation network, the optimal routing of emergency teams in charge of reaching strategical locations in a city (e.g., hospitals), the effects of congestions on the electrical grid reconfiguration strategies and the effect of lack of semaphoric lighting in road networks due to a power outage.

2017 −2018 Project **HANSEL** – Grant: 40 k€
The project has been funded by the University Campus Bio-Medico of Rome via blind peer review and was aimed at creating an integrated Industry 4.0 environment for training operators, performing stress tests and evaluating cyber vulnerabilities of multi-vendor SCADA, IoT and eHealth solutions.

Head of Operative Unit

2019−2021 4STER European SAF€RA Project – Grant: 35 k€
The project is co-funded by INAIL and involves also VTT (Finland), TNO (The Netherlands) and the University of Bologna. The project aims to provide insights and best practices to raise awareness and effectiveness of European process industries – and specifically Seveso plants – with respect to cyber-physical security threats and the work-related safety of employees.
Within the project, I am coordinating the activities at University Campus Bio-Medico of Rome, with reference to the collection and analysis of data to characterize the attitudes and awareness of employees in European industries (with a specific focus on Seveso plants) regarding vulnerabilities concerning their physical safety as a result of cyber physical security threats.

Work Package Leader

2021 −2023 Regional Project **RESIM**
This project aims to improve the cyber resilience of critical infrastructures by developing a specific human-cyber-physical environment. The project builds on the work carried out in the framework of the European projects Facies and Resisto by University Campus Bio-medico of Rome and University Roma Tre and is part of the training activities (master) carried out by the two universities, in the field of critical infrastructures.
I am serving as the WP Leader for WP3, which aims at developing a cyber range testbed.

2019 −2021 National PON Project **RAFAEL**
The project, coordinated by ENEA, involves (among other partners) ANAS, INGV, e-distribuzione, Polytechnic University of Bari and University of Ferrara, University of L'Aquila, and aims at implementing a decision support

system for predicting natural events and their impact on Critical Infrastructures, integrating GIS systems, sensors of different nature, analysis of seismic and geo-dynamic sensors, SAR data.

I am serving as the Dissemination WP Leader and I am contributing to the development of data analysis algorithms to predict the consequences of natural events in Critical Infrastructures.

Project Evaluator

2020 Evaluator for 1 SONATA-15 Project, National Science Centre Poland.

Participation in Research Projects

2021 −2024 National Project DRIVERS.

The project, funded by INAIL, involves the University Campus Bio-Medico of Rome, the University of Genoa and the Univeristy of Messina, and aims at developing a risk assessment methodology that combines machine learning techniques with the experience of human experts. In particular, machine learning techniques are quite effective when sufficient training data is available, but are not flexible and do not provide information about the reason why inputs are mapped into outputs. Conversely, decision support systems based on knowledge elicited by human experts are able to account for intangible factors and for the intuition of decision makers, but typically involve ambiguous, linguistic or contradictory information. The project aims to combine such two domains in order to obtain a faceted and expressive risk analysis framework, which will be applied to scenarios such as biofuel production and Seveso plants in general.

2021 −2024 Marie Skłodowska-Curie Research and Innovation Staff Exchange project EUMAP.

The project aims to develop an open platform that will enable local and public authorities to better plan and manage the demand and supply of building utilities, including energy, water, waste and telecommunications in situations such as quarantine and lockdown. The Research and Innovation Staff Exchange programme will be key to developing this platform which will be piloted in five European capital cities.

Within the project, I am participating to the staff exchange and I will visit Space Systems Solutions in Cyprus for four months. The aim of the visit is the development of a novel aggregated measure of anthropic activity in a zone based on Multi-criteria decision techniques and features extracted via satellite imaging. The measure will be the basis for the development of a decision-support system to prioritize water distribution.

2020 −2022 National project **STW** “Security for Transport Workers" (STW).

The project, funded by INAIL, aims at analyzing violent attacks against transport workers and provision of procedural and technological measures to combat them.

2020 −2022 ESA Project **HERMES** “Healthcare Emergency support system for the distributed Response and Monitoring of Epidemics in the Society".

Thee project involves, among other partners, Telespazio and e-GEOS and aims at the development of an ecosystem of services able to support screening, prevention, monitoring and healthcare logistics in response to major emergencies such as COVID 19. Specifically, the application created by

the University Campus Bio-Medico of Rome analyses the CT and X-rays of the lungs carried out in telemedicine to identify possible positive cases supported by Artificial Intelligence techniques.

2019 −2021 European CIP Project **RESISTO**

The project, coordinated by Leonardo and in collaboration with (among others), Tim, Ericsson, Orange, and University Roma Tre, aims at developing an innovative solution for raising situation awareness and enhancing resilience in Communication Critical Infrastructures. RESISTO aims at implementing an innovative Decision Support System to protect communication infrastructures from combined cyber-physical threats exploiting the Software Defined Security model on a suite of state of the art cyber/physical security components (Blockchain, Machine Learning, IoT security, Airborne threat detection, holistic audio-video analytics) and services (Responsible Disclosure Framework) for detection and reaction in presence of attacks or natural disasters. My contribution to the project has been the development of network infrastructure models and distributed estimation algorithms.

2018 −2020 National PON Project **ARONA**

The project coordinated by Masmec, involves also the University Sant'Anna of Pisa, Istituto Tumori Bari Giovanni Paolo II and aims at providing novel navigation algorithms for surgical robots by exploiting image manipulation algorithms that allow to track the position of the robot's end effector also when the organs undergo deformations.

I contributed to the development of image manipulation algorithms.

2017 −2019 National Project **SMARTBENCH**

The project, co-funded by INAIL, is coordinated by Universitá Tor Vergata di Roma and involves also Universitá degli studi di Messina, Universitá di Bologna and Universitá del Salento and aims at developing an integrated system to improve the safety of workers in dangerous areas. The system is composed of several modules: Universitá Campus Bio-Medico di Roma is developing an integrated IoT platform to increase the awareness on the health/risk condition of the workers.

I contributed to the development of indoor localization algorithms for sensor networks.

2016 −2018 Italy-Israel Cooperation Project **SECUREWATER**

This project, coordinated by BVTECH in cooperation with IOSIGHT (Israel) and NITEL aimed at improving cybersecurity of industrial control system used in the water sector. The project developed a suite of tools able to detect several type of cyber-attack with consequences on the physical process on the base of deep analysis of data collected from the field.

I contributed to the development of the detection algorithms.

2016 −2019 EU Horizon2020 Project **ATENA** (grant n. 700581)

The project was managed by Leonardo Spa (former Finmeccanica) and the consortium included, among others partners, University Roma Tre, ENEA, Israel Electric Corporation, CRAT consortium and University of Coimbra. Atena aimed at leveraging the outcomes from previous European Research

activities, particularly from CockpitCI and MICIE EU projects and pushes at innovating them exploiting advanced features of ICT and Cyber Security, to be tailored and validated in selected Use Cases, in order to be adopted at an operational industrial maturity level.

My contribution was the development of indicators of the vulnerability of different subsystems within a set of strongly interconnected critical infrastructures, using multi-objective optimization approaches.

2014 −2017 EU FP7 Project **CIPRNET** (grant n. 312450)

The Critical Infrastructure Preparedness and Resilience Research Network (CIPRNet) is a Network of Excellence in Critical Infrastructure Protection (CIP), whose consortium included several research institutions; among the others: Fraunhofer (DE), ENEA (IT), TNO (NL), Joint Research Centre (EU), University of Cyprus (CY) and University Campus Bio-Medico (IT).

