WORKSHOP
Sustainable Electronics & International Cooperation on Semiconductors

Grenoble (France)
April 26-28, 2023

PRELIMINARY PROGRAMME

1st DAY

Morning

Welcome word – Francis Balestra (GrenobleINP/CNRS - ICOS Coordinator / SiNANO Institute Director)

SESSION 1 – European Innovation Council

- **EIC Programme:** Eric-Olivier Pallu (European Commission/EISMEA)
- **EIC Responsible Electronics programme:** Isabel Obieta (European Commission/EISMEA)
- **EIC Accelerator help:** Charlotte Rix Nicolajsen (Bureau Europe - Auvergne Rhône-Alpes Entreprises)
- **Start-ups success stories:** UPMEM, TiHive, ALEDIA

SESSION 2 – CHIPS ACTS

- **EU Chips Act:** Francisco Ibañez or Angela Rinaldi (European Commission/DG Connect)
- **Chips Acts and IRDS building pillars and bridges over valleys of death** – Paolo Gargini (IRDS Chairman & US Chips Act)

Lunch

Afternoon

SESSION 3 – Sustainable Electronics

- **Introduction**
- **IRDS Environment, Safety, Health and Sustainability Chapter Presentation** – Leo Kenny (IRDS ESH/S Team leader)
- **What future for the semiconductor industry in the age of climate change? Evolution and diversification of semiconductor technologies** – Stephane Monfray (ST)
- **Life cycle assessment of ICT** – Mathilde Billaud (Fraunhofer IZM)
- **Assessing the environmental impact of integrated circuit chip manufacturing** – Cédric Rolin (IMEC)
- **Sustainable ICT assessment, adoption and strategy** – Thomas Ernst (CEA-LETI)
- **Can we cope with the massive production of integrated circuits (ICs) within environmental limits?** – Thibault Pirson (Université Catholique de Louvain)
- **How innovation leads to a better, safer, more secure and sustainable world?** – Patrick Pype (NXP)
- **Sustainable printed circuits: a possible path to greener electronics** – Attila Géczy (BME-VIK)
- **Building Safe-and-Sustainable-by-Design Community in Electronics** – Dmitri Petrovykh (INL)

PANEL SESSION 1
Challenges and Solutions for Sustainable Electronics

With **Leo Kenny** (IRDS ESH/S Team leader), **Patrick Pype** (NXP), **Markus Pfeffer** (Fraunhofer IISB), **Mustafa Badaroglu** (IRDS More Moore Team leader), **Dominique Thomas** (STMicroelectronics), **Thomas Ernst** (CEA-Leti)

Cocktail

Morning

SESSION 4 – Advanced functionalities

- **IRDS More than Moore Presentation** – Enrico Sangiorgi (Director Emeritus SiNANO Institute – IRDS More than Moore Team leader)

Smart sensors

- **MEMS, IoT** – Matthias Illing (Bosch)
- **Low power transducers for the IoT** – Cosmin Roman (ETHZ)
- **Smart sensors for AgriTech** – Alan O'Riordan (Tyndall)

Smart energy

- **SiC VDMOS Technology evolution as an example for sustainable and efficient energy conversion** – Markus Pfeffer (Fraunhofer IISB)
- **Wide Bandgap Power Devices for a Sustainable Future** – Mikael Östling (KTH)

Lunch

Afternoon

SESSION 5 – Beyond CMOS

- **Introduction**
- **Ferroelectric memories – Enabler for novel computing architectures** – Konrad Seidel (Fraunhofer IPMS)
- **On and Beyond CMOS** – Jouni Ahopelto (VTT)
- **IRDS Beyond CMOS Presentation** – An Chen (IRDS Beyond CMOS Team leader)
- **Nanowire GAA FETs** – Qing-Tai Zhao (FZJ)
- **Flexible electronics with 2D materials** – Andreas Hemmetter (AMO)

SESSION 6 – Quantum Information Processing

- **IRDS technology roadmap for CEQIP** – Scott Holmes (IRDS Cryogenic Electronic and Quantum Information Processing Team leader)
- **The path to large scale quantum computing based on CMOS technology** – Maud Vinet (Siquance)
- **European Quantum Industry Consortium** – Johanna Sepulveda (AIRBUS)

PANEL SESSION 2
Strategy for International Cooperation - Chips Act

With **Paolo Gargini** (IRDS Chairman & US Chips Act), **Enrico Sangiorgi** (Director Emeritus SiNANO Institute – IRDS More than Moore Team leader), **Mathias Illing** (Bosch), **Markus Pfeffer** (Fraunhofer IISB), **Abdul Rahim** (EpiXFab), **Giorgos Fagas** (Tyndall), **Holger Schmidt** (Infineon), **Jean René Lequepeys** (CEA-Leti)

Cocktail

Morning

SESSION 7 – Japanese session

- **Introduction by Japanese and EC representatives**
- **Presentations by Japanese experts**

Lunch

Afternoon

SESSION 8 – Advanced Computing

- **Introduction**
- **IRDS More Moore Roadmap for edge and cloud computing** – Mustafa Badaroglu (IRDS More Moore Team leader)
- **FDSOI platform** – Roberto Gonella (STMicroelectronics)
- **Nanosheet-based Device Architectures for Enabling Advanced CMOS Logic Scaling** – Anabela Veloso (imec)
- **FDSOI engineered substrates for advanced computing** – Sébastien Loubriat (SOITEC)

SESSION 9 – Semiconductors-based Photonics

- **Introduction**
- **Silicon Photonics: Current state, trends, and future evolution** – Abdul Rahim (EpiXFab)
- **Semiconductor-based Nanophotonics** – Stephan Suckow (AMO)
- **Silicon photonics and applications** – Frédéric Bœuf (STMicroelectronics)

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