

PROGRAMME

Thursday 17th November, Morning

08.15 am Registration - Welcome & coffee
08.50 am Workshop Opening

SESSION 1. NON-VOLATILE MEMORIES: DEVICES, ARCHITECTURES & APPLICATIONS

Chairmen: *Christophe Muller (IM2NP) & Cyrille Dray (Intel Mobile Communications)*

09.00 am **Keynote speaker: Barbara de SALVO, CEA LETI: The Future of Silicon Non Volatile Memories and Successor Memory Technologies: Challenges and Opportunities**

09.30 am **Design Challenges for Prototypical and Emerging Memory: From memory array to distributed cells in CMOS logic**
– *Jean-Michel Portal – IM2NP*

10.00 am **Leading-edge NOR flash for Contactless application** – *Stephan NIEL – STMicroelectronics*

10.15 am **Non Volatile Memory in Digital Security** – *Didier Save – Gemalto*

10.45 am Coffee Break / Poster session

SESSION 2. TECHNOLOGY PROVIDERS OF MATURE SOLUTIONS (FRAM, MRAM, PCM)

Chairmen: *Philippe Boivin (ST Microelectronics) & Rémi Capraro (LFoundry)*

11.00 am **An 82µA/MHz Microcontroller with Embedded FeRAM for Energy- Harvesting Applications** – *Christian Sichert – Texas Instruments*

11.30 am **MRAM Technologies** – *Eric Marcelot – E2V*

12.00 am **Perspectives of Embedded Phase Change Memory Technology for Low Power Applications** – *Paola Zuliani – STMicroelectronics*

12.30 pm Lunch / Poster session

Embedded NVM Workshop

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Thursday 17th November, Afternoon

02.00 pm Workshop afternoon opening

SESSION 3. RELIABILITY, SECURITY AND TESTING OF NVM

Chairmen: Patrick Girard (LIRMM) &
Didier Née (Inside Secure)

02.00 pm **Reliability of PCM and RRAM: issues, testing and predictive models** – Daniele Ielmini – *Politecnico di Milano*

02.30 pm **Overview of embedded NVM security features** – Assia Tria – *