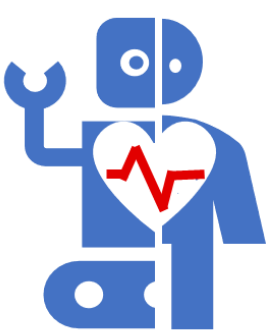

APHRODITE WORKSHOP

AdaPtive beHavioRal mODels of robotic systems based on brain-inspired AI cogniTivE architectures.

Main organisers

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Laura Fiorini is a postodoctoral researcher at the University of Florence, Department of Industrial Engineering, Florence, Italy. She received the M.Sc. Degree in Biomedical Engineering at University of Pisa in 2012 (full marks, cum laude). She obtained a Ph.D. in Biorobotics (full marks, cum laude) at the BioRobotics Institute of Scuola Superiore Sant'Anna, in 2016. In 2015 she visited the Bristol Robotics Laboratory at University of West England (Bristol, UK). From 2016 to 2020, she was post doc researcher at the BioRobotics Institute and she collaborated at different EU and national projects such as: Robot-Era, ACCRA, CloudIA and SI-ROBOTICS. Currently, she is the coordinator of Italian pilot site of Pharaon Project.

Filippo Cavallo
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Prof. Filippo Cavallo is Associate Professor in Biomedical Robotics at the University of Florence, Department of Industrial Engineering, Florence, Italy. From 2007 to 2013, he was post doc researcher and, from 2013 to 2019, he was assistant professor and head and scientific responsible of the Assistive Robotics Lab at the BioRobotics Institute, Scuola Superiore Sant'Anna. The objectives of his research activities are to promote and evaluate novel service robotics for active and healthy ageing, to identify and validate disruptive healthcare paradigms for neurodegenerative and chronic diseases, focusing on prevention and support for physical and cognitive declines, to optimize the management of working life for improving efficiency, security and QoL of workers in industrial settings. The main scientific and technological challenges concern social robotics, human robot interaction, wearable sensors, Internet of Things and artificial intelligence for robot companion and healthcare applications.

Co-organisers

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He received a M.S. in Mathematical Sciences in 1997 and a Dr. Sci. in Mathematical Sciences in 2005 from Tokyo Denki University. In 2000, he became a Special Postdoctoral Researcher at RIKEN for studying computational models focusing on the brain oscillation. From 2003 to 2009, he was a Research Scientist in the Laboratory for Dynamics of Emergent Intelligence at the RIKEN Brain Science Institute. His research interests include theoretical modeling of brain oscillations, the memory integration process of experienced episodes, and the implementation

of oscillatory neural networks into neurorobotics. His research for elucidating emerging process of creative decisions depending on spatial and behavioral contexts in the brain, by using the robotic platform. He is currently Professor of Kyushu Institute of Technology (KYUTECH) in the Department of Human Intelligence Systems, Graduate School of Life Science and Systems Engineering. He is a member of IEEE.

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Riccardo De Benedictis is researcher in Artificial Intelligence at the Institute of Cognitive Sciences of CNR. His research topics concern the development of automatic solvers, aimed at efficiently solving planning and scheduling problems, addressing real world applications, while keeping a strong consideration for the human component that must interact with intelligent applications. He has worked since 2010 on several projects under the FP7, H2020 and AAL research and innovation framework programs. He is currently studying the integration of different AI techniques for executing plans in nondeterministic environments.

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Dr Mauro Dragone is an Assistant Professor at Heriot-Watt University, Edinburgh Centre for Robotics, where he set up set up the Robotic Assisted Living Testbed (http://ralt.hw.ac.uk). The testbed is a 'Living-Lab" designed to facilitate user-driven design and testing of innovative and more practical solutions for healthy ageing and independent living by harnessing IoT and Robotic technologies working together. He is involved in EU projects running competitions for healthcare robotics in domestic scenarios. His current research activities include cloud-robotics, tele-presence robotics, and integration of robot technology with smart homes to assess and assist people living with conditions such as dementia and frailty.

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Vishwanathan Mohan is an Associate Professor at the School of Computer Science and Electronics Engineering, University of Essex. Before joining Essex, he was a Post Doctoral researcher at the RBCS dept, Italian Institute of Technology, Genoa. His current research focusses on Cognitive Robotics, in particular spatial awareness, social awareness, lifelong learning, common-sense reasoning and robot episodic memory. On the applied side, he is presently involved in several ongoing projects developing robotic co-workers in Smart farms (Innovate UK funded project Versatile, 2021-23), Food Production lines (Innovate UK funded project SMART 2021-24 targeting Sandwich Assembly), EU H2020 SoftGrip on Mushroom harvesting (2021-24), Carehome robots with Provide CIC, SoftFruit Picking (with Wilkin and Son's, Tiptree Essex).

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Praminda Caleb-Solly is Professor of Embodied Intelligence at the University of Nottingham, UK. Prior to this, she led research in Assistive Robotics and Intelligent Healthcare Technologies in the Bristol Robotics Laboratory at the University of the West of England for over ten years.
She holds degrees in Electronic Systems Engineering, Biomedical Instrumentation Engineering, and a Ph.D. in Interactive Evolutionary Computation. From 2014 to 2018 she was the Head of Electronics and Computer Systems at Designability, an assistive technology SME and charity located at the Royal United Hospital in Bath. In 2020 she co-founded Robotics for Good CIC, a start-up to enable deployment of leading-edge intelligent robotics and smart technology solutions that

seek to empower people in their everyday lives. Prof Caleb-Solly's academic publications cover machine learning and human-robot interaction. She also co-authored the UK-Robotics and Autonomous Systems White Paper on Robotics in Social Care: A Connected Care EcoSystem for Independent Living; and gave evidence to the UK House of Lords' Science and Technology Committee inquiry into Ageing: Science, Technology and Healthy Living. She currently also serves as a member of the British Standards Institute's Technical Committees on Service Robot Safety and Ethics.