



SINANO-NANOSIL Workshop: **“On the convergence between More Moore, More Than Moore and Beyond CMOS”**

Date of the Workshop: September 17, 2010, Seville, Spain - during ESSDERC-ESSCIRC'2010

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Abstract:

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Research in Nanoelectronics today not only consists in pushing further the tremendous scaling of integrated circuits. It is also about introducing additional functionalities such as micro/nanosystem, RF, analog, biochips ... with more conventional logic or memory circuits. In addition, new technologies (such as for instance graphene or nanowire electronics) are also expected to emerge from the area of Nanosciences and Nanotechnologies, possibly leading to major breakthroughs for many applications.

These main trends, referred as “More Moore”, “More Than Moore” and “Beyond CMOS”, are usually presented as three distinct fields. But is it so simple ? In Physics, Technology and Design : what are in fact the connections between these three domains? What are the synergies needed between the various aspects of Nanoelectronics ? Is there a convergence between future research topics and platforms in these areas ?

Several outstanding speakers, coming both from industry and academia, on the basis of examples taken from their own expertise and vision, will address this very important issue for future Nanoelectronic systems.

Programme:

8.45 – 9.00 : Welcome and Opening

9.00 – 9.30 : Thomas Skotnicki, STMicroelectronics, France, “III-V high mobility materials in advanced CMOS”

9.30 – 10.00 : Sywert Brongersma, IMEC, Belgium, “CMOS, CMORE, and what to use it for”

10.00 – 10.30 : Coffee Break

10.30 – 11.00 : Enrico Sangiorgi, IU.NET, Italy, “When More Moore meets More than Moore and Beyond CMOS”

11.00 – 11.30 : Mireille Mouis, IMEP-LAHC, France , “Nanowires in the Beyond CMOS and More than Moore perspectives : Electromechanical properties”

11.30 – 12.00 : Peter Baumgartner, Infineon Technologies, Germany, “Scaling Challenges for complex SOC products”

12.00 – 13.00 : Lunch

13.00 – 13.30 : Heike Riel, IBM Research, Switzerland, “Tunnel Field Effect Transistors based on grown Nanowires”

13.30 – 14.00 : Michel Brillouet, CEA LETI, France, “Synergies and differences between More Moore, More than Moore and Beyond CMOS”

14.00 – 14.30 : Siegfried Mantl, Forschungszentrum Julich, Germany, “Novel Materials, a source of innovation and performance gain”

14.30 – 15.00 : Jan Hoentschel, Global Foundries, Germany, “Diversification of Moore's law and its advanced technologies”

15.00 – 15.30 : Jean Pierre Colinge, Tyndall, Ireland, “Junctionless nanowire transistor: an example of the convergence between More Moore and Beyond CMOS”