

Emerging memory technologies : ReRAM and PCM

Instructor: Daniel Ielmini, Associate Professor at Politecnico di Milano

- Technology, scaling, operation potential and status
- Including discussion on potential applications (embedded – SCM –VRRAM)

Daniele Ielmini

Daniele Ielmini is an Associate Professor at Dipartimento di Elettronica, Informazione e Bioingegneria (DEIB), Politecnico di Milano, Italy.

Following his PhD in 2002 on reliability of Flash memories, he joined DEIB as an Assistant Professor in 2002, and became an Associate Professor in 2010. He also held positions of visiting scientist in Intel and Stanford University in 2006.

His main research interests focus on the modelling of emerging semiconductor devices such as phase change memory (PCM) and resistive switching memory (RRAM), exploring their applications in both memory and computing circuits, e.g., neuromorphic networks.

Prof. Ielmini has published more than 250 papers in international journals and conferences. He has served in several Technical Subcommittees of international conferences, such as IEEE-IRPS(2006-2008), IEEE-SISC (2008-2010), IEEE-IEDM (2008-2009), and INFOS (2011-2015). He is a Senior Member of the IEEE and a member of the MRS. He received the Intel Outstanding Researcher Award in 2013 for his works on emerging memory devices. In 2014, he was awarded the Consolidator Grant from the European Research Council (ERC) for researching beyond-CMOS computing with emerging devices.