Challenges in Advanced Computing and Functionalities
International Cooperation on Semiconductors

SINANO Academy:
An Overview of the SiNANO Institute and the Skills Agenda

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27 Members from 16 Countries in Europe

SiNANO is a network of excellence connecting the European research and academic community in semiconductor science and technologies

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SiNANO SME community

SiNANO integrates a thriving SME community from the
start-ups/spin-outs associated with our members

Member Competences

Research activities cover the full value chain **from Materials to Systems:**

- **More Moore** (logic nanodevices, embedded and non-charge-based memories, very low power devices, high-temperature electronics)
- **Beyond CMOS** (novel devices for ultra-low power, small slope switches-NCFET/TFET/NEMS, 1D, alternative materials-2D layers, neuromorphic computing, new bottom-up processes)
- **More than Moore** (micro-nano-bio sensors & systems, RF devices, energy harvesting, flexible & printed electronics, power electronics)
- **Smart Systems** including circuit and system design
- **Quantum Technologies** including cryo-Electronics
- **Sustainable Electronics**
- Semiconductor-based **Photonics**

Applications: Internet of Things, automotive/mobility, medical/health, environment, manufacturing, security, energy, farming, etc.

Our Objective

To secure the future of Europe's semiconductor science and technology by

- mobilising and nurturing the European research and innovation community,

- promoting and strengthening synergies in the field through our membership,

- working with industry to accelerate innovation,

- and ensuring the growth of skilful talent in an inclusive and diverse environment with equal opportunities for all

SiNANO Activities

➤ Community engagement: grow and enhance the European R&I network and internal collaborations, e.g., through EU projects from brainstorming to execution, in particular dissemination and communication

➤ Stakeholder engagement: SiNANO is the network partner for promoting Europe's semiconductor science and technology and coordinating/preparing roadmaps and position/white papers to inform the inform the EC and the broader community

➤ Innovation: accelerate the translation of excellent research into European know-how, technologies, and products together with our start-ups and industry partners

➤ Education & Skills: Ensure the delivery of a pipeline of talented researchers and skilful workforce

➤ Promote and Support EDI

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(Bi)-Annual School

SiNANO ACADEMY: 10TH Modelling, Simulation and Technology Summer School

October 1-2, 2024 – at THM, Giessen, Germany

9th SiNANO Modelling and Simulations Summer School

From 12th to 14th July, 2022 — Glasgow, Scotland

Future schools to be organised on an annual basis covering a wider range of topics

Research Accelerator Programme

On-site introduction to the technology/facilities available for early-stage research on micro/nano-electronics and early-stage research on emerging and green electronics
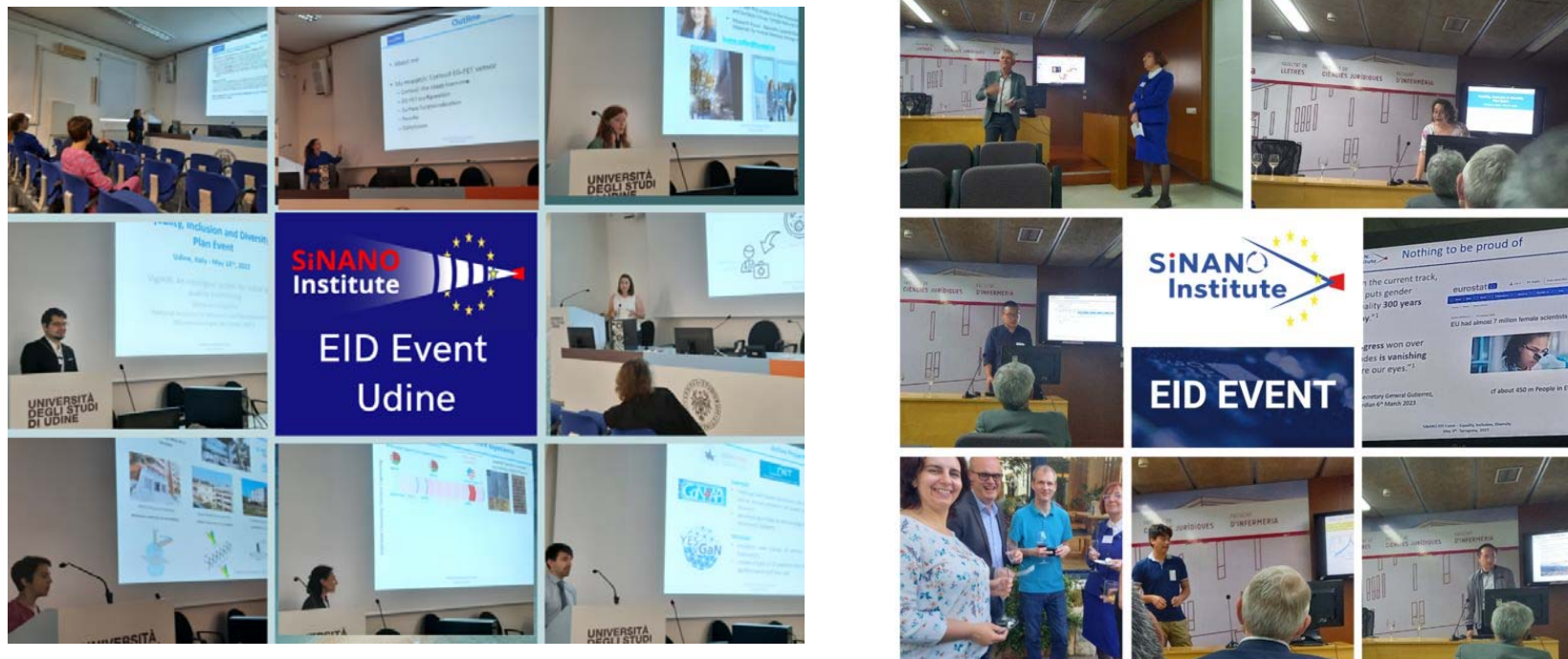
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Supporting Early Career Researchers

Awards/Prizes

SiNANO Androula Nassiopoulou Best Paper Award is given every year to the best

EUROSOI-ULIS paper (joint SiNANO/EUROSOI-ULIS) with an award of €300 to the first author

SINANO Institute Presentation

ESSDERC/ESSIRC Workshops - 20 Years Anniversary!

Monday 9th SiNANO-ICOS workshop on
"Identification of emerging technologies in Advanced Computation, Advanced Functionalities, Ground-breaking Technologies and expected impact for international cooperation"

Future Plans

- Intensify the SiNANO Academy events

- Use of Marie Skłodowska-Curie Actions, in particular Doctoral Networks

- A campaign to promote the social benefits and sustainability of semiconductor technology to target students at 3rd level (and secondary) education

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THANK YOU!

ICOS WORKSHOP – May 13-14th 2024, Athens

icos-semiconductors.eu