# 9<sup>th</sup> International Workshop on Characterization and Modeling of Memory devices

# September 27<sup>th</sup> - 28<sup>th</sup> 2018 University of Milano-Bicocca, Building U6, Room U6-09 (Ground Floor Piazza dell'Ateneo Nuovo 1, Milan (Italy)

# SCHEDULE SEPTEMBER 27<sup>th</sup>

# 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<sup>nd</sup> 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

Partners



Aicron







## 9.00 a.m. 3<sup>rd</sup> 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 BRAM for Spiking Neural Networks* - Sabina

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

Fondazione Politecnico di Milano E. comunicazione@fondazione.polimi.it Ph. + 39 02 2399 2950

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