

42nd ACM/SIGAPP Symposium on Applied Computing

April 5-9, 2027, Gwangju, South Korea

Cyber-Physical Systems - Call for Papers



Scope

Cyber-physical systems (CPS) are engineered systems whose operations are monitored, coordinated, controlled, and integrated by a computing and communication core embedded in all types of objects and structures in the physical environment. CPS has emerged as a unifying name for systems where the cyber parts, i.e., the computing and communication components, and the physical parts are tightly integrated, both at the design time and during operation. Such systems use computations and communication deeply embedded in and interacting with physical processes to add new capabilities to physical systems. Such systems must be operated safely, dependably, securely, efficiently and in real-time.

These CPS span applications such as transportation, healthcare, automotive, energy, manufacturing, entertainment, consumer electronics, environmental monitoring, aerospace, robotics, etc., all essential to social infrastructure. Therefore, advances in this field will have significant technical, economic and societal impacts in the near future.

However, the vision of CPS faces core multidisciplinary research challenges, as relevant technologies span diverse areas of science and engineering. Thus, there is an emerging consensus that new methodologies and tools are urgently needed to support CPS.

Paper submission and acceptance

Authors are invited to submit original and unpublished papers of research and applications for this track. Full papers are limited to 8 pages with the option for up to 2 additional pages at extra charge. The author name(s) and address(es) must not appear in the body of the paper, and self-reference should be in the third person. This is to facilitate double-blind review. Only the title should be shown at the first page without the author information. Papers must be formatted according to the ACM SAC template. Contributions must contain original unpublished work. Papers that have been concurrently submitted to other conferences or journals (double submissions) will be automatically rejected. Full submission instructions, including formatting requirements and access to the submission portal, are available on the ACM SAC 2027 website.

Paper registration is required for inclusion in the conference proceedings. An author or a proxy attending ACM SAC MUST present the paper. This is a requirement for the paper to be included in the ACM digital library. No-show of registered papers will result in exclusion of them from the ACM digital library.

Student research competition

Graduate students seeking feedback from the scientific community on their research ideas are invited to submit abstracts of original, unpublished, and in-progress work. Authors of selected abstracts can share and discuss their work through poster and oral presentations and compete for the top three winning places selected by the SRC committee. Winners will receive cash awards and SIGAPP recognition certificates. Invited authors are also eligible to apply for the SIGAPP Student Travel Award Program (STAP). SRC abstracts are limited to 3 pages and must be submitted via the SAC 2027 webpage. Please visit <https://src.acm.org/> for more information.

Topics of interest

- Ubiquitous and pervasive computing with CPS
- Mobile computing and devices for CPS
- Wearable CPS and applications
- Design automation and tool chains for CPS
- Networking and communication for CPS applications
- Cloud computing and distributed systems for CPS
- Intermittent and sustainable computing for CPS
- Real-time CPS
- Control of CPS
- Safety and dependability for CPS
- Security and privacy of CPS
- Resilient and robust systems design for CPS
- Machine learning for CPS
- Simulation and experimental prototypes of CPS

Dates

Submission deadline: 2 October 2026
Notification of acceptance: 13 November 2026
Deadline for final manuscript: 28 November 2026
Author registration: 5 December 2026

Web site

Main:

<http://www.sigapp.org/sac/sac2027>

CPS track:

<https://conference.cs.cityu.edu.hk/saccps/2027>

Track chairs

Hashan Roshantha Mendis – Academia Sinica, Taiwan

Jingtong Hu – University of Pittsburgh, USA

Pi-Cheng Hsiu – Academia Sinica, Taiwan

TPC members

Fatemeh Akbarian	Lund University
Étienne André	Nantes Université
Ludovic Apvrille	Télécom Paris
Federico Aromolo	Scuola Superiore Sant'Anna
Florian Brandner	Télécom Paris
Ipek Caliskanelli	UK Atomic Energy Authority
Daniel Casini	Scuola Superiore Sant'Anna
Yuan-Hao Chang	National Taiwan University
Kuan-Hsun Chen	University of Twente
Ya-Shu Chen	NTUST
Te-Chuan Chiu	National Tsing Hua University
Hyunjong Choi	San Diego State University
Silviu Craciunas	NXP Semiconductors, DTU
Francesco Daghero	University of Southern Denmark
Qingxu Deng	Northeastern University
Zheng Dong	Wayne State University
Sebastiano Gaiardelli	Technical University of Munich
Simos Gerasimou	University of York
Miguel Gutiérrez Gaitán	UC Chile
Song Han	University of Connecticut
Changhee Jung	Purdue University
Hokeun Kim	Arizona State University
Philipp Kindt	Technical University of Munich
Fanxin Kong	University of Notre Dame
Qiao Li	MBZUAI
Yu Liang	Inria
Chia-Yin Liu	Academia Sinica
Chen Pan	University of Texas at San Antonio
Philippos Papaphilippou	University of Southampton
Anuj Pathania	University of Amsterdam
Mo Sha	Florida International University
Amit Singh	University of Essex
Youcheng Sun	MBZUAI
Pei-Hsuan Tsai	National Cheng Kung University
Hu Wan	City University of Hong Kong
Yidi Wang	Santa Clara University
Qixin Wang	Hong Kong Polytechnic University
Yawen Wu	Amazon
Chin-Hsien Wu	NTUST
Mimi Xie	University of Texas at San Antonio
Michael Yuhua	Vanderbilt University
Houssam-Eddine Zahaf	Nantes Université
Jeff Zhang	Arizona State University
Dakai Zhu	University of Texas at San Antonio