

# Virtual AICAS 2021

## Call for Papers

**3rd IEEE International Conference on Artificial Intelligence Circuits and Systems**  
**May 3-7, 2021**

### Conference Scope

Artificial Intelligence is driving a new revolution in domains ranging from manufacturing, automotive, healthcare, robotics, entertainment, and many others. New computing platforms are required to support the emerging AI algorithms and applications, from cloud servers to edge devices, from system level to circuit level.

The IEEE International Conference on Artificial Intelligence Circuits and Systems facilitates research, innovation, and development activities at the frontiers of circuits and systems for Artificial Intelligence. It allows academia to meet industry from the international community to exchange experiences, demonstrate their studies, and further advance AI technologies. AICAS is the major conference for AI that stands between theory, applications, and ASICs. AICAS2021 brings together members of AI and CAS communities to broaden their knowledge and create synergies between applications and their supporting hardware.

### Paper Submission

Submissions should be full-length papers of up to four pages (PDF format, double-column, US letter size, using the IEEE Conference format). Submissions must be anonymous (i.e., double-blind review process). Submitted papers must describe original work that has not been published/accepted or is currently under review by another journal, conference, or symposium.

### Exemplary topics of interest

The topics covered include (but are not limited to):

- Circuits and systems for AI
- Deep learning/machine learning/AI algorithms
- Tools/Platforms for AI
- Architectures for AI computing
- Neuromorphic circuits, processors and systems and their applications
- Hardware/software co-design and design automation for AI systems
- Advanced neural network design
- Emerging applications: Internet-of-Things, healthcare, autonomous vehicles, environment
- Emerging devices and materials for AI

### Proceedings

The conference proceedings will be submitted to the IEEE Xplore® digital library.

### IEEE JETCAS Special Issue

A Special Issue on AICAS 2021 is planned in the IEEE Journal on Emerging and Selected Topics in Circuits and Systems (JETCAS). Authors of accepted papers will be eligible to submit an extended version of their work to the special issue of this high-impact journal.

#### Special Session/Tutorial/Demo

##### Proposal Submission:

January 11, 2021

##### Paper Submission:

January 25, 2021

##### Author Notification:

March 5, 2021

##### Camera-ready Version:

March 26, 2021

##### Author Registration Deadline:

April 12, 2021

##### Conference (Virtual):

May 3-7, 2021

### General Chairs

- Kaushik Roy, Purdue Univ., USA
- Hai Li, Duke Univ., USA

### Program Chairs

- Meng-Fan Chang, National Tsing Hua Univ., Taiwan
- Arijit Raychowdhury, Georgia Institute of Technology, USA

### Special Session Co-chairs

- Tobi Delbruck, Univ. of Zurich and ETH Zurich, Switzerland
- Tinoosh Mohsenin, UMBC, USA
- Emre Neftci, UC Irvine, USA
- Kea-Tiong Tang, National Tsing Hua Univ., Taiwan
- Shimeng Yu, Georgia Institute of Technology, USA
- Wei Zhang, Hong Kong University of Science and Technology, Hong Kong

### Tutorial Co-chairs

- Priya Panda, Yale Univ., USA
- Aida Todri-Sanial, LIRMM, France
- Jae-sun Seo, Arizona State U.

### Panel Co-chair

- Ulf Schlichtmann, Technical Univ. of Munich, Germany

### Demo Co-chairs

- Arindam Basu, Nanyang Technological U., Singapore
- Jongsun Park, Korea U., Korea
- Abu Sebastian, IBM Zurich

### Industrial Session Co-chairs

- Ambar Sarkar – Nvidia, USA
- John Paul – HPE, USA
- Matthew Ziegler, IBM, Zurich

### Publication Chairs

- Wujie Wen, Lehigh U., USA

### Finance Chair

- Bing Li, Capital Normal U., China

### Publicity

- Theocharis Theocharides, U. of Cyprus, Cyprus
- Bo Yuan, Rutgers U., USA

## Call for Special Sessions

The AICAS 2021 organizing committee invites proposals for special sessions. The special sessions will complement the regular program with new or emerging topics of particular interest at specific or cross levels-of-abstraction, including algorithms, systems, microarchitectures, circuits, and technologies, particularly promising in solving the current challenges of artificial intelligence in circuits and systems.

A special session is expected to have a minimum of three, up to six speakers, including the organizers, who provides an overview of the topic area. Prospective organizers of special sessions should submit proposals to the special session chairs indicating: **title and abstract of the session, organizers, a list of topics** (please provide a list of all talks, speakers and their short biographies, co-authors, the contact information of the corresponding author, and an abstract of each contribution).

Important aspects in evaluating special session proposals will be the timeliness of the topic, quality/track record of the proposers and speakers, coherence of the session, and expected value added to the overall technical program. Notifications of acceptance will be provided by January 22, 2021. Authors of invited papers will be asked to submit their manuscripts and follow the regular conference paper submission and review procedure.

## Call for Tutorials

The AICAS 2021 organizing committee invites proposals for tutorials. The objective of the tutorial program is to provide participants with an inspiring and informative selection of tutorials that reflect current topics in AI circuits and systems related research and development. Tutorials will cover a one to three-hour period.

Prospective organizers of tutorial program should submit proposals to the tutorial chair indicating: title of the tutorial, presenter(s) and their short biographies, target audience and prerequisite knowledge of audience, 300 words abstract (for inclusion on webpage and in registration materials), full description (1-2 pages to be used for evaluation), keywords, the detailed contact information of all presenters (and indication of the main contact person).

## Call for Demos

The AICAS 2021 organizing committee invites proposals for live demonstrations, showing an interactive and tangible form of presentation of working systems that will be directly experienced by conference attendees. With live demonstrations, presenters have the opportunity to show direct proof of their working systems and to create a lasting impression in a session that is very well attended.

Prospective presenters should submit a one-page description of the demonstration using the same page formatting as regular AICAS papers, selecting “Live Demo” as track. Each Live Demonstration must be based either on already published work or on a paper submitted to AICAS 2021. It is mandatory to include a reference to at least one earlier publicly accessible publication of the work or the ID of the submitted paper.