I contributed to modeling of interdependency phenomena among Critical Infrastructures.

2012−2015 European Project SAF€RA **RISING**

RISING project featured Universitá Campus Bio-Medico di Roma, Universitá Roma Tre and Tecnun University of Navarra and aimed at developing an indoor localization system based on radio-frequency systems and inertial navigation.

Within the project, my contribution was the development of indoor localization algorithms for distributed sensor networks.

2012−2015 European FP7 Project **STRUCTURES**

STRUCTURES project aimed at analyzing the effect of Intentional ElectroMagnetic Interference (IEMI) Attacks to critical infrastructures.

Within the project I contributed to develop propagation models to assess the impact of IEMI attacks to critical infrastructures.

2012 −2014 EU DG-HOME Project **FACIES** (grant n. 4000002115)

The project, managed by University Campus Bio-Medico in collaboration with University of Cyprus, University of Malaga and Radiolabs aimed at the definition of detection strategies for physical and cyber faults and attacks, with particular reference to the water distribution infrastructure.

Within the project, I contributed to the implementation and validation of a test bed environment.

2012 −2014 EU DG-HOME Project **THREVI2** (grant n. 4000002102)

The project, managed by NIER INGEGNERIA SpA and in collaboration with University Campus Bio–Medico of Rome, Politecnico di Milano and RGS Srl, aimed at the definition of an ontology for the representation of interdependency phenomena and threats to critical infrastructures.

Within the project, I contributed to the definition of the ontology.

2012 −2014 EU DG-HOME Project **SPARC** (grant n. 4000002119U)

The project, managed by Telespazio SpA and in collaboration with NITEL consortium, University Tor Vergata of Rome and CNR, aimed at evaluating

the impact of malfunctioning of satellite infrastructures and space assets on ground critical infrastructures.

I contributed to the development of a simulation environment based on CISIA framework to quantify the impact of solar wind on ground critical infrastructures, taking into account direct and indirect effects.

2011–2013 EU DG-HOME Project **REFIRE** (grant n. 2010/CIPS/AG/033)

The project, managed by IES Solutions and in collaboration with University Campus Bio–Medico of Rome, the consortium Radiolabs, Becar Beghelli Spa and the directorate of Italian Fire Fighters, aimed at the definition of localization strategies for first responders in indoor scenarios in critical conditions (scarce visibility, fire, etc.).

Within the project, I contributed to the development of an indoor localization system.

2012–2015 EU FP7 Project **CockpitCI** (grant n. 285647)

The project, managed by Selex Sistemi Integrati Spa and in collaboration with University Roma Tre, ENEA, Israel Electric Corporation, CRAT consortium and University of Coimbra, aimed at the development of an automatic tool for risk assessment, cause identification and countermeasure selection for critical infrastructures, with reference to cyber attacks.

Within the project, I contributed to the development of a data fusion methodology based on Dempster and Shafer's belief theory, aimed at the identification of cyber attacks on critical infrastructures.

2011–2012 Lazio Regional Project **DyCoH** (Dynamic Contrast enHancement).

The project, managed by Digital Video S.p.a. and in collaboration with University Campus Bio–Medico, aimed at realizing a smart platform for the manipulation of biomedical images.

Within the project, I contributed to the development of algorithms for tracking deformable biomedical objects.

2010–2011 ASI Project **ASIA for Human Flight**

The project, funded by Italian Space Agency (ASI) has been coordinated by INTESE Spa in collaboration with University Campus Bio–Medico and aimed at predicting bone calcium level in astronauts subject to microgravity conditions.

Within the project, I contributed to the development of a methodology for the analysis of the influence among blood parameters as a predictor of bone demineralization for astronauts in microgravity environment.

2008–2011 EU FP7 Project **MICIE** (grant n. 225353/2008)

The project, managed by Selex Communications SpA and in collaboration with University Roma Tre, ENEA, Israel Electric Corporation, CRAT consortium and University of Coimbra, aimed at the development of an on-line risk prediction system for distributed critical infrastructures.

Within the project, I contributed to the development of a methodology for the synchronization of systems characterized by ambiguity and to the implementation of a distributed on-line risk prediction system.

2008–2009 National FIRB Project **SAT**

Within the project, managed by University Roma Tre, I contributed to analyze the feasibility of the adoption of RFID technology for the implementation of an automated storage facility.

Visiting Researcher

2022 Visiting researcher for 60 days at Space Systems Solutions, Cyprus, within the Marie Skłodowska-Curie Research and Innovation Staff Exchange project EUMAP.

2019 Visiting researcher, University of Hokkaido, Sapporo, Japan.

2019 Visiting researcher, University of Kent, Canterbury, England.

2018 Visiting researcher, University of Cyprus, Nicosia, Cyprus, within the HANSEL project.

2018 Visiting researcher, University of Hokkaido, Sapporo, Japan, within the HANSEL project.

2018 Visiting researcher, University of Cyprus, Nicosia, Cyprus within the internal mobility program of the University Campus Bio-Medico of Rome.

2017 Visiting researcher, University of Hokkaido, Sapporo, Japan within the internal mobility program of the University Campus Bio-Medico of Rome.

2017 Visiting researcher, Department of Electrical and Computer Engineering, University of Cyprus within Erasmus plus teacher mobility program.

2016 Visiting researcher, University of British Columbia, within CIPRNET European project.

2016 Visiting researcher, Department of Electrical and Computer Engineering, University of Cyprus within CIPRNET European project.

2015 Visiting researcher, Department of Electrical and Computer Engineering, University of Cyprus within Erasmus plus teacher mobility program.

2014 Visiting researcher at Kios Research Center, University of Cyprus within Erasmus teaching staff mobility program and CIPRNET Project internal staff exchange program.

Editorial Activities

2022 *Program Committee Member* for the 2nd IEEE Intl. Workshop on ALgorithms for Indoor Architectures and Systems (ALIAS 2022), held in conjunction with the 23rd IEEE Intl. Conference on Mobile Data Management (MDM 2022), June 6, 2022, Paphos, Cyprus.

2021 *Associate Editor* for Contributed Papers within the 60th IEEE Conference on Decision and Control, to be held in Austin, USA, on December 13th-15th, 2021.

2020–2021 *Associate Editor* for Contributed Papers within the American Control Conference 2021, to be held in New Orleans, USA, on May 26-28, 2021.

2020 *Associate Editor* for Contributed Papers within the 59th IEEE Conference on Decision and Control, to be held in Jeju Island, Korea, on December 8th-11th, 2020.

2019–2020 *Associate Editor* for Contributed Papers within the American Control Conference 2020, Denver, USA, July 1-3, 2020.

2018 *Guest Editor* of the Special Issue: "Pharma 4.0: Opportunities and Constraints of the Pharmaceutical Industry Digitalization", Medic Methodology & Education for Clinical Innovation – New Series, vol. 26, 2018, Pacini Editore Medicina.

2017 *Guest Editor* with Dr. Unal Tatar and Dr. James Moreland of the Special Issue: "Cyber Security of Critical Infrastructures: Recent Advances and Future Directions", International Journal of Critical Infrastructures, vol. 13, n. 2-3, 2017, Inderscience.

2013 *Guest Editor*, with prof. Federica Pascucci from University Roma Tre, of the Special Issue *"Situation Awareness: Theory and Methodology"*, International Journal of System of Systems Engineering (IJSSE). ISSN online: 1748-068X, ISSN print: 1748-0671, 2013.

