

## Editorial

# Preface to the International Conference on the Challenges, Opportunities, Innovations, and Applications in Electronic Textiles (E-Textiles 2023) <sup>†</sup>

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<sup>†</sup> All papers published in the volume are presented at E-Textiles 2023: 5th International Conference on the Challenges, Opportunities, Innovations and Applications in Electronic Textiles, Ghent, Belgium, 14–16 November 2023.

**Abstract:** The fifth International Conference on the Challenges, Opportunities, Innovations, and Applications in Electronic Textiles (E-Textiles 2023) was held in Ghent (Belgium) on 14–16 November 2023.

**Keywords:** electronics; wearables; smart fabrics; electronic textiles; e-textiles; sensing; healthcare devices; textile antennas; energy harvesting; printed electronics; knitted e-textiles; functional yarns

## 1. Introduction

The fifth edition of this annual conference, organized by the E-Textiles Network, continues to serve as a vital platform for researchers and developers from academia and industry to explore the fascinating world of electronic textiles.

Founded in 2018, the E-Textiles Network has been at the forefront of fostering collaboration and innovation in the field of electronic textiles. Our mission is to provide a space where experts can share their latest findings, discuss challenges, and explore new opportunities in adding electronic functionality to textiles and their related products.

Building on the success of last year's conference in Nottingham (United Kingdom), which attracted a diverse array of participants from across academia and industry, we were excited to continue this tradition of excellence and innovation. This year's conference provided a rich tapestry of ideas, bringing together leading minds in the field to share their insights and push the boundaries of what is possible in e-textiles.

The conference was led by our esteemed Conference Chairs, Frederick Bossuyt and Paula Veske-Lepp from the University of Ghent. Their expertise and guidance, along with the dedicated efforts of our Local Organizing Committee, Technical Programme Committee, and International Steering Committee, ensured that this conference was a landmark event in the e-textiles calendar.

## 2. Conference Days

The event was held in Ghent from the 14th to the 16th of November 2023. The technical programme was organized into eight sessions, covering the following topics:

- Manufacturing and materials;
- Sensing and actuating;
- Reliability, sustainability, and future trends;
- Standards and certification;
- Work wear and protective apparel applications;



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- Healthcare and sports applications;
- Energy solutions for e-textiles;
- Design and fashion.

On the first day, there was a dedicated poster pitch session with quick-fire pitches, followed by a full poster and exhibition session. Over the course of the following two days of the conference, we explored a wide range of topics, from the latest technological advancements to innovative applications of e-textiles across various sectors. Participants engaged actively in discussions, forged new collaborations, and contributed to the growing body of knowledge in this exciting field.

For those interested in delving deeper into the history and evolution of our conference, we invite you to visit our Past Conferences page, where you can find the speakers lists, presentations, and proceedings from previous events.

### 3. E-Textiles 2023 Prizes

E-Textiles 2023 awarded three prizes, which were sponsored by MDPI *Micromachines*.

#### 3.1. Best Paper Award

**Winner:** Brett Hannigan (ETH Zürich, Switzerland) “HACS4x: 4-Ply Helical Auxetic Capacitive Sensors for Strain Sensing E-textiles”.

#### 3.2. Best Student Paper Award

**Winner:** Renad Allagani (King’s College London, UK) “Analysing the Contributing Factors to Activity Recognition with Loose Clothing”.

#### 3.3. Best Student Poster Award

**Winner:** Nishadi Perera (Nottingham Trent University, UK) “Exploring sustainable approaches in designing textiles embedded with micro-devices”.

### 4. Committees

#### 4.1. International Steering Committee

Prof. Steve Beeby (Chair), University of Southampton  
 Prof. Kai Yang, University of Southampton  
 Dr Russel Torah, University of Southampton  
 Dr Theo Hughes-Riley, Nottingham Trent University  
 Christian Dalsgaard, Smart Textiles Alliance  
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Dr. Celine Vanhaverbeke, University of Ghent  
Katrien Vanneste, University of Ghent

#### *4.3. Technical Programme Committee*

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Prof. Vladan Koncar, GEMTEX Research Laboratory/ENSAIT  
Malte von Krshiwoblozki, Fraunhofer IZM  
Simon McMaster, Footfalls and Heartbeats (UK) Limited  
Ashleigh Naysmith, University of Huddersfield  
Dr Gopika Rajan, Royal College of Art  
Dr Sara Robertson, Sara + Sarah Smart Textile Design  
Sigrid Rotzler, TU Berlin/Fraunhofer IZM  
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Prof. Kai Yang, University of Southampton  
Dr Sheng Yong, University of Southampton  
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Dr Sasikumar Arumugam, University of Southampton  
Dr Kun Zhang, Donghua University

#### *4.4. Technical Support*

Beckie Isaia, University of Southampton  
Martina Creutzfeldt, MCC Events

### **5. Sponsorship**

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Smart Textiles & Wearables.

We extend our heartfelt gratitude to all the participants, speakers, and sponsors who make this conference possible. Your contributions are invaluable in advancing the field of e-textiles and shaping its future.

**Conflicts of Interest:** The authors declare no conflicts of interest.

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