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 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 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

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