2016–2019 *Programme Committee Member* of the 11th International Conference on Critical Information Infrastructures Security (CRITIS).

2016–2017 *Programme Committee Member* of the IEEE International Symposium on Safety, Security and Rescue Robotics (SSRR).

2017 *Program Committee Member* of the 18th International Symposium on Advanced Intelligent Systems (ISIS2017).

2016 *Programme Committee Member* of the Joint 8th International Conference on Soft Computing and Intelligent Systems and 17th International Symposium on Advanced Intelligent Systems (SCIS-ISIS2016).

2015 *Programme Committee Member* of the 2*nd PhD Forum* within the *Sixt International Conference on Indoor Positioning and Indoor Navigation* (IPIN2015).

2013–2015 *Program Committee Member* of the *World Conference on Information Systems and Technologies* (WorldCIST).

Workshop Organization

2019 *Co-organizer* with dr. Luca Faramondi and prof. Francesco Flammini of the Special Session "Homeland Security: Tools and Methodologies", within the 2019 IEEE International Conference on Systems, Man, and Cybernetics on October 6th-9th, 2019 in Bari, Italy.

2018 *Organizer* of the Workshop "Healthcare 4.0: Digitalization from the Farmaceutical Industry to the Hospital", held in Rome, Italy on July 3rd, 2018.

2017 *Co-organizer* with Dr. Angelo Facchini of the Workshop "Complex Water Infrastructures", held in Lucca, Italy on October 12th, 2017 as a side event of the International Conference on Critical Information Infrastructures Security (CRITIS2017).

Invited Talks

2022 Seminar: "Multi-Criteria Decision-Making with Incomplete Preference Information", Department of Electrical and Computer Engineering Seminar Series, University of Cyprus, January 26th, 2022.

2019 Seminar: "Aggregating Centrality Rankings: A Novel Multi-Criteria Approach to Detect Network Vulnerabilities", Hokkaido University, Sapporo, Japan, September 12th, 2019.

2019 Seminar: "Decision Making based on Sparse Information", University of Kent, Canterbury, England, February 20th, 2019.

2018 Seminar: “Decision Making with Sparse Information", Kios Research center, University of Cyprus, Nicosia, Cyprus, November 19th, 2018.

2018 Seminar: “Sparse and distributed analytic hierarchy process", Dipartimento di Ingegneria dell’Informazione e Scienze Matematiche, Universitá di Siena, Italy, September 26th, 2018.

2018 Seminar: “Opinion-Based Optimal Group Formation", Hokkaido University, Sapporo, Japan, June 21st, 2018.

2017 Seminar: “A Multi-Objective Optimization Framework to Assess Network Robustness/Vulnerability", Hokkaido University, Sapporo, Japan, September 21st, 2017.

2017 Lecture: “Artificial Systems: from Modeling to Control", within the workshop “Bio-Complexity: Natural and Artificial Systems", University Campus Bio-Medico of Rome, Italy January 30th, 2017.

2016 Seminar: “An Attacker Perspective to Network Vulnerability in Critical Infrastructures", Kios Research Center, University of Cyprus, Cyprus, October 24th, 2016.

2016 Seminar: “Distributed Cycle Detection and Removal", Kios Research Center, University of Cyprus, Cyprus, October 19th, 2016.

2016 Seminar: “Critical Infrastructure Protection, Challenges, Perspectives and the Experience of CIPRNET project" within the workshop “Metrology in a complex world: from urban and energy systems to social networks", Centro di Servizi Metrologici Avanzati (CeSMA), Universitá degli Studi di Napoli Federico II, Naples, Italy, July 26th, 2016.

2015 Seminar: “Distributed Finite-Time Averaging Algorithms", Kios Research Center, University of Cyprus, Cyprus, March 3rd, 2015.

2015 Seminar: “Wireless Sensor Networks Localization: The Shadow Edge Approach", University of Cyprus, Cyprus, February 26th, 2015.

2015 Invited Talk: “Robustness: a Systems Engineering Point of View", Workshop “Robustness – Engineering Science", Rome, Italy, February 5th, 2015.

2014 Seminar: “Agreement, Clustering and Localization in Distributed Networks", University of Sannio, Benevento, Italy, September 16th, 2014.

2014 Seminar: “Distributed algorithms for localization, clustering and agreement", Kios Research Center, University of Cyprus, Cyprus, May 6th, 2014.

2012 ERNCIP *Thematic Area (TA) on ICS and Smart Grids* Meeting, invited by EU Commission as Critical Infrastructure expert, Joint Research Center (JRC), Ispra (VA), Italy, 3 February 2012.

2012 Invited Talk *“Consensus, Ambiguity and Localization”*, University Campus Bio–Medico of Rome, Italy, 6 November 2012.

2010 Invited Speech *“Online Distributed Interdependency Estimation”*, SANS SCADA Security Summit, London, 26–29 September 2010.

Peer Review Activities

2009–today Reviewer of more than 230 papers in international journals and conferences: in particular, reviewer of 27 papers for the IEEE Transactions on Automatic Control, 14 papers for the IEEE Transactions on Control of Network Systems, 8 papers for Automatica and 47 papers for the International Journal of Critical Infrastructure Protection.

University Service

Appointed Roles

2021–today Member of the "Board of Discipline" of the University Campus Bio-Medico of Rome, in charge of evaluating academic misconduct cases.

2021–today Member of the "Teaching Quality Insurance Group" of the M.Sc degree in "Intelligent Systems Engineering" (Computer Science Engineering) of the University Campus Bio-Medico of Rome.

2020–today International Mobility Responsible for the M.Sc degree in "Intelligent Systems Engineering" (Computer Science Engineering) of the University Campus Bio-Medico of Rome.

Past Roles

2019–2020 Member of the Board of Governors of the Doctorate Program in Computer Science and Automation Engineering at University Roma Tre of Rome, Italy.

M.Sc Teaching

2020–today Course "Event-based Systems and Networks" (6 credits, automation, SSD ING-INF/04), M.Sc. Program in "Intelligent Systems Engineering" (Computer Science Engineering), University Campus Bio–Medico of Rome, Italy.

2015–today Course "Automatic Control" (6 credits, automation, SSD ING-INF/04), M.Sc. Program in Biomedical Engineering, University Campus Bio–Medico of Rome, Italy. **Taught in English**.

2018–2020 Course "Dynamics and Control of Chemical Processes–I Module" (3 credits, automation, SSD ING-INF/04), M.Sc. Program in Chemical Engineering for Sustainable Development, University Campus Bio–Medico of Rome, Italy. **Taught in English**.

2012–2020 Course "Complements of Automatic Control" (3 credits, automation, SSD ING-INF/04), Faculty of Mechanics and Aeronautical Engineering, University Roma Tre of Rome, Italy.

2013–2018 Course "Dynamics and Control of Industrial Processes–I Module" (3 credits, automation, SSD ING-INF/04), M.Sc. Program in Chemical Engineering for Sustainable Development, University Campus Bio–Medico of Rome, Italy. **Taught in English**.

2011–2012 and 2014–2016 Course "Control Systems for Industrial Automation" (9 credits, automation, SSD ING-INF/04), Faculty of Industrial Engineering, University of Cassino, Italy.

Postgraduate Teaching

2018 Ph.D Course "Applications of Algebraic Graph Theory" (3 credits, automation, SSD ING-INF/04), Faculty of Engineering, University Roma Tre of Rome, Italy. **Taught in English**.

