



# 11th INTERNATIONAL WORKSHOP ON CHARACTERIZATION AND MODELING OF MEMORY DEVICES

October 6<sup>th</sup> – 7<sup>th</sup>, 2022

Politecnico di Milano, Aula Magna - Piazza Leonardo da Vinci 32, Milano

## PROGRAM

**October 6<sup>th</sup>, 2022**

### OPENING SESSION

9.30 Registration  
10.10 Welcome

### 1<sup>st</sup> session: Memory device physics and material science

10.30 **Plenary Talk - Atomistic simulations aiding nano-(opto)electronics**  
Elisa Molinari, Università di Modena

11.15 **Phase-change heterostructures for neuromorphic computing**  
Riccardo Mazzarello, Università La Sapienza, Roma

11.50 **The role of density in melt-quenching phase change materials**  
Martin Salinga, Muenster University

12.25 Lunch

### 2<sup>nd</sup> session: AI and Memory systems

14.15 **Plenary Talk - Memory challenges and opportunities for AI at the extreme edge**  
Luca Benini, Università di Bologna & ETH

14.50 **Emerging NVM-based concepts of Edge AI**  
Elisa Vianello, LETI

15.25 **TinyML system with ultra-low power Memories**  
Iakovos Stamoulis, Think Silicon, An Applied Materials Company

16.00 **Accelerating deep learning with in-memory computing, a system perspective**  
Giuseppe Desoli, STMicroelectronics

16.35 Coffee Break

**October 7<sup>th</sup>, 2022**

### 3<sup>rd</sup> session: Memory Applications

9.00 **Evolving Opportunities and Challenges for Memory**  
Mark Helm, Micron

9.45 **16MB ePCM microcell for automotive grade microcontroller in 28nm FD SOI, featuring extension to 24MB for Over The Air software update**  
Fabio Disegni, STMicroelectronics

10.20 **Deep learning inference using computational phase-change memory**  
Manuel Le Gallo, IBM Zurich

10.55 Coffee Break

### 4<sup>th</sup> session: Material science

11.30 **Ge-rich GexSbyTez alloys and high Ge content heterostructures for automotive applications**  
Raffaella Calarco, CNR Roma

12.05 **Will hafnium oxide finally enable competitive ferroelectric devices?**  
Johannes Ocker, Ferroelectric Memory Company

12.45 Lunch

14.00 Adjourn

More info available on the workshop website at [www.iwcm2.eu](http://www.iwcm2.eu)

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