7th International Workshop on Characterization and Modeling of Memory devices

Sept 29th- 30th 2016 | Università degli Studi di Milano - Bicocca

Building U6 | Room M. Martini | Floor -1 | Piazza dell'Ateneo Nuovo 1 | Milan, Italy

SCHEDULE

Sept 29th

10.00 a.m. Registration

10.30 **Welcome**

Marco **Bernasconi**, Università degli Studi di Milano - Bicocca

Paolo **Fantini**, Micron Semiconductor Italia

10.45 **Workshop Introduction**

Chandra **Mouli**, Micron Semiconductor Italia

11.00 a.m. 1st session: Phase change materials and devices

11.00 *Density functional simulations of phase change material / graphene heterostructures* - Jaakko **Akola**, Tampere University - Finland

11.35 *Fragile-Strong behavior of telluride alloys and its importance for phase change application* - Pierre **Lucas**, University of Arizona - USA

12.10 Lunch

1.45 p.m. 2nd session: Phase change materials and devices

1.45 *The role of disorder on electronic, ferroelectric and structural changes in phase change materials* - Ritesh **Agarwal**, University of Pennsylvania - USA

2.20 *Metal-Insulator Transition Driven by Vacancy Ordering in GeSbTe Phase Change Materials Investigated via Electrical Transport, Terahertz and Raman spectroscopy* - Raffaella **Calarco**, PDI - Berlin - Germany

2.55 *Chalcogenide-Based Phase-Change Switches for RF Switching Applications* - Nabil **El-Hinnawy**, Northrop Grumman - Maryland - USA

3.30 p.m. 3rd session: Models for Percolative Conduction

3.30 *Statistical Simulation of Percolative Conduction in poly-Si channels for NVM applications* - Salvatore **Amoroso**, GSS Ltd & Glasgow University - UK

4.00 Coffee Break

Sept 30th

8.30 a.m. 4th session: Magnetic and Ferroelectric Memories

8.30 *First principles multi-scale theory for current-driven magnetization dynamics* - Stefano **Sanvito**, Trinity College - Dublin - Ireland

9.05 *Nanosecond-Scale Switching in Perpendicularly Magnetized STT-MRAM Cells* - Thibaut **Devolder**, CNRS - Paris - France

9.40 *The negative aspects at the origin of hysteresis effects in FeFETs and niobium threshold switches* - Stefan **Slesazeck**, NaMLab - Dresden - Germany

10.15 Coffee Break

10.45 a.m. 5th session: Resistive Memories and Selectors

10.45 *Bi-directional Threshold Selector Devices for 3D X-point Memory* - Hyunsang **Hwang**, Pohang University of Science and Technology Postech - Korea

11.20 *Visualization, modeling and control of filament growth in resistive-memories (RRAMs) towards commercial applications* - Wei **Lu**, University of Michigan & Crossbar Inc. - USA

11.55 *Studying ReRAM memories at the nanoscale using the conductive AFM* - Mario **Lanza**, Inst. of Functional Nano & Soft Materials of Soochow University - China

12.30 *Carbon-based resistive memories* - Federico **Zipoli**, IBM Zurich - Switzerland

1.05 p.m. Lunch & Adjourn

More info available on the workshop website at www.iwcm2.eu

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