9th International Workshop on Characterization and Modeling of Memory devices

September 27th - 28th 2018

University of Milano-Bicocca, Building U6, Room U6-09 (Ground Floor Piazza dell'Ateneo Nuovo 1, Milan (Italy)



SCHEDULE SEPTEMBER 27th

9.30 a.m. Registration

10.10 a.m. **Welcome**Gianfranco **Pacchioni**, Pro-Rector for Research, University of Milano-Bicocca

10.20 a.m. 1st Session: Plenary Talks

10.20 a.m. *Integrating CMOS and emerging memories for machine learning* - Yusuf **Leblebici** - EPFL, Lausanne - Switzerland

11.05 a.m. *Spin-Transfer-Torque MRAM: the Next Revolution in Memory* - Daniel C. **Worledge** - IBM Almaden Research Center - USA

11.50 a.m. *Scaling Perspectives of 3D NAND* - Akira **Goda** - Micron Tecnhology, Boise - USA

12.35 a.m. Lunch

2.00 p.m. **2**nd **Session: Phase Change and Ovonic Materials**

2.00 p.m. Ab initio Guided Design of an Ultrafast Phase-Change Material - Riccardo Mazzarello - Aachen University - Germany 2.35 p.m. Exploiting Nanoscale Effects in Phase-Change Memories - Martin Salinga - Aachen University - Germany 3.10 p.m. Terahertz Studies in Phase Change Materials: Toward Ultrafast Phase Change Operation and Photonics - Kotaro Makino - AIST, Tsukuba - Japan

3.45 p.m. Ovonic Threshold Switching Selector and Non-Volatile Resistive Memory Co-Integration Towards 3D PCM and RRAM Crossbar Memory Featuring High Density and High Endurance Performance - Gabriele Navarro - CEA, LETI, Grenoble - France

4.20 p.m. Coffee Break

SEPTEMBER 28th

9.00 a.m. 3rd Session: Oxide RRAM

9.00 a.m. Cross-layer Design Strategy for Accelerating Deep Learning Using Emerging Resistive Memory Technology - Tuo-Hung Hou - National Chiao Tung University - Taiwan 9.35 a.m. Multiscale Modeling of Novel Memory Devices: Linking Materials to Devices for Accurate Performance and Reliability Predictions - Luca Larcher - University of Modena and Reggio Emilia - Italy

10.10 a.m. *Oxide RRAM for Spiking Neural Networks* - Sabina **Spiga** - CNR-IMM, Agrate Brianza - Italy

10.45 a.m. Coffee Break

11.15 a.m. 4th Session: Ferroelectrics and Ferromagnetics

11.15 a.m. *A Potential Alternative for DRAM and NAND:*Ferroelectric HfO2 Thin Film - Karine Florent - KU Leuven - Belgium

11.50 a.m. *Current Status of FeRAM Technologies and Prospects for Beyond Memory Application* - Stefan **Slesazeck** - NaMLab, Dresden - Germany

12.25 a.m. *Towards High Density STT-MRAM at sub-20nm Nodes* - Bernard **Dieny** - Université Grenoble Alpes - France

1.00 p.m. Lunch & Adjourn

CLICK HERE TO REGISTER

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

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