



Program

Materials and Devices Beyond CMOS

Oct. 07, 2015		
15:00-18:00		Arrival at Castle Ringberg (coffee, tea, fruit, cake for your welcome)
18:00-19:00	Essl	Guided tour of the Castle Ringberg
19:00-20:00		Welcome DINNER
20:00-21:00	Parkin	Opening - Concept of the "BEYOND!" Workshop series
Oct. 08, 2015		
07:45-08:45		BREAKFAST
		Chair: PARKIN
08:45-09:00	Parkin	Welcome to "BEYOND! CMOS" workshop
09:00-09:40	Poon	Integrated photonics for "more than Moore", "more Moore", and neural technologies
09:40-10:20	Peterson	3-D Additive Processing of Multi-layer Transistor Systems
10:20-10:40		Refreshing your brain (coffee, tea & more)
		Chair: GROSS
10:40-11:20	Williams	Electronic analogs of synapses and neurons
11:20-12:00	Di Ventra	Memcomputing: computing with collective states of interacting memory processors
12:00-13:00		LUNCH
		Chair: MERTIG
13:00-13:40	Cha	2D Electronic Chalcogenide Nanomaterials
13:40-14:20	Mak	Valley pseudospin transport in transition metal dichalcogenide atomic layers
14:20-15:00	Yan	From the bulk to the surface in a new topological matter, the Weyl Semimetal
15:00-15:20		Move & talk (coffee, tea & more)
		Chair: HANEIN / DATTA
15:20-16:00	Liu	Active 3D DNA plasmonics
16:00-16:40	Kadic	3D Microstructured Metamaterials
16:40-17:20	Cavalleri	Coherent ultrafast control of solids through optical phononics
17:20-18:00	Ropers	Ultrafast electron microscopy and diffraction using nanoscale photoemitters
18:15-19:45		DINNER
		Chair: FELSNER
20:00-20:40	Salahuddin	Controlled Phase Transition for Next Generation Computing
20:40-21:20	Apsel	Communicating on a Shoestring: How Fireflies and Flexible Hardware Can Enable IoT

BEYOND!

CMOS

Oct. 09, 2015		
07:45-09:00		BREAKFAST
		Chair: DI VENTRA
09:00-09:40	Helmstaedter	Connectomics
09:40-10:20	Levi	Biomimetic Neural Network for the new neuromorphic roadmap
10:20-10:40		Refreshing your brain (coffee, tea & more)
		Chair: APSEL
10:40-11:20	Lemay	All-electrical (bio)sensing with CMOS nanocapacitor arrays: from nanoparticles to living cells
11:20-12:00	Hanein	Nano Materials for Neuro Technology
12:00-12:40	Yaksi	Sensory processing in zebrafish brain
13:00-14:00		LUNCH
		Chair: CAVALLERI
14:00-14:40	Delbruck	Silicon Retina Technology
14:40-15:20	Datta	Revisiting Spin Transistors
15:20-16:00		Networking time (coffee, tea & more)
		Chair: LIU
16:00-16:40	Wakamura	Quasiparticle-mediated spin Hall effect in a superconductor
16:40-17:20	Cao	Magnon-Polaritons in Microwave Cavities
17:20-18:00	Bazylak	Fuel cells for clean energy: designing new materials for higher efficiencies
18:00-19:30		Bavarian night - BUFFET at Castle Ringberg
19:30-20:00	Parkin	Closing remarks - future directions
Oct. 10, 2015		
08:00-9:00		BREAKFAST
		Departure - Taxi transfer to Tegernsee station