2011–today Postgraduate Program in Homeland Security, University Campus Bio–Medico of Rome and NITEL Consortium, Italy.

2013–2015 Course "Quality, Safety and Systems Suitability"– Postgraduate Program in Systems Engineering, University Tor Vergata of Rome, Italy.

2013 Post-graduate course on Business Intelligence, University Campus Bio–Medico of Rome, Italy.

External Examiner

2018–2019 External Examiner for the Course "Critical Infrastructure Security", held by prof. Stephen Wolthusen, Faculty of Information Technology and Electrical Engineering, Norwegian University of Science and Technology, Trondheim, Norway.

Ph.D Supervision

2020-today Camilla Fioravanti. The PhD revolves around algebraic methods to guarantee privacy and security in multi-agent distributed systems.

2020-today Francesca Santucci. The PhD, in collaboration with INAIL (Italian National Institute for Insurance against Accidents at Work), revolves around data fusion, wearable devices and workers' safety and security.

PostDoc Supervision (Past)

2018 Fabio Giudici. The topic of the postdoc position was "Development and integration of innovative SCADA and IoT systems for Hospital 4.0 and Industry 4.0".

Undergraduate Student Supervision

2016–today *Advisor* of 3 B.sc students in Industrial Engineering, and 3 M.Sc student in Biomedical Engineering, University Campus Bio-Medico of Rome, Italy.

2014–today *Mentor* of more than 20 M.sc students in Industrial Engineering, University Campus Bio-Medico of Rome, Italy.

2008–today *Co-advisor* of 16 students, both at University Campus Bio-Medico (UCBM) and at University Roma Tre (RM3).

* Complete Publication List

International Journals

[IJ48] M. Ylönen, A. Tugnoli, **G. Oliva**, J. Heikkilä, M. Nissilä, M. Iaiani, V. Cozzani, R. Setola, G. Assenza, W. Steijn, D. van der Beek, N. Gotcheva and E. Del Prete, "Integrated Management of Safety and Security in Seveso Sites - Sociotechnical Perspectives", *Safety Science*, vol. 151, 2022 (doi: https://doi.org/10.1016/j.ssci.2022.105741).

[IJ47] **G. Oliva**, A. Rikos, A. Gasparri and Christoforos N. Hadjicostis "Distributed Negotiation for Reaching Agreement among Reluctant Players in Cooperative Multi-Agent Systems", *IEEE Transactions on Automatic Control*, 2022 (doi:10.1109/TAC.2022.3161612).

[IJ46] **G. Oliva**, A. Farina and R. Setola "Intelligence-aware Batch Processing for TMA with Bearings-Only Measurement", *Sensors*, vol. 21, no. 21, 7211, 2021.

[IJ45] **G. Oliva**, R. Setola and A. Gasparri "Distributed Markov Chain Redesign for Multi-Agent Decision-Making Problems", *IEEE Transactions on Automatic Control* (provisionally accepted).

[IJ44] **G. Oliva**, L. Faramondi, R. Setola, M. Tesei and E. Zio, "A Multi-Criteria Model for the Security Assessment of Large-Infrastructure Construction Sites", *International Journal of Critical Infrastructure Protection*, vol. 35, 100460, 2021 (doi: https://doi.org/10.1016/j.ijcip.2021.100460).

[IJ43] C. Giudicianni, M. Herrera, A. Di Nardo, **G. Oliva** and A. Scala, "The faster the better: On the shortest paths role for near real-time decision making of water utilities", *Reliability Engineering & System Safety*, vol. 212, 107589, 2021 (doi:10.1016/j.ress.2021.107589).

[IJ42] E. Montijano, **G. Oliva** and A. Gasparri, "Distributed estimation and control of node centrality in undirected asymmetric networks", *IEEE Transactions on Automatic Control* vol. 66, no. 5, pp. 2304–2311, 2021 (doi: 10.1109/TAC.2020.3004788).

[IJ41] L. Faramondi, **G. Oliva** and S. Bozòki, "Incomplete Analytic Hierarchy Process with Minimum Weighted Ordinal Violations", *International Journal of General Systems*, vol. 49, no. 6, pp. 574–601, 2020.

[IJ40] G. Assenza, L. Faramondi, **G. Oliva** and R. Setola, "Cyber threats for operational technologies", *International Journal of System of Systems Engineering*, vol.10, no.2, 2020.

[IJ39] L. Faramondi, **G. Oliva**, and R. Setola, "Critical Infrastructure Vulnerability Assessment via Multi-Criteria Ranking Aggregation", *International Journal on Critical Infrastructure Protection*, vol. 28, id. 100338, 2020 (doi: 10.1016/j.ijcip.2020.100338).

[IJ38] **G. Oliva**, S. Panzieri, R. Setola and A. Gasparri, "Gossip Algorithm for Multi-Agent Systems via Random Walk", *Systems & Control Letters*, vol. 128, pp. 34-40, 2019 (doi: 10.1016/j.sysconle.2019.04.009).

[IJ37] L. Faramondi, **G. Oliva**, R. Setola and C. N. Hadjicostis, "Distributed C-Means Clustering via Broadcast-Only Token-Passing", *IEEE Transactions on Control of Network Systems*, vol. 7, no. 1, pp. 315–325, 2020 (doi: 10.1109/TCNS.2019.2910472).

[IJ36] **G. Oliva**, A. Rikos, C. N. Hadjicostis and A. Gasparri, "Distributed Flow Network Balancing with Minimal Effort", *IEEE Transactions on Automatic Control*, vol. 64, no. 9, pp. 3529–3543, 2019 (doi: 10.1109/TAC.2019.2891443).

[IJ35] A. Tugnoli, M. Iaiani, **G. Oliva**, E. Salzano, R. Setola and V. Cozzani, "Physical security barriers and protection distances for Seveso sites", *Chemical Engineering Transactions*, vol. 77, pp. 883–888, 2019 (doi: 10.3303/CET1977148).

[IJ34] **G. Oliva**, R. Setola, A. Scala and P. Dell'Olmo, "Opinion-Based Optimal Group Formation", *Omega*, vol. 89, pp. 164–176, 2019 (doi: 10.1016/j.omega.2018.10.008).

[IJ33] L. Faramondi, R. Setola and **G. Oliva**, "Performance and Robustness of Discrete and Finite Time Average Consensus Algorithms", *International Journal of Systems Science*, vol 49, no. 12, pp. 2704–2724, 2018. (doi: 10.1080/00207721.2018.1510059).

[IJ32] **G. Oliva**, R. Setola, A. Scala and P. dell'Olmo, "Sparse Analytic Hierarchy Process. An Experimental Analysis", *Soft Computing*, vol. 23, no. 9, pp. 2887–2898, 2019. (doi: 10.1007/s00500-018-3401-9).

[IJ31] M. Menci, **G. Oliva**, M. Papi, R. Setola and M. Zoppello, "Distributed Utility Estimation with Heterogeneous Relative Information", *IEEE Control System Letters*, vol. 2, no. 2, pp. 2475-1456, 2018 (doi: 10.1109/LCSYS.2018.2819964).

[IJ30] **G. Oliva**, R. Setola and M. Tesei, "A Stackelberg Game-Theoretical Approach to Maritime Counter-Piracy", *IEEE Systems Journal*, vol. 13, no. 1 pp. 982 –993, 2019 (doi: 10.1109/JSYST.2018.2795892).

