# EW1: ISCAS 2024 Embedded Workshop on Climate Change

Where: Leo 1, Resorts World Convention Centre When: Monday, May 20, 2024; 3pm – 6.30pm

**Objective:** The aim of the Embedded workshop on Climate Change 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 and as contributors to aggravations in climate change.

#### **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.

# **Distinguished Speakers**



Prof. Lerwen Liu Nanyang Tech. University Singapore



Ms. Victoria Papp Int'l Telecom. Union (ITU) UN agency Switzerland



Ms. Sandhya Situola Terre des hommes International NGO Nepal



Expression of Interest

## **Schedule**

Framing presentations		
3pm – 3.15pm	Dr. Balwant Godara	Opening Remarks
3.15pm – 4.15pm	Prof. Lerwen Liu Ms. Victoria Papp Ms. Sandhya Situola	Presentations and discussions (20 minutes each)
4.15pm – 4.30pm	Dr. Balwant Godara	Presentation of guiding questions for second part
Reflection and building		
5pm – 5.45pm	All participants	Reflections on how each participant can articulate climate action into their work
5.45pm – 6.15pm	All participants	Report back by participants
6.15pm – 6.30pm	Dr. Balwant Godara	Closing Remarks

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### Sustainability and entrepreneurship in ICTs

Speaker Bio: Dr. LIU Lerwen is Associate Professor in Entrepreneurship at NTU Singapore. She supports emerging technology driven innovation and global entrepreneurship ecosystem building towards digital and green social and economic transformation. Dr. LIU has over 25 years of global business development experience supporting research commercialization & impact and nurturing start-ups. She is consultant for the Asian Development Bank (ADB) and UN agencies on circular economy, sustainability, emerging technologies, and technopreneurship. She specialises on strategic development, assessment, and emerging technologies (including nanotechnology, solar PV, industry 4.0, etc). She is the founding director of STEAM Platform, focusing on youth empowerment with convergent STEM knowledge, strategic communication skills, entrepreneurship for SDGs2030. Dr. Liu obtained a Ph.D. in Physics from the University of New South Wales (NSW), Australia. Her academic research areas cover semiconductor transports and nanostructure studies, and later on, entrepreneurship ecosystem and circular economy studies. She is an author and co-editor of the textbook, "An Introduction to Circular Economy" published by Springer Nature in Dec. 2020. This book was awarded the Springer Nature's China Development Award in 2021. She is the editor of "Emerging Nanotechnology Power: Nanotechnology R& D and Business Trends In The Asia Pacific Rim, published by World Scientific in 2009. She is the editor-in-chief of the Handbook of Circular Economy Global Leadership to be published by Springer Nature with the 1st handbook to be launched in Q1 2024.

#### From Standards to Solutions: ICTs Driving Climate Action Globally

**Abstract:** In this session, we'll highlight the crucial nexus between global standards and sustainable development, exploring how these frameworks facilitate cooperation and consistency in addressing climate challenges. This presentation will explore the potential of IoT solutions in driving climate action, dive into the role of smart sustainable cities and the imperative of managing e-waste in our digital age. We'll examine how international standards serve as an indispensable tool in the fight against climate change, driving efficiency, and innovation across various sectors.

Speaker Bio: Victoria Papp is a consultant at the International Telecommunication Union (ITU), supporting the Study Groups on 'Internet of Things and Smart Cities and Communities' and 'Environment, Climate Change and Circular Economy'. Victoria is a subject matter expert on global standards, strategic initiatives and reports that support cities in addressing climate change issues through digital transformation to make a positive impact globally. Victoria has a strong focus on analytical research in sustainability, digital transformation, environmental science, resilience, and wellbeing, where she has co-authored several publications on these topics. Victoria holds a Master of Applied Science in Environmental Science and Management and a Bachelor's degree in Environment and Urban Sustainability from Ryerson University in Canada.

### **Designing Inclusive ICT Solutions for Climate Action**

**Abstract:** It is imperative to ground our solutions in the realities faced by communities on the frontlines. Using concrete examples, this presentation aims to highlight 3 crucial criteria to consider when designing solutions: i) drawing upon traditional knowledge and local expertise, as these often hold the key to sustainable solutions deeply rooted in community contexts; ii) understanding the unique needs of the end-users and ensuring their active participation in the design and implementation; and iii) addressing the challenges of limited infrastructure and access to online services. By innovating with these constraints in mind, we can develop ICT solutions that are inclusive and impactful, empowering communities to effectively confront climate change while advancing their resilience and well-being.

**Speaker Bio**: Ms. Sitoula has works with the Terre des hommes (Tdh) Foundation as Asia Regional Migration Coordinator and Lead for Climate Change/Migration, covering Nepal, India, Bangladesh, and Myanmar. She earlier worked with the International Labour Organization (ILO) as National Project Coordinator in Nepal, overseeing the project to reduce the vulnerability of unsafe migration, human trafficking, and forced labor. She also worked as a Legal Fellow at Open Society Initiatives West Africa in Dakar, Senegal. She holds an LL.M. degree from the University of Notre Dame, USA, in International Human Rights Law, and an LLB and Master's of Law in Human Rights and Gender Justice from the Kathmandu School of Law.