

2nd International Workshop on Cyber-Physical Social Systems for Sustainability: Preface

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Welcome to the 2nd International Workshop on Cyber-Physical Social Systems for Sustainability (CPSS4Sus). The workshop is a forum for researchers and practitioners to discuss the challenges and opportunities the Cyber-Physical System (CPSS) brings to promote strong and fair communities. In particular, we are interested in how issues such as social and health equity, community development, human rights, and social justice can be integrated into the early development of CPS.

We received two submissions, each of which underwent a rigorous review process by at least two members of the Program Committee. This ensured that the proposals we discussed during the workshop were of the highest quality and relevance to our theme.

Felix Schöllhammer, Mario Cortes-Cornax, Paula Lago, Vijanti Ramautar, Claudia Roncancio, Sietse Overbeek, and Sergio España presented the paper “Method and tool to assess the environmental impacts of cyber-physical systems with a life-cycle approach.” The paper presents a Life Cycle Assessment (LCA) - based method tailored for CPS that facilitates the comparison of architectural and location variants and a supporting tool that guides the LCA process and automates part of the data collection activity.

Carolina Lagartinho-Oliveira, Filipe Moutinho, and Luis Gomes presented the short paper “A Cyber-Physical Social System Approach for User-Centric Power Wheelchairs.” Their work offers an advancement in designing and implementing user-centric power wheelchairs through a cyber-physical social approach. The use of IOPT-net-based digital twins serves as a cornerstone in this proposal.

The keynote speaker presented his experience on the workshop topics, followed by two paper presentations. Following the presentations, we engaged in discussions with experts in the field. We employed a systematic approach to facilitate group dialogue among the participants. As a result of this discussion, challenges and opportunities were identified for the CPSS4Sus community. Additionally, concerns were raised regarding the social and technological aspects of sustainability.

Authors of papers presented at CPSS4Sus 2024 will receive invitations to submit extended versions of their work for potential inclusion in the Journal of Software Engineering Research and Development (JSERD).

We are grateful to the Program Committee* for their reviews and valuable feedback, as well as to the experts who so generously shared their experiences with us. We thank all the authors who submitted their work to CPSS4Sus'24 and congratulate those whose papers appear in the

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final proceedings. We look forward to growing a community around this interesting and important topic and to seeing you again in the near future!

Best regards,

Isabel, Ivan, and João Paulo

* Program Committee:

- Ana Moreira - Universidade Nova de Lisboa (Portugal).
- Anikó Costa - Universidade Nova de Lisboa (Portugal).
- Claudia P. Ayala Martínez - Technical University of Catalunya - UPC (Spain).
- Coral Calero - Universidad Castilla La Mancha (Spain).
- Colin Venters - University of Huddersfield (United Kingdom).
- Filipe Moutinho - Universidade Nova de Lisboa (Portugal).
- Jari Porras - Lappeenranta-Lahti University (Finland).
- Luís Gomes - Universidade Nova de Lisboa (Portugal).
- Nelly Condori-Fernandez - Universidad de Coruña (Spain).
- Shola Oyedeji - Lappeenranta-Lahti University (Finland).

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