

LETI MEMORY WORKSHOP – June 26th, 2015

Embedded and Standalone NVM: Vision, Opportunities and Disruptive Applications

8:15-8:45 a.m. Reception

8:45-8:50 a.m. OPENING

SESSION 1		NVM vision on standalone & embedded markets
Chair : Luca Perniola (CEA-LETI)		
8:50-9:15 a.m.	eMCU trends & challenges for advanced nodes	Delphine Maury (STMicroelectronics)
9:15-9:40 a.m.	Scaling of Logic-Process-Compatible Split-Gate Flash Memory from 90 nm to 28 nm Technology Node	Nhan Do (Microchip)
9:40-10:05 a.m.	Long Live Data: Opportunities and Challenges for Emerging NVM	Jeff Childress (HGST)
10:05-10:25 a.m.	To be defined	Fabien Clermidy (CEA-LETI)
10:25-10:55 a.m.	COFFE BREAK	

SESSION 2		Emerging memory opportunities
Chair : Gabriele Navarro (CEA-LETI)		
10:55-11:20 a.m.	Emerging Non Volatile Memory (NVM) Market Trends – Technological choices are about to be made by key players -STTMRAM or RRAM?	Yann de Charentenay (Yole Développement)
11:20-11:45 a.m.	Multilevel-Cell Phase Change Memory: A Reliable Storage Technology	Milos Stanisavljevic (IBM)
11:45-12:05 a.m.	Controlling oxygen vacancies in doped oxide based CBRAM for improved memory performances	Gabriel Molas (CEA-LETI)
12:05-12:30 p.m.	Memory market overview and future PCM opportunities	Innocenzo Tortorelli (Micron)
12:30-2:00 p.m.	LUNCH BREAK	

SESSION 3		NVM in disruptive applications
Chair : Carine Jahan (CEA-LETI)		
2:00-2:25 p.m.	About security of the data in NVM: State of the art and challenges	Romain Wacquez (CEA-Tech)
2:25-2:50 p.m.	Radiation Effects on NVM Technologies	Alessandro Paccagnella (University of Padova)
2:50-3:10 p.m.	Towards the origin of low resistance state retention failure in HfO ₂ based RRAM	Boubacar Traore (CEA-LETI)
3:10-3:30 p.m.	Conductive Bridge RAM (CBRAM) Forming, SET and RESET operations understanding, for memory stack optimization	Jérémy Guy (CEA-LETI)
3:30-4:00 p.m.	COFFE BREAK	

SESSION 4		Memories for biomedical & neuromorphic applications
Chair : Luca Perniola (CEA-LETI)		
4:00-4:25 p.m.	Electronic memory: from health applications to the brain model for next generation devices	François Berger (CEA-Cinatec)
4:25-4:50 p.m.	Computing with RRAM devices in crossbar logic and neuromorphic circuits	Daniele Ielmini (University of Milan)

4:50-5:10 p.m.

Variability-tolerant Convolutional
Neural Network for Pattern
Recognition Applications based on
OxRAM Synapses

Daniele Garbin (CEA-LETI)