

## Workshop title:

AI4US: Unlocking the potential of Artificial  
Intelligence for Ultrasound image processing

## Organizers

**Sara Moccia, PhD** – The BioRobotics Institute and Department of Excellence in Robotics and AI, Scuola Superiore Sant’Anna, Pisa, Italy – [sara.moccia@santannapisa.it](mailto:sara.moccia@santannapisa.it)  
**Prof. Emilio Filippucci, MD, PhD** – Rheumatology Unit, Department of Clinical and Molecular Sciences, “Carlo Urbani” Hospital, Jesi, Italy – [emilio\\_filippucci@yahoo.it](mailto:emilio_filippucci@yahoo.it)  
**Maria Chiara Fiorentino** – Department of Information Engineering, Università Politecnica delle Marche, Ancona, Italy – [m.c.fiorentino@pm.univpm.it](mailto:m.c.fiorentino@pm.univpm.it)  
**Prof. Emanuele Frontoni, PhD** – Department of Information Engineering, Università Politecnica delle Marche, Ancona, Italy – [e.frontoni@univpm.it](mailto:e.frontoni@univpm.it)

## Short Description

The goal of the AI4US workshop is to group expert AI researchers in US-image analysis to discuss the most recent research work and highlight current challenges and needs. AI4US aims at bridging the gap among universities, hospitals, enterprises, and stakeholders to draw a roadmap for future AI applications in the field.  
 The intended audience of AI4US ranges from PhD students and resident doctors that are approaching the challenges of US image analysis with AI, to experienced researchers that may be interested in knowing the latest breakthrough research. Graduate students in biomedical engineering, computer science and medicine may benefit from the invited speakers’ presentations highlighting the current research work being done on AI for US image analysis.

## Contents

**Schedule** (27 July 2021)  
 1:00 - 1:05 pm: Welcome by the workshop organizers  
 1:05 - 1:20 pm: Prof. Emilio Filippucci (Department of Clinical and Molecular Sciences, “Carlo Urbani” Hospital, Italy): **“The value of artificial intelligence in ultrasound in rheumatology: a clinical perspective”**  
 1:20 - 1:35 pm: Prof. Bruno Madore (Department of Radiology, Brigham and Women’s Hospital, Harvard Medical School, Boston, US): **“Ultrasound-based sensors to monitor internal motion”**  
 1.35 - 2.50 pm: Dr. Nicola Guraschi (Esaote S.p.A., Genoa, Italy): **“AI in US: a new paradigm to support clinicians in the ultrasound examination”**  
 2.50 - 3.00 pm: Q&A session  
 3.00 - 3.15 pm: spotlight session and closing remarks

## CVs of the Organizers

**Sara Moccia, PhD** is currently Assistant Professor in Bioengineering at Scuola Superiore Sant’Anna, Italy. Sara’s main research interests include deep learning and computer vision applied to the analysis of medical images.  
**Prof. Emilio Filippucci, MD, PhD** is Senior Lecturer in Rheumatology at Università Politecnica delle Marche, Italy. His main research interests focus on the role of ultrasound in early diagnosis and monitoring of rheumatoid arthritis  
**Maria Chiara Fiorentino** is currently PhD student at Università Politecnica delle Marche, Italy. Her PhD deals with deep-learning methods for ultrasound image analysis  
**Prof. Emanuele Frontoni** is an Associate Professor of Computer Science at Università Politecnica delle Marche, Italy. His research focuses on applying artificial intelligence and computer vision techniques to healthcare, mobile robots and sensible spaces.

