

# New design principles and frontiers for wearable robotics

Nicola Vitiello - n.vitiello@sssup.it

## **Abstract**

Starting from the analysis of case-studies related to upper- and lower-limb wearable robots for functional motion assistance, rehabilitation or augmentation, this workshop aims at identifying major scientific and technological challenges, as well as the breakthroughs still needed to achieve the development of wearable robots endowed with advanced human-robot interaction modalities. Fifteen experts will present selected recent case-studies related to basic enabling technologies or design methodologies. Experts will be renowned representatives of the different scientific fields contributing to the advancement of wearable robotics, such as: robotics, mechatronics, biomechanics, biomedical and rehabilitation engineering, mechanical engineering, control and system engineering. Contributions by the experts, conveyed through the presentations or through the discussion, will be organized in a public document, intended to serve researchers in the field of wearable robotics as a 5-to-10-year strategic research agenda (SRA). The workshop primarily targets all scientists and engineers active in the field of wearable powered robotics technologies.