[IJ29] L. Faramondi, **G. Oliva**, R. Setola S. Panzieri, F. Pascucci, M. Schlueter and M. Munetomo, "Network Structural Vulnerability A Multi-Objective Attacker Perspective", *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, vol. 49, no. 10, pp. 2168–2232, 2019 (doi: 10.1109/TSMC.2018.2790438).

[IJ28] L. Faramondi, **G. Oliva** and V. Piemonte, "Novel Vulnerability Metrics for Interdependent Systems based on System Controllability", *IOP Conference Series: Journal of Physics: Conference Series*, vol 1026, 012021, 2018 (doi :10.1088/1742-6596/1026/1/012021).

[IJ27] S. Feng, C. Wu, Y. Zhang and **G. Oliva**, "WSN Deployment and Localization Using a Mobile Agent", *Wireless Personal Communication*, vol. 97, no. 4, pp 4921–4931, 2017 (doi: 10.1007/s11277-017-4747-5).

[IJ26] L. Faramondi, R. Setola S. Panzieri, F. Pascucci and **G. Oliva**, "Finding Critical Elements in Infrastructure Networks", *International Journal of Critical Infrastructure Protection*, vol. 20, pp. 3–15, 2018 (doi: 10.1016/j.ijcip.2017.11.004).

[IJ25] **G. Oliva**, S. Cioabă and C. N. Hadjicostis, "Distributed Calculation of Edge-Disjoint Spanning Trees for Robustifying Distributed Algorithms against Man-in-the-Middle Attacks", *IEEE Transactions on Control of Network Systems*, vol. 5, no. 4, pp. 1646–1656, 2018 (doi:10.1109/TCNS.2017.2746344).

[IJ24] **G. Oliva**, R. Setola and A. Scala, "Sparse and Distributed Analytic Hierarchy Process", *Automatica*, vol. 85, pp. 211–220 (doi: 10.1016/j.automatica.2017.07.051).

[IJ23] **G. Oliva**, R. Setola, L. Glielmo and C. Hadjicostis, "Distributed Cycle Detection and Removal", IEEE Transactions on Control of Network Systems, vol. 5, no. 1, pp. 194-204, 2018 (doi:10.1109/TCNS.2016.2593264).

[IJ22] **G. Oliva**, R. Setola and C. Hadjicostis, "Distributed Finite-Time Calculation of Node Eccentricities, Graph Radius and Graph Diameter", *Systems and Control Letters*, vol. 92, pp. 20–27, 2016 (doi:10.1016/j.sysconle.2016.02.015).

[IJ21] **G. Oliva**, R. Setola, F. Pascucci and S. Panzieri, "Localization of Networks with Presence and Distance Constraints based on 1-hop and 2-hop Mass-Spring Optimization", *ICT Express*, vol. 2, no. 1, pp 19–22, 2016 (doi:10.1016/j.icte.2016.02.005).

[IJ20] **G. Oliva**, R. Setola and S. Panzieri, "Critical Clusters in Interdependent Economic Sectors. A Data-Driven Spectral Clustering Analysis", *The European Physical Journal Special Topics* (EPJ–ST), vol. 225, no. 10, pp. 1929–1944, 2016 (doi:10.1140/epjst/e2015-50321-0).

[IJ19] **G. Oliva**, R. Setola and C. Hadjicostis, "Distributed Finite-Time Average-Consensus with Limited Computational and Storage Capability", *IEEE Transactions on Control of Network Systems*, vol. 4, no. 2 pp. 380-391, 2017 (doi: 10.1109/TCNS.2016.2524983).

[IJ18] L. Di Paola, C. B. M. Platania, **G. Oliva**, R. Setola, F. Pascucci and A. Giuliani, "Characterization of Protein-Protein Interface Through a Protein-Contact-Network Approach", *Frontiers in Bioengineering and Biotechnology, section Computational Physiology and Medicine*, vol. 3, n.170, 2015 (doi: 10.3389/fbioe.2015.00170).

[IJ17] **G. Oliva**, F. Pascucci, S. Panzieri and R. Setola "Sensor Network Localization: Extending Trilateration via Shadow Edges", *IEEE Transactions on Automatic Control*, vol. 60, n. 10, pp. 2752–2755, 2015 (doi: 10.1109/TAC.2015.2404253).

[IJ16] **G. Oliva**, D. La Manna, A. Fagiolini and R. Setola, "Distributed Data clustering via Opinion Dynamics", *International Journal of Distributed Sensor Networks*, Volume 2015, Article ID 753102, 13 pages, 2015 (doi: http://dx.doi.org/10.1155/2015/753102).

[IJ15] **G. Oliva**, R. Setola and K. Barker, "Fuzzy Importance Measures for Ranking Key Interdependent Sectors Under Uncertainty", *IEEE Transactions on Reliability*, vol. 63, n. 1, p. 42–57, 2014 (doi: 10.1109/TR.2014.2299113),

[IJ14] **G. Oliva**, S. Panzieri and R. Setola, "Discrete-Time Linear Systems with Fuzzy Dynamics", *Journal of Intelligent & Fuzzy Systems*, vol. 27, n. 3, pp 1129–1141, 2014 (doi: 10.3233/IFS-131076),

[IJ13] **G. Oliva**, S. Panzieri, A. Priolo and G. Ulivi, "Characterising Failures and Attacks in Average Consensus", *International Journal of Systems, Control and Communications*, vol. 6, n. 1, pp. 1–19, 2014 (doi: 10.1504/IJSCC.2014.062798).

[IJ12] L. Adacher, A. Gemma and **G. Oliva**, "Decentralized spatial decomposition for traffic signal synchronization", Transportation Research Procedia, vol. 3, pp. 992–1001, 2014.

[IJ11] L. Adacher, **G. Oliva** and F. Pascucci, "Decentralized Route Guidance Architectures for Multiple Path Routing in Urban Transportation Networks", *Procedia – Social and Behavioral Sciences*, Volume 111, pp. 1054–1062, Elsevier, 2014 (doi: 10.1016/j.sbspro.2014.01.140).

[IJ10] F. Conte, **G. Oliva** and R. Setola, "Time-Varying Input-output Inoperability Model", *Journal on Infrastructure Systems*, vol. 19, n.1, pp. 47–57, ASCE, 2013. (doi:10.1061/ (ASCE)IS.1943-555X.0000099).

[IJ9] **G. Oliva**, S. Panzieri and R. Setola, "An Amendment to: Distributed Synchronization Under Uncertainty: a Fuzzy Approach", Fuzzy Sets and Systems, vol. 235, pp. 104–106, technical note, 2014 (doi: http://dx.doi.org/10.1016/j.fss.2013.05.016).

[IJ8] B. B. Zobel, R. Del Vescovo, **G. Oliva**, V. Russo and R. Setola, "Assessing Bone Loss in Micro-Gravity: a Fuzzy Approach", *Computer Methods and Programs in Biomedicine*, Elsevier, vol. 108, n. 3, pp. 910–921, 2012. (doi:10.1016/j.cmpb.2012.05.001),

[IJ7] G. Digioia, C. Foglietta, **G. Oliva** and S. Panzieri, "Aware on-line interdependency modeling via evidence theory", *International Journal of Critical Infrastructures* (IJCIP), vol. 9, n. 1–2, pp. 74–92, 2013. (doi: 10.1504/IJCIS.2013.051604),

[IJ6] E. Etcheves Miciolino, **G. Oliva** and R. Setola, "Distributed Opinion Dynamics with Heterogeneous Reliability", *International Journal of System of Systems Engineering* (IJSSE), Vol.4, No.3/4, pp.277–290, 2013 (doi:10.1504/IJSSE.2013.057657).

