



SCW 2025

Sustainable Computing Workshop at Computing Frontiers

Towards Sustainable Systems within the Computing Frontiers Conference May 28-30 2025 Cagliari, Italy

CALL FOR PAPERS

The **ACM International Conference on Computing Frontiers (CF'25)** is a premier international forum in emerging technologies in the broad field of computing. **SCW 2025** is a workshop within CF'25 that addresses sustainability aspects of computing systems. Emphasis is on current and future challenges of sustainable computing in both academia and industry.

SUBMITTING A PAPER

We invite prospective authors to submit original papers in areas including, but not limited to:

Impact assessment or life cycle analysis (LCA) of computing systems and technologies

- Novel methods and tools for LCA and impact assessment or measurement
- Evaluation of the environmental or social, direct or indirect impacts of ICT systems and technologies
- Carbon footprint of systems and technologies
- Attributional or consequential LCAs of computing systems or technologies
- Critical reviews of impact assessment or LCA methods

Novel methods and tools for systems ecodesign:

- Repair/reuse/recycle strategies for computing systems, and integration in a circular economy
- Reusability of devices through hardware and software updates
- Long-term maintenance of hardware and software for lifetime extension
- Design methodologies to increase the lifetime or lower the impacts of systems
- ASIC design flows for sustainable devices and applications
- Reconfigurability for systems lifetime extension
- FPGA design flows for sustainable computing devices
- Hardware and software designs and methodologies for better traceability, interoperability and modularity
- Critical reviews of computing ecodesign methods

Computing systems for sustainability:

- Novel exploitations of computing systems for improving the sustainability of applications

Submissions may cover one or several of the three sustainability pillars : environmental, economic and social.

Sustainable development of computing technologies and architectures

- New systems exploited for sustainable computing : chiplets, architectures, AI hardware, cloud, quantum etc.
- New software programming technologies for low energy processing
- New substrates for low environmental impacts
- Sustainable development of computing architectures, operating systems and applications
- Low environmental or social impact systems
- Reduced energy consumption application-specific designs, and methods to adjust resource requirements to the actual needs of the application
- Low energy video communication architectures
- Technologies and architectures for sustainable artificial intelligence services
- Novel power electronics for low energy computing systems
- Testing and verification of systems updates and update or maintenance mechanisms

Submission Procedure

4-page short paper or 8-page long paper. Formatting and paper submission on <https://scw.insa-rennes.fr>. Accepted papers will be published in the ACM digital library. Paper submission deadline : **February 28th, 2025**
Notification of acceptance : **March 28th, 2025**
Camera ready deadline : **April 4th, 2025**
All accepted papers require one registration and one physical attendance at the conference.

COMMITTEE

Organization Committee

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