



FED'13

Functionality-Enhanced Devices Workshop

EPFL, Lausanne, Switzerland
25 March 2013

9:00 - 10:00	PART I: Silicon-based Controllable Polarity Devices Fabrication
	"Reconfigurable Nanowire Electronics – Device Principles and Prospects" Walter Weber, <i>NamLab, Dresden, Germany</i>
	"Polarity Control at the Runtime in Double-Gate, Gate-All-Around Vertically Stacked Silicon Nanowire FETs" Michele De Marchi, <i>EPFL, Lausanne, Switzerland</i>
10:00 - 10:30	Coffee Break
10:30 - 12:00	PART II: Carbon-based and Carbon-like Materials, Devices and Circuits
	"MoS₂ Based Devices and Circuits" Andras Kis, <i>EPFL, Lausanne, Switzerland</i>
	"Electrostatically-Reversible Polarity of Dual-Gated Graphene Transistors" Shu Nakaharai, <i>AIST, Japan</i>
	"Electrostatic Doping in Carbon-based Nanoelectronics Devices" Joachim Knoch, <i>RWTH Aachen, Germany</i>
	"Sacha, the Stanford Carbon Nanotube Controlled Handshaking Robot" Max Shulaker, <i>Stanford University, California, USA</i>
12:00 - 14:00	Lunch
14:00 - 15:30	PART III: Compact Modeling and Circuit Design
	"Compact Model for Multiple Independent Gates Ambipolar Devices" Gianluca Piccini, <i>Politecnico di Torino, Torino, Italy</i>
	"Ambipolar Logic Circuit Design and Synthesis" Ian O'Connor, <i>Institute of Nanotechnologies of Lyon, Ecully, France</i>
	"Specific Design Techniques for Controllable Ambipolar Transistors: from Physical Design to Circuit Simulation" Haykel Ben Jamaa, <i>CEA, LETI, Minatec Campus, Grenoble, France</i>
	"Layout Technique for Double-Gate Silicon Nanowire FETs with an Efficient Sea-of-Tiles Architecture" Shashi Bobba, <i>EPFL, Lausanne, Switzerland</i>
15:30 - 16:00	Coffee Break
16:00 - 17:15	PART IV: Advanced Architectural Design
	"Modularity Study of Ultra-fine Grain Reconfigurable Architectures Based on DG-CNTFET" Fabien Clermidy, <i>CEA, LETI, Minatec Campus, Grenoble, France</i>
	"Biconditional BDD: A Novel Canonical BDD Enabling Efficient Direct Mapping of DG Controllable Polarity FETs" Luca Amaru, <i>EPFL, Lausanne, Switzerland</i>
	"Auto-Reconfiguration in Statically Interconnected CNTFET-based Cells" Sébastien Le Beux, <i>Institute of Nanotechnologies of Lyon, Ecully, France</i>
17:15 - 17:45	Concluding Discussions