

## Embedded workshop – Climate change

### Introduction

The Embedded workshop on climate change is one of the special initiatives during ISCAS 2024, and is perfectly aligned with the overall theme of ISCAS 2024 – “circuits and systems for sustainable development”.

The overall aim of this Embedded workshop is to advance the ICT community’s understanding of the role of circuits and systems in climate – both as part of the solutions to adapt to the new reality of climate change (‘adaptation’) and as contributors to aggravations in climate change (‘mitigation’). The workshop intends to improve understanding on both these aspects, and thereafter, see how participants can better integrate considerations of climate change into their work on circuits and systems.

The workshop is *timely*, since the need has never been greater to design, implement and scale up high-impact actions to address climate change. The workshop is also *opportune* – it will make use of the very high scientific credibility, quality and visibility of ISCAS to push the climate agenda higher in the community working on information and communications technologies, including circuits and systems. The workshop is designed to be *complementary* to the other contents of ISCAS related to climate and to sustainable development – while the special thematic sessions will present current research on the theme, the workshop will provide a space for collective reflection.

The workshop builds on two successful editions of the EmC2 workshop organised by the IEEE Circuits and Systems Society – in [2022](#) and [2023](#).

### Outcomes

The workshop aims to give the following outcomes:

- A deeper understanding of how solutions based on circuits and systems can help adapt to climate change and mitigate their own harmful contributions to climate change.
- Specific illustrations of the above, using case studies and examples that show that the climate future could also be the digital future, in the best possible way.
- Exploration of how participants can integrate climate change into their own research efforts.

All these will be documented in the form of a white paper, carrying on the trend established via the two EmC2 workshops. This paper will be widely disseminated within CASS and IEEE, to inform and inspire other researchers.

### Organiser

The workshop is being organised by Balwant Godara, PhD.

Dr. Godara obtained his Bachelor of Engineering from IIT Delhi, India, in 2002 and followed that with a Doctor of Philosophy from University of Bordeaux, France, in 2006. He then worked as associate professor at the ISEP engineering school in Paris, France, until 2012.

Over the past decade, he has been working on policy and innovations within the international development space, whose direction is provided by the Sustainable Development Goals. He has worked with UN-hosted bodies (WHO and SWA) as well as with international NGOs (TdH, FIND and PATH).

Climate change is the dominant narrative of Dr. Godara’s work in sustainable development. Besides this, he has helped organise the two editions of EmC2.

### Programme

The workshop will take place on 19 May 2024. The programme of the workshop is as follows.

## Embedded Workshop on Climate Change

19 May 2024; 1.30pm – 5.00pm

### **1.30pm – 1.45pm: Opening remarks by organiser**

- Key findings from IEEE CASS white papers on Climate Change
- Importance of this workshop and structure

### **1.45 pm – 2.45pm: Circuits and systems in the adaptation to climate change**

- Framing presentations by 2 speakers (15mins each)
- Panel discussion (30mins)

2.45pm – 3.00pm: Break

### **3.00pm – 4.00pm: Circuits and systems in the mitigation of climate change**

- Framing presentations by 2 speakers (15mins each)
- Panel discussion (30mins)

### **4.00pm – 4.30pm: Group work**

- Guiding question – How to extend/adapt your current work to take into account climate change

### **4.30pm – 5.00pm: Conclusions and closing**

- Report back from group work
- Next steps and closing

### **Framing presentations**

The framing presentations will be delivered by experts in the fields of climate action. These will include two kinds – those with a solid understanding of, and experience in, climate action globally; and those whose work on ICT has already taken into account climate change.

Speakers from the region will be prioritised, in order to optimise expenditure. These could include Singapore (Nanyang Technological University and the Singapore government), Indonesia, Malaysia, and Australia (Institute for Sustainable Futures, Sydney).

### **Participants**

The target public for this workshop includes a subset of ISCAS 2024 attendees, who have strong interest and/or some experience in adapting ICT for climate action. This public would be a mix of early- and late-career researchers – for the former, the workshop would allow reflection on how climate change can be integrated into their individual work; for the latter, who are also often at higher levels of decision-making, this workshop could be useful in charting out the path using which the work of their teams could be adapted to integrated climate change.

There will be no call for papers, but a call for participation. The expressions of interest would then be assessed to select the final list of participants. The call for participation would include questions on the current and future scope of the applicants' work to integrate climate change. The optimal size of the workshop is 30 persons, excluding the keynote speakers.