

## SINANO-NEREID

### Workshop "Towards a new NanoElectronics Roadmap for Europe"

Leuven, Belgium - 11<sup>th</sup> September 2017

#### Organizers

Francis Balestra, Grenoble INP-CNRS (NEREID Coordinator), Enrico Sangiorgi, SiNANO Institute/IUNET (SiNANO Institute Director), Ralf Popp, Edacentrum (NEREID Dissemination Manager)

#### Abstract

Within this Workshop the H2020 Coordination and Support Action NEREID entitled "NanoElectronics Roadmap for Europe: Identification and Dissemination" (<https://www.nereid-h2020.eu/>, n° 685559) will report on its recent findings on the way to map the future of European Nanoelectronics. The objective of this 3 year project NEREID is to elaborate a new NanoElectronics Roadmap for Europe using a pretty new method: starting from the needs of applications and leveraging the strengths of the European eco-system the advanced design and technology concepts are examined with respect to their potential to serve future application needs and/or to lead to possible disruptive applications. Focusing on a longer term time horizon, NEREID will lead to an application oriented early benchmark/identification of promising novel nanoelectronic technologies, and an identification of bottlenecks all along the innovation (value) chain. In this workshop, which is supported by the European Institute of Nanoelectronics SINANO ([www.sinano.eu](http://www.sinano.eu)) the NEREID project will report on its recent findings and will bring them into a hopefully vivid feedback situation with the audience, aiming to verify the current results by discussing especially controversial points. Besides applications like automotive, energy, health, IoT and many others, the topics of NEREID and the workshop comprise Beyond CMOS technologies, advanced logic and connectivity, functional diversification, system design and heterogeneous integration as well as equipment and manufacturing science.

#### Programme

9.00	Welcome	Enrico Sangiorgi (SiNANO Institute)
9.05	"Presentation of the NEREID Project"	Francis Balestra (Grenoble INP/CNRS)
9.25	"European Status, Vision and Perspectives in Nanoelectronics"	Francisco Ibanez (European Commission)
10.00	"Emerging technologies for Beyond CMOS"	Jouni Ahopelto (VTT)
	"Alternative Computing Paradigms"	Clivia Sotomayor Torres (ICN2)
10.45	Coffee Break	
11.00	"Advanced logic: Nanoscale FET"	Anda Mocuta (IMEC)
	"RF and mmW Design / Connectivity"	Yann Deval (IMS Bordeaux)
	Functional Diversification:	
11.45	"Smart Sensors"	Montserrat Fernandez-Bolanos (EPFL)
	"Smart Energy Devices"	Steve Stoffels (IMEC)
	"Energy for Autonomous Systems"	Stéphane Monfray (ST Microelectronics)
12.45	Lunch	
14.00	"System Design"	Danilo Demarchi (Politecnico Di Torino) Holger Schmidt (Infineon)
	"Heterogenous Integration"	Georgios Fagas (Tyndall)
14.45	"Equipment and Manufacturing Science"	Thanasis Dimoulas (NCSR)
15.30	Conclusions	Enrico Sangiorgi (SiNANO Institute)