





# Soft Electronics meets Soft Robotics

**⊞ April 14, 2024** 

⊗ San Diego, CA (USA)

## **Organizers**

<u>Virgilio Mattoli</u> <u>Istituto Italiano di Tecnologia, Italy</u> <u>virgilio.mattoli@iit.it</u>

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#### **Abstract**

Soft electronics represents a captivating area of research dedicated to the seamless incorporation of electronic components and devices onto flexible, non-planar, and intricate 3D surfaces and objects. Over the last decade, the exploration of soft electronics has surged, driven by the growing demand for innovative portable electronic systems bridging the gap between biology and electronics. In the context of soft robotics, soft electronics has become a crucial technology, driven by its superior compliance, seamless integration capability, and the unique properties of recently developed materials such as soft conducting polymers, hydrogels, liquid metals, and electrolytic liquids. These materials are pushing the boundaries towards creating soft sensors, actuators, and integrated soft robotics devices. This workshop aims to showcase the latest breakthroughs in soft electronics technologies and soft robotics through interactive sessions, featuring contributions from leading experts. Emphasis will be placed on the theme of sustainability, exploring concepts like transient, biodegradable, and even edible soft electronics and robotics. Join us in discovering advancements that can shape the next generation of soft robotics.

#### Call for posters

We have several slots for poster presentations free, just send your poster title and abstract (200 words max, 1 figure) to the organizers, keeping all of the following email addresses: <a href="mailto:virgilio.mattoli@iit.it">virgilio.mattoli@iit.it</a>, <a href="mailto:barbara.mazzolai@iit.it">barbara.mazzolai@iit.it</a> and we will let you know about acceptance. Best poster award will be sponsored by Advanced Electronics Materials. Accepted submissions will be presented at the workshop as short lighting talk and posted on the website. Furthermore, there is the potential of publishing your contribution in Advanced Electronics Materials on a dedicated special issue.

**Deadline for abstract submission: 15/03/2024**Communication of acceptance: 20/03/2024

# Agenda

#### Welcome

**(**) 13:30-13:40

Barbara Mazzolai and Virgilio Mattoli

## **Enabling electronic control of arrays of soft fluidic actuators**

**(**) 13:40-14:10

<u>Tommaso Ranzani</u> - Boston University, USA

#### **Transient Electronics Meets Lifetime-Controlled Soft Robots**

**(**\) 14:10-14:40

 $\stackrel{\triangle}{\simeq}$  Seung-Kyun Kang - Seoul National University, Republic of Korea

## Flexible, printed & environmentally-friendly electronics

**(**) 14:40-15:10

😩 <u>Luisa Petti</u> - Libera Università di Bolzano, Italy

### **Poster teasers**

**(**) 15:10-15:40

#### **COFFEE BREAK - INTERACTIVE POSTER SESSION**

**(**) 15:40-16:00

## Ultrathin/tattoo electronics for sensing and actuation

**(**\) 16:00-16:30

Virgilio Mattoli - Istituto Italiano di Tecnologia, Italy

## Soft aerial robotics proprioception

**(**\) 16:30-17:00

😩 <u>Mirko Kovač</u> - Imperial College London, UK

## IA tools in publishing

**(**) 17:00-17:10

😩 <u>Gaia Tomasello</u> - Wiley Editor

### **Panel discussion**

**(**) 17:10-17:30

## **Best Poster Award Prize**

**(**) 17:30