[IJ5] **G. Oliva**, R. Setola and S. Panzieri, "Distributed Consensus under Ambiguous Information", *International Journal of Systems of Systems Engineering*, Vol.4, No.1, pp. 55 –78, 2013. (doi:10.1504/IJSSE.2013.053504),

[IJ4] **G. Oliva**, S. Panzieri and R. Setola, "Distributed Synchronization Under Uncertainty: a Fuzzy Approach", *Fuzzy Sets and Systems*, Elsevier eds., vol. 206, pp. 103–120, 2012. (doi:10.1016/j.fss.2012.02.003),

[IJ3] **G. Oliva**, "Stability and Level-wise Representation of Discrete-time Fuzzy Systems", *International Journal of Fuzzy Systems*, vol. 14, n. 2, pp. 185–192, 2012,

[IJ2] **G. Oliva**, S. Panzieri and R. Setola, "Fuzzy Dynamic Input-Output Inoperability Model", *International Journal on Critical Infrastructure Protection*, vol. 4, n. 3-4, pp. 165–175, Elsevier, 2011 (doi:10.1016/j.ijcip.2011.09.003),

[IJ1] **G. Oliva**, S. Panzieri and R. Setola, "Agent Based Input-Output Interdependency Model", *International Journal on Critical Infrastructure Protection*, Elsevier, vol. 3, n. 2, pp. 76–82, 2010. (doi:10.1016/j.ijcip.2010.05.001),

Book Chapters

[BC7] L. Faramondi, G. Assenza, **G. Oliva** , E. Del Prete, F. Pera and R. Setola, "A Strategy to Improve Infrastructure Survivability via Prioritizing Critical Nodes Protection", in *Issues on Risk Analysis for Critical Infrastructure Protection*, Rosato and Di Pietro Eds., Intechopen (ISBN: 978-1-83962-621-0, doi:10.5772/intechopen.95367).

[BC6] L. Faramondi, **G. Oliva**, R. Setola and L. Vollero, "Hospital 4.0: Blockchain and Robust Data Management", in *Security and Privacy Trends in the Industrial Internet of Things*, Alcaraz Ed., Springer, pp. 271–285, 2019. (ISBN 978-3-030-12330-7).

[BC5] M. Menci and **G. Oliva**, "Robustness vs Control in Distributed Systems", in *Biological Robustness. Emerging Perspectives from within the Life Sciences*, Bertolaso, Caianiello and Serrelli Eds., Springer, pp. 189–204, 2018. (ISBN 978-3-030-01198-7).

[BC4] **G. Oliva** and R. Setola, "Infrastructure Interdependencies–Modeling and Analysis", in "Intelligent Monitoring, Control, and Security of Critical Infrastructure

Systems", Studies in Computational Intelligence, vol. 565, pp. 239–261, Elias Kyriakides and Marios Polycarpou eds., Springer-Verlag, 2015 (doi: 10.1007/978-3-662-44160-2_9).

[BC3] **G. Oliva**, S. Panzieri and R. Setola, "Modelling and Simulation of Critical Infrastructures", In *Critical Infrastructure Security: Assessment, Prevention, Detection, Response*, F. Flammini ed., WIT press, 2012. (isbn:978-1845645625).

[BC2] C. Foglietta, **G. Oliva** and S. Panzieri, "Online Distributed Evaluation of Interdependent Critical Infrastructures", In *Nonlinear Estimation and Applications to Industrial Systems Control*, G. Rigatos ed., Nova Pubblications, 2012.

[BC1] S. De Porcellinis, **G. Oliva**, S. Panzieri and R. Setola, "A Holistic-Reductionistic Approach for Modeling Interdependencies ", *Critical Infrastructure Protection III*, M. Papa and S. Shenoi eds., vol. 311/2009, pag. 215-227, Springer, 2009 (isbn:978-3-642-04797-8),

Conference Papers

[IC52] A. Furchí, **G. Oliva**, and A. Gasparri, "Distributed Finite-time Optimization for Compromise-Seeking Agents with Relative Preferences", *IEEE European Control Conference 2022* (to appear).

[IC51] C. Fioravanti and **G. Oliva**, "Towards Asynchronous State Reconstruction via Time Projection. Preliminary Results in the case of two Sensors", *IEEE European Control Conference 2022* (to Appear).

[IC50] C. Fioravanti, **G. Oliva**, S. Panzieri and C. N. Hadjicostis "A Secure Communication Protocol with Application to Networked Kalman Filtering", *2022 American Control Conference* (to Appear).

[IC49] C. Fioravanti, **G. Oliva** and R. Setola "Distributed 2-Way Spectral Clustring", *2021 10th International Conference on Mechatronics and Control Engineering* (to Appear).

[IC48] M. Lippi, M. Santilli, **G. Oliva** and A. Gasparri "A Finite-time Distributed Protocol for Link Prediction in Networked Multi-Agent Systems", *IEEE Conference on Decision and Control* (to Appear).

[IC47] L. Faramondi, **G. Oliva** and R. Setola "Optimal Man-In-The-Middle Covert Attack", *The 16th International Conference on Critical Information Infrastructures* (to appear).

[IC46] M. Santilli, **G. Oliva** and A. Gasparri "Distributed Finite-Time Algorithm for a Class of Quadratic Optimization Problems with Time-Varying Linear Constraints", *IEEE Conference on Decision and Control* , pp. 4380–4386, 2020 (doi: 10.1109/CDC42340.2020.9304300).

[IC45] **G. Oliva**, A. E. Amideo, S. Starita, R. Setola and M. P. Scaparra, "Aggregating Centrality Rankings: A Novel Approach to Detect Critical Infrastructure Vulnerabilities", 14th International Conference on Critical Information Infrastructures Security (CRITIS2019), pp. 57-68, 2019.

[IC44] L. Faramondi, S. Panzieri, R. Setola and **G. Oliva**, "Assessing Node Criticality in Dynamical Distributed Systems", *European Control Conference*, pp. 1537–1543, 2019.

[IC43] **G. Oliva**, M. Santilli and A. Gasparri, "Optimal Redesign of Markov Chains with Prescribed Repulsive Distribution", IEEE Conference on Decision and Control, pp. 1610–1615, 2018.

[IC42] E. Montijano, **G. Oliva** and A. Gasparri, "Distributed estimation of node centrality with application to agreement problems in social networks", IEEE Conference on Decision and Control, pp. 5245–5250, 2018.

[IC41] L. Faramondi, **G. Oliva**, S. Panzieri and R. Setola, "Discovering Vulnerabilities in Heterogeneous Interconnected Systems", 13th International Conference on Critical Information Infrastructures Security (CRITIS2018), pp. 204-215, 2018.

[IC40] M. Menci, **G. Oliva**, M. Papi, R. Setola and A. Scala, "A Suite of Distributed Methodologies to Solve the Sparse Analytic Hierarchy Process Problem", 2018th European Control Conference, pp. 1147–1453, 2018.

[IC39] F. Inderst, R. Setola, S. Panzieri, F. Pascucci and **G. Oliva**, "Faulty or Malicious Anchor Detection Criteria for Distance-Based Localization", 12th International Conference on Critical Information Infrastructures Security (CRITIS2017), pp. 229–240, 2017.

