2ⁿᵈ French-Italian Workshop on Robotics 4.0

The workshop will be held on September 1st, 2024, as part of IEEE CASE 2024 in Bari, Italy.

Goal:

The aim of this workshop is to bring together scientists from academia as well as experts from companies, both from France and Italy, who carry out research in the field of robotics and automation. The goal is to share latest advancements and perspectives concerning robots and automation systems in various domains, including manufacturing, healthcare, transportation, and household tasks, focusing on human well-being, in addition to efficiency and productivity.

Organizers:

- Raffaele Carli, Assistant Professor, Polytechnic of Bari. E-mail: raffaele.carli@poliba.it
- Mariagrazia Dotoli, Full Professor, Polytechnic of Bari. E-mail: mariagrazia.dotoli@poliba.it
- Andrea Cherubini, Full Professor, Ecole Centrale Nantes / LS2N. E-mail: andrea.cherubini@ls2n.fr

Abstract:

Recent development and practice of Robotics 4.0 technologies are getting huge momentum to improve citizens quality of life and well-being and enhance society conditions. Latest advancements delve into the progression from traditional automation to collaborative and cognitive automation, emphasizing the importance of human-robot interaction and cooperation. In this context, the proposed workshop aims at exploring the evolution of robotics and automation across different human-centric technological domains, such as manufacturing, healthcare, transportation, and household tasks, while investing the effectiveness of new solutions for helping people, improving working conditions, transferring applications and economic enhancement of research.

Description:

This workshop is intended to be the second edition of the French-Italian Workshop on Robotics. Details on the first edition, conducted in Paris last year and supported by Groupement de Recherche GDR Robotique and Italian Institute for Robotics and Intelligent Machines I-RIM (Working Group on Robotics 4.0), are available here: https://fr-it-robots4fof.sciencesconf.org/

Program:

14:30 – 14:45	*Opening Remarks by workshop organizers*
14:45 – 15.10	*StockBot, autonomous solution for retailers* Speaker: **Francesco Ferro**, CEO, PAL Robotics, Barcelona, Spain and Toulouse, France
15:10 – 15.35	*Can objects be manipulated through aerial cooperative manipulation?* Authors: Dario Sanalitro and Maide Bucolo, University of Catania, Italy Speaker: **Dario Sanalitro**, Assistant Professor
15:35 – 16.00	*Electro-active Materials for Soft Robots and Wearables* Speaker: **Vito Cacucciolo**, Associate Professor, Polytechnic of Bari, Italy
16.00 – 16.30	*Coffee Break*
16:30 – 16.55	*Integrating AI and control methods for state estimation of PDEs* Authors: Andrea Cristofaro, Guglielmo Cappellini, Emanuele De Santis, and Marilena Vendittelli - Department of Computer, Control and Management Engineering, Sapienza University of Rome, Italy Speaker: **Marilena Vendittelli**, Associate Professor
16:55 – 17.20	*AI-powered force control: enhancing manufacturing performance in Robotics 4.0* Speaker: **Enrico Ferrentino**, Assistant Professor, University of Salerno, Italy
17:20 – 17.45	*Human Prediction Model for Collaborative Robotics* Authors: Marco Casarin, Michael Vanuzzo, Mattia Guidolin, Stefano Michieletto, Monica Reggiani - Department of Management and Engineering, University of Padova, Italy Speaker: **Stefano Michieletto**, Assistant Professor
17:45 – 18.10	*Robot perception for interacting with humans and for manipulating soft objects* Speaker: **Andrea Cherubini**, Full Professor – Ecole Centrale Nantes / LS2N, France
18.10 – 18.30	*Discussion and Concluding Remarks*

Registration Fee

The registration fee for the workshop is €60, which includes lunch and coffee breaks. Registration will be processed through the CASE 2024 registration system, following the same procedure outlined for "In-person Workshops and Tutorials Registration" (more information available here: **https://2024.ieeecase.org/**). Please note that this registration is valid only for the events on September 1st (all CASE 2024 workshops) and does not include access to the main CASE conference (August 28th-31st).