

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: **574** – **844**

h-index: **12** – **15**

source: **Scopus** – **Google Scholar**, last update May 9, 2021.

ROLES AND MEMBERSHIPS

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 Almagia.

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	<p>2019 Senior Member of the Institute of Electrical & Electronic Engineers (IEEE).</p> <p>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.</p> <p>2015 Finalist at the CIPRNet Young CRITIS Award, 10th International Conference on Critical Information Infrastructures Security, Berlin, Germany, October 5–7, 2015 (CRITIS2015).</p>
JOB EXPERIENCES	<p>2015–2019 <i>Assistant Professor</i> (RTD-A) in Automatic Control (ING-INF/04) at University Campus Bio–Medico of Rome, Italy.</p> <p>2012–2014 <i>Post-doctorate research fellow</i> at University Campus Bio–Medico of Rome, Italy, within European FP7 Project CIPRNET, European DG-HOME Projects FACIES and REFIRE.</p>
EDUCATION	<p>2008 –2012 <i>Ph.D in Computer Science and Automation</i> (Doctoral School in Engineering, Computer Science and Automation Section) at University Roma Tre of Rome, Italy. Advisor: prof. Stefano Panzieri.</p> <p>2005 –2008 <i>M.Sc Degree in Computer Science and Automation Engineering</i> at University Roma Tre of Rome, Italy. Passing grade: 110/110 with honors.</p> <p>2002 –2005 <i>B.Sc in Computer Science Engineering</i> at University Roma Tre of Rome, Italy. Passing grade: 110/110 with honors.</p>
LINGUISTIC PROFICIENCY	<div>  Italian: mother tongue </div> <div>  English: professional proficiency </div> <div>  Japanese: advanced proficiency (JLPT Level N2 \approx Level C1) </div> <div>  Modern Greek: intermediate proficiency (Level B2) </div> <div>  French: limited proficiency (DELFI Level A2) </div>
EMI SKILLS	<p>2019 Certificate in <i>EMI Skills</i> (English as a Medium of Education), issued by Cambridge English Language Assessment (University of Cambridge).</p>

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 –2022 Project **RESIM**

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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

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". The 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 Università Tor Vergata di Roma and involves also Università degli studi di Messina, Università di Bologna and Università 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: Università 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 Università Campus Bio-Medico di Roma, Università 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

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

- 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 2nd PhD Forum within the *Sixth 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 Pharmaceutical 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

- 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, Università 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), Università 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 200 papers in international journals and conferences: in particular, reviewer of 26 papers for the IEEE Transactions on Automatic Control, 7 papers for Automatica and 37 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

- 2020–2021** 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 multi-agent systems and distributed estimation problems.

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 2 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).

- [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.res.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. 2475–2486, 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).
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