[IC38] **G. Oliva**, Andrea Gasparri, Adriano Fagiolini and Christoforos N. Hadjicostis, "Distributed and Proximity-Constrained C-Means for Discrete Coverage Control", Conference on Decision and Control, pp. 1584–1589, 2017.

[IC37] Luca Faramondi, **G. Oliva**, Roberto Setola, Annunziata E. Amideo and Maria P. Scaparra, "Performance Analysis of Single and Multi-Objective Approaches for the Critical Node Detection Problem", Optimization and Decision Science, XLVII Annual Meeting of AIRO–Italian Operations Research Society, pp. 315–324, 2017 (doi: 10.1007/978-3-319-67308-0_32).

[IC36] **G. Oliva**, R. Setola and C. N. Hadjicostis, "Distributed Asynchronous Cholesky Decomposition", Conference on Decision and Control (CDC2016), pp. 4414–4419, 2016 (doi: 10.1109/CDC.2016.7798939).

[IC35] **G. Oliva**, R. Setola and C. N. Hadjicostis, "Distributed C-Means Data Clustering Algorithm", Conference on Decision and Control (CDC2016), pp. 4396–4401, 2016 (doi: 10.1109/CDC.2016.7798936).

[IC34] **G. Oliva**, A. Scala, R. Setola and L. Glielmo, "Access Time Eccentricity and Diameter", *5th International Symposium on Positive Systems*, Roma, September 14th-16th 2016 (doi: 10.1007/978-3-319-54211-9_17).

[IC33] L. Faramondi, **G. Oliva**, F. Pascucci, S. Panzieri and R. Setola, "Critical Node Detection based on Attacker Preferences", *24th Mediterranean Conference on Control and Automation*, pp. 773–778, 2016 (doi: 10.1109/MED.2016.7535859).

[IC32] **G. Oliva**, S. Panzieri and R. Setola, "Identifying Critical Infrastructure Clusters via Spectral Analysis", 10th International Conference on Critical Information Infrastructures Security, Berlin, Germany, October 5–7, 2015 (CRITIS2015), pp. p. 223-235 (doi: 10.1007/978-3-319-33331-1_18).

[IC31] F. Inderst, F. Pascucci, **G. Oliva** and R. Setola, "Augmenting Rescuer Safety Using Wireless Sensor Networks", 6th International Conference on Indoor Positioning and Indoor Navigation (IPIN2015), pp. 1–9, 2015 (doi: 10.1109/IPIN.2015.7346773).

[IC30] **G. Oliva**, S. Panzieri, F. Pascucci and R. Setola, "Noisy Localization over Unit Disk Graphs: the Shadow Edge Approach", American Control Conference, Chicago, USA, pp. 4436–4442, 2015 (doi: 10.1109/ACC.2015.7172027).

[IC29] F. Gaetano, **G. Oliva**, S. Panzieri, C. Romani and R. Setola, "Analysis of Severe Space Weather on Critical Infrastructures", *Critical Information Infrastructure Security, Lecture Notes in Computer Science*, vol. 8328, pp. 62–73, Springer, 2013 (doi: dx.doi.org/10.1007/978-3-319-03964-0_6).

[IC28] G. Digioia, C. Foglietta, **G. Oliva** and S. Panzieri, "Countermeasures Selection via Evidence Theory", *Critical Information Infrastructure Security, Lecture Notes in Computer Science*, vol. 6983, pp. 218–222, Springer, 2013 (doi: dx.doi.org/10.1007/978-3-642-41476-3_21).

[IC27] **G. Oliva**, S. Panzieri and R. Setola, "Fuzzy Input-Output Inoperability Model", *Critical Information Infrastructure Security, Lecture Notes in Computer Science*, vol. 6983, pp. 200–204, Springer, 2013 (doi: dx.doi.org/10.1007/978-3-642-41476-3_17).

[IC26] G. Digioia, C. Foglietta, **G. Oliva**, S. Panzieri and R. Setola, "Moving from looking to understanding: Situation Awareness and Prediction", In *Effective Surveillance for Homeland Security: Balancing Technology and Social Issues*, F. Flammini, R. Setola and G. Franceschetti eds., pp. 229–255, CRC Press / Taylor & Francis, 2013 (isbn:9781439883242).

[IC25] R. Lupo, C. Albanese, F. Agostini, F. Berrilli, D. Del Moro, R. Setola, C. Romani and **G. Oliva**, "Failure propagation simulations in Critical Infrastructures applied to a Space Weather event", 11th European Space Weather Week Conference, 2014.

[IC24] **G. Oliva**, R. Setola, F. Pascucci, C. Laoudias and C. P. Panayiotou "Hybrid Sensor Networks Localization. Dealing with Range-Capable and Range-Free Nodes", IPIN 2014, (Accepted).

[IC23] **G. Oliva**, R. Setola and M. Polycarpou, "Distributed Gabriel Graph Construction and Meta-Information Gathering", 18th International Workshop on ADC Modelling and Testing Research on Electric and Electronic Measurement for the Economic Upturn, Benevento, Italy, September 15-17, pp. 259–264, 2014.

[IC22] **G. Oliva**, D. La Manna, A. Fagiolini and R. Setola, "Distance–Constrained Data Clustering by Combined k–means Algorithms and Opinion Dynamics Filters", *2014 Mediterranean Conference on Control and Automation (MED2014)*, Palermo, Italy, June 16–19, pp. 612–619, 2014 (doi: 10.1109/MED.2014.6961441).

[IC21] L. Adacher, F. Pascucci and **G. Oliva** , "Decentralized Assignment for Intelligent Electric Vehicles to Recharge Stations", *16th UKsim–AMSS International Conference on Modeling and Simulation, Cambridge*, England, March 26–28, 2014.

[IC20] F. De Cillis, **G. Oliva**, F. Pascucci, R. Setola and M, Tesei, On field gesture-based human-robot interface for emergency responders, *2013 IEEE Symposium on Safety, Security and Rescue Robotics* (SSRR 2013), pp. 1–6, LinkÃ¶ping, Sweden, October 21–26, 2013 (doi: 10.1109/SSRR.2013.6719345).

[IC19] **G. Oliva**, R. Setola, D. Ward and O. Jonkeren, "Identifying Key Sectors with Experience Based Input-Output Model", *21st International Input-Output Conference*, Kitakyushu, Japan, July 9–12, 2013.

[IC18] **G. Oliva**, S. Panzieri, F. Pascucci and R. Setola, "Simultaneous Localization and Routing in Sensor Networks using Shadow Edges", *2013 IFAC Intelligent Autonomous Vehicles Symposium* (IAV2013), Gold Coast, Australia, 26-28, pp 199–204, 2013 (doi:10.3182/20130626-3-AU-2035.00067),

[IC17] **G. Oliva**, S. Panzieri, F. Pascucci and R. Setola, "Network Localization by Shadow Edges", *12th European Control Conference (ECC2013)*, pp. 2263 - 2268, Zurich, Switzerland, 17-19 July 2013,

[IC16] **G. Oliva**, L. Di Paola, A. Giuliani, F. Pascucci, and R. Setola, "Assessing Protein Resilience via a Complex Network Approach", *IEEE 2nd International Workshop on Network Science*, pp. 131–137, West Point, NY, USA 29 April – 1 May, 2013 (doi: 10.1109/NSW.2013.6609209).

