SUSTAINABLE MANUFACTURING
THROUGH ADVANCED ROBOTICS TRAINING
IN EUROPE

www.smart-e-mariecurie.eu

SMART-E is a Marie-Curie Initial Training Network
(Project no: 608022) funded by the European Union

SMART-E Final Conference Program

Stazione Leopolda, Sala Convegni Piazza Guerrazzi, 56125 Pisa, Italy

Day 1 Thursday, September 7 2017

Time	Agenda	Speaker	Institution	Details
09:45 – 10:00	Opening Talk	Samia Neftz Meziani	Univerity of Salford	SMART-E Coordinator
10:00 - 10:20	External Presenter	Lynne McGregor	Innovate UK	(15'+5')
10:20 - 10:40	External Presenter	Rolf Pfeifer	University of Zurich	(15'+5')
10:40 - 11:00	Coffee Break			
11:00 - 11:20	ESR1 Presentation	Saber Mahboubi	University of Salford	Work Package 1: Soft Robotics (15' + 5')
11:20 - 11:40	ESR12 Presentation	Syed Taimoor Hassan	Scuola Superiore Sant' Anna	
11:40 - 12:00	ESR2 Presentation	Yasmin Ansari	Scuola Superiore Sant' Anna	
12:00 - 14:30			Lunch / Discussion	
14:30 - 14:50	External Presenter	Chris Berg	Acorn2Oak Innovative Solutions	(15'+5')
14:50 - 15:10	ESR5 Presentation	Stefania Russo	University of Salford	Work Package2: Reconfigurable and Logistic Robots (15' + 5')
15:10 – 15:30	ESR7 Presentation	Alex		
15:30 - 15:50	Coffee Break			
15:50 - 16:10	ESR8 Presentation	Matteo Leco	University of Sheffield/ AMRC	Work Package2: Reconfigurable and Logistic Robots (15' + 5')
16:10 - 16:30	ESR11 Presentation	Roy Assaf	University of Salford	
16:30 - 18:00			Discussion	
19:30	Dinner		Osteria L'Artilafo	

Day 2 Friday, September 8 2017

Time	Agenda	Speaker	Institution	Details
09:30 – 09:50	External Presenter	Stephen Shackleford	National Nuclear Laboratory UK	(15'+5')
09:50 - 10:10	External Presenter	Phil Webb	Cranfield University	(15'+5')
10:10 – 10:30	Coffee Break			
10:30 - 10:50	ESR6 Presentation	Andrea Giusti	Technical University of Munich	Work Package 3: Safety and human-robot interaction (15'+5')
10:50 - 11:10	ESR9 Presentation	Aaron Perira	Technical University of Munich	
11:10 – 11:30	ESR10 Presentation	Esra Icer	Technical University of Munich	
11:30 - 14:00	Lunch / Discussion			
14:00 - 14:20	External Presenter	Kevin Blacktop	Network Rail	(15'+5')
14:20 – 14:40	ESR13 Presentation	Martijn Zeestraten	Italian Institute of Technology	Work Package 3: Safety and human-robot interaction (15'+5')
14:40 – 15:00	ESR4 Presentation	Stefano Toxiri	Italian Institute of Technology	
15:00 - 15:20	Coffee Break			
15:20 - 17:00	Discussion			
17:00 – 17:15	Closing Remarks	Samia Neftz Meziani		SMART-E Coordinator

Conference Details

SMART-E (Sustainable Manufacturing through Advanced robotic Technologies) is a Marie-Curie Initial Training Network (ITN) that aims to contribute towards the next industrial revolution, Industry 4.0. The project is composed of 12 early stage researchers (ESRs); 2 experienced researchers (ERs); 7 academic partners with world-class expertise in robotics, autonomous systems, and advanced manufacturing; and number of renowned industrial partners. This conference presents the summary of the results of the overall 3 year project with talks from the ESRs, ERs, academic, and industrial partners. This conference is an open event, however, limited to a capacity of 80 people. Reserve your seat to listen in on the talks now!

https://www.eventbrite.co.uk/e/smart-e-final-conference-tickets-37121991877

1. Official Information of the conference available at:
   http://www.smart-e-mariecurie.eu/
   https://www.facebook.com/Smart-E-Marie-Curie-1469999693329376/
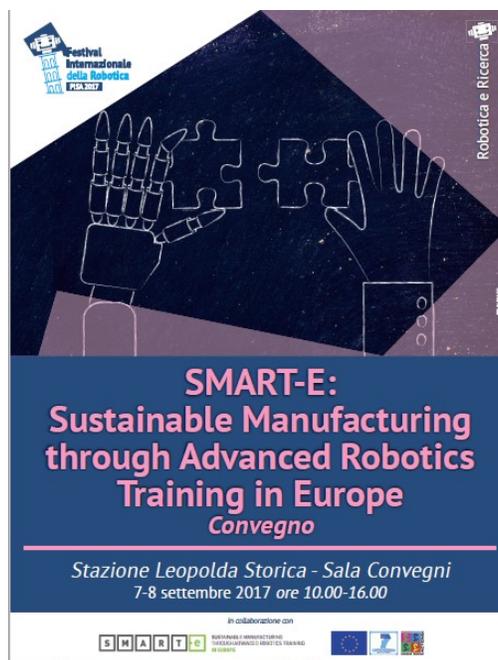   https://twitter.com/smarteitn

2. Contact Information:
   Cecilia Laschi, Conference Organizer, c.laschi@santannapisa.it
   Matteo Cianchetti, Conference Organizer, m.cianchetti@santannapisa.it
   Yasmin Ansari, Conference Organizer, y.ansari@santannapisa.it

External Speaker Information

Lynne McGregor

Lynne McGregor is an Innovation Lead in the Manufacturing and Materials sector at Innovate UK, the UK's innovation agency. Lynne has been with Innovate UK for over 4 years and specializes in the take up of, and innovation in the use of digital tools and approaches in manufacturing. Prior to this, Lynne spent 8 years at Imperial Innovations, providing incubation services for start-up companies, leading seed investment rounds, and serving on spin-out company boards, where she has also helped troubleshoot early stage challenges in these companies. Lynne's background is in chemical engineering, with a degree from the University of Waterloo, Canada, and an MBA from London Business School. Lynne's early career was spent in engineering companies like Stone & Webster (now Technip), ABB, and Aspentech, where she specialized in the areas of automation, advanced control, simulation and modelling. Her breadth of experience encompasses project management, product development, market evaluation, investment appraisal, sales and marketing, and business strategy and planning.

Rolf Pfeiffer

Rolf Pfeifer is currently "Visiting Chair Professor", at Shanghai Jiao Tong University, China, and he is a scientific coordinator at "Living with Robots" Ltd. Moreover, he is co-founder of the National Robotics Center in Switzerland.

He has a master's degree in physics and mathematics and a Ph.D. in computer science (1979) from the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland. From 1987-2014 he was professor of computer science at the University of Zurich and director of the Artificial Intelligence Laboratory. He was a visiting professor and research fellow at the Free University of Brussels, the MIT Artificial Intelligence Laboratory in Cambridge, Mass. (US), the Neurosciences Institute (NSI) in San Diego, the Beijing Open Laboratory for Cognitive Science, the Ludwig-Maximilians-University, Munich, the University of São Paolo, Brazil, and the Sony Computer Science Laboratory in Paris. In 2004 he was elected "21st Century COE Professor, Information Science and Technology" at the University of Tokyo. In 2009 he was a visiting professor at the Scuola Superiore Sant'Anna in Pisa, and at Shanghai Jiao Tong University in China and was appointed "Fellow of the School of Engineering" at the University of Tokyo and in 2016 "Fellow of ECLT", the European Center for Living Technology in Venice, Italy. In 2009 he started the "ShanghAI Lectures" (at Shanghai Jiao Tong University), a global, fully interactive videoconference-based series on natural and artificial intelligence that now involves over 50 universities from around the planet. In 2017 he was appointed "Honorary Professor" at the Department of Automation, Shanghai Jiao Tong University.

He is a pioneer of the fields of "embodied intelligence" and "soft robotics" which are now rapidly gaining importance and have already had a decisive impact on the fields of artificial intelligence and robotics. His book "How the body shapes the way we think – a new view of intelligence" has been published in English, Chinese, Japanese, Arabaic, and French, and is now considered a classic in the field. He developed the humanoid robot "Roboy", which has attracted world-wide media attention, and he is

presently pursuing the "ROBOLOUNGE" project, a venue where robots will take care of the well-being of the customers and where people can experience the future – i.e. they can feel what it will be like to interact very closely with robots in a public space.

Chris Berg

Dr Chris Berg, CEng, MInstMC is the Owner and Director of Acorn2Oak Innovation Solutions Limited an SME developing commercial opportunities in the Advanced Composites industry for light-weighting via high-throughput sustainable manufacturing, advanced automation and in-service structural health monitoring. Acorn2Oak's mission is to reduce carbon dioxide emissions through process efficiencies and cost-reduction to increase the adoption of composites in volume manufacture; and is achieving this by simplifying innovation and the commercialisation of disruptive technologies. With academic and industrial experience Acorn2Oak is bridging the gap between lab-based research and manufacturing. Achieving this requires an ability to take a 'helicopter' view of the supply chain and a detailed understanding of customer requirements to 'pull' appropriate and commercially viable technology out of the research domain and into use. Chris will present an overview of this strategy, the technological developments currently underway and the relevance of advanced engineering and manufacturing technologies to the company's mission.

Prior to developing Acorn2Oak Innovation Solutions Ltd. for business growth and high-value job creation Chris has attained extensive global engineering experience spanning his career from Toolroom Apprentice to Technical/Engineering Directorships and Strategic Management in academia and a number of industrial sectors including Automotive, Aerospace and Oil&Gas. His capability is enhanced by academic qualifications, peer reviewed publications, patents and the implementation of cost-effective quality-assured commercially-viable solutions for sustained business growth.

Stephen Shackleford

Stephen has over 15 years' experience working in the nuclear industry managing a number of technical capabilities and technical projects in support of the Sellafield reprocessing and decommissioning challenges. Stephen has held a number of previous roles as acting Director for Fuel Cycle Solutions and Business Leader for Asset Care. His current role is in support of NNL's transformation project as the company goes through restructuring but also as NNL's technical robotic lead. This later role as robotics' lead has the main responsibilities in relation to robotics and simulation include:

- Driving continued development and engagement of Robotics and Artificial Intelligence into the nuclear sector. One that is still predominately manual in delivery of its business.
- Support to Sellafield Ltd robotics through management of the SL operational programmes and research through development and commissioning of the robotic Box Encapsulation Plant programme

- Engagement in longer term university lead research programmes through the Eu's H2020 RoMaNs programme, UK's KTN & EPSRC research calls such ISFC, and numerous PhD and PDRA research programmes.
- Support to NNL's Autonomous Robotic Laser HA Active cutting facility and development of SL's Robotic Alpha Decommissioning facility.
- Development and commercialisation of simulation training capabilities to Brokk, as part of a teaching programme and for the BEP programme utilising forward and inverse Kinematics. Latterly providing support to the Laser cutting and alpha decommissioning robotics test facilities.
- Maintaining and developing links with key stakeholders, steering groups and research institutions such as board member to the Northern Robotics Network, NAMRAC, and technical steering for the current EPSRC research grant in order to develop and generate new technologies, products and services.
- Supporting innovative development and maximising funded leverage to meet current and future customer technical challenges in the area of inspection, remote handling and robotics.

Phil Webb

Professor Phil Webb is the head of the Centre for Structures, Assembly and Intelligent Automation at Cranfield University where he holds a Royal Academy of Engineering and Airbus Chair. He is also Deputy Director of the EPSRC Centre for Innovative Manufacturing in Intelligent Automation. He has over 20 years of experience in research into advanced automation and robotics. His particular specialism is the application of automation in the aerospace industry and he has worked with most of the major aerospace companies including Airbus, BAE System, Bombardier and Rolls-Royce. He is a member of the SAE Automated Assembly and Fastening Committee and the Council of the British Automation and Robotics Association and has served as the UK representative to the International Federation for Robotics