[IC15] **G. Oliva**, S. Panzieri, F. Pascucci and R. Setola, "Exploiting Routing Information in Wireless Sensor Networks Localization", *IEEE 2nd International Workshop on Network Science*, pp.66–73, West Point, NY, USA 29 April – 1 May, 2013 (doi: 10.1109/NSW.2013.6609196),

[IC14] **G. Oliva**, S. Panzieri and R. Setola, "Fuzzy Chaotic Logistic Maps", *World Automation Congress*, pp. 1–6, Puerto Vallarte, Mexico, 24 – 28 June 2012 (ISBN: 978-1-4673-4497-5).

[IC13] A. Gasparri, **G. Oliva**, M. Franceschelli and S. Panzieri, "Online Distributed Synchronizability Check for Networks of Interconnected Systems", *9th IEEE International Conference on Mobile Ad hoc and Sensor Systems*, Las Vegas, USA, pp. 1–6, 11 October 2012 (doi: 10.1109/MASS.2012.6708517).

[IC12] **G. Oliva**, R. Setola and S. Panzieri, "Consensus of Agents with Fuzzy State", *6th International Conference on Soft Computing and Intelligent Systems/ The 13th International Symposium on Advanced Intelligent Systems* (SCIS-ISIS 2012), pp. 1017–1022, Kobe, Japan, 19–25 November 2012 (doi: 10.1109/SCIS-ISIS.2012.6505011).

[IC11] **G. Oliva** and E. Etcheves Miciolino, "Criticality Assessment via Opinion Dynamics", *International Defense and Homeland Security Simulation Workshop* (DHSS2012), Wien, Austria, 19-21 September, 2012.

[IC10] **G. Oliva**, S. Panzieri and R. Setola, "Discrete-Time LTI Fuzzy Systems: Stability and Representation", *51th Conference on Decision and Control* (CDC2012), pp. 6181–6186, Maui, USA, December 2012 (doi: 10.1109/CDC.2012.6427013).

[IC9] **G. Oliva**, A. Priolo, S. Panzieri and G. Ulivi, "Adding and Removing nodes in Consensus", *20th Mediterranean Conference on Control and Automation*, pp. 1031–1036, Barcelona, Spain, June 2012. (isbn:978-1-4673-2530-1),

[IC8] A. Gasparri and **G. Oliva**, "Fuzzy Opinion Dynamics", *American Control Conference 2012* (ACC2012), pp. 5640 – 5645 Montreal, Canada, 27–29 June 2012 (isbn: 978-1-4577-1095-7),

[IC7] F. Pascucci, S. Panzieri, R. Setola, **G. Oliva**, U. Del Prato, S. Marsella, M. Marzoli, M. Carpanelli, G. Borelli, "REference implementation of interoperable indoor location & communication systems for FIrst Responders: the REFIRE project.", *10th IEEE International Symposium on Safety Security and Rescue Robotics*, pp. 1–5, College Station, Texas, USA, November 5–8, 2012 (doi: 10.1109/SSRR.2012.6523877),

[IC6] **G. Oliva** and S. Panzieri, "Modeling Real Networks with Deterministic Preferential Attachment", *19th Mediterranean Conference on Control and Automation (MED2011)*, pp. 13–18, Corfu, Greece, June 20–23, 2011 (doi: 10.1109/MED.2011.5983122),

[IC5] **G. Oliva**, S. Panzieri and R. Setola, "Online Distributed Interdependency Estimation for Critical Infrastructures.", *50th IEEE Conference on Decision and Control (CDC2011)* , pp. 7224–7229, Orlando, Florida, USA, December 12–15, 2011 (doi: 10.1109/CDC.2011.6160930),

[IC4] P. Capodieci, E. Ciancamerla, M. Minichino, S. Diblasi, C. Foglietta, S. Panzieri, D. Lefevre, **G. Oliva**, R. Setola, S. De Porcellinis, F. Delli Priscoli, M. Castrucci, V. Suraci, L. Lev, Y. Shneck, S. Iassinovski, D. Khadraoui, J. Aubert, J. Jiang, P. Simoes, F. Caldeira, A. Spronska, C. Harpes, M. Aubigny , "Improving Resilience of Interdependent Critical Infrastructures via an On-Line Alerting System", *COMPENG 2010 - Complexity in Engineering*, pp. 88-90, Roma, Italy, February 2010 (doi: 10.1109/COMPENG.2010.28),

[IC3] A. Gasparri, F. Iovino, **G. Oliva** and S. Panzieri, "Online Distributed Interdependency Estimation with Partial Information Sharing ", *COMPENG 2010 - Complexity in Engineering*, pp. 82–84, Roma, Italy, February 2010 (doi: 10.1109/COMPENG.2010.30),

[IC2] A. Gasparri, **G. Oliva** and S. Panzieri, "On the distributed synchronization of on-line IIM Interdependency Models", *7th IEEE International Conference on Industrial Informatics*, pp. 795–800, IEEE, Cardiff (UK), June, 2009 (doi: 10.1109/INDIN.2009.5195904),

[IC1] A. Gasparri, **G. Oliva** and S. Panzieri, "Path Planning using a Lazy Spatial Network PRM", *17th Mediterranean Conference on Control and Automation* (MED2009), pag. 940-945, Thessaloniki, Grece, June 24–26, 2009 (doi: 10.1109/MED.2009.5164666),

International Journals (Submitted)

[SJ6] Z. Al Zahra Sanai Dashti, **G. Oliva**, C. Seatzu, A. Gasparri and M. Franceschelli, "Distributed Mode Computation In Open Multi-Agent Systems", *IEEE Control Systems Letters* (submitted on February 2022).

[SJ5] C. Fioravanti, L. Faramondi, **G. Oliva** and C. N. Hadjicostis "Eavesdropping-Resistant and Privacy-Preserving Consensus", *IEEE Transactions on Control of Network Systems* (revision submitted on January 2022).

[SJ4] **G. Oliva**, M. Schlueuter, M. Muntomo and A. Scala "Optimal Dynamical Intervention Planning against COVID-19-like epidemics", *Plos ONE* (submitted on January 2022).

[SJ3] A. Scala and **G. Oliva** "Optimal vaccination based on simple, yet effective, linear constraints and vaccines with different effectiveness", *Socio-Economic Planning Sciences* (submitted on January 2022).

[SJ2] L. Faramondi, **G. Oliva**, R. Setola and S. Bozoki "Characterizing Robustness to Rank Reversal in Pairwise Comparison Matrices", *European Journal of Operational Research* (Revision submitted on February 2022).

[SJ1] **G. Oliva**, T. Charalambous, L. Faramondi, R. Setola and A. Gasparri "Best Effort Workload Disparity Minimization in Multi-Agent Systems with Capacity Constraints", *IEEE Transactions on Automatic Control* (revision submitted on December 2021).

International Conferences (Submitted)

[SC3] C. Fioravanti and **G. Oliva**, "Distributed and Asynchronous Secure State Reconstruction for Cyber-Physical Systems", *IEEE Mediterranean Conference on Control and Automation 2022* (submitted).

[SC2] C. Fioravanti, **G. Oliva** and S. Panzieri, "Distributed Asynchronous Projection onto the Intersection of Convex Sets", *IEEE Mediterranean Conference on Control and Automation 2022* (submitted).

[SC1] C. Fioravanti, **G. Oliva**, S. Panzieri and C.N. Hadjicostis, "Private Consensus using Chaotic Oscillator-Based Encryption", *IEEE Mediterranean Conference on Control and Automation 2022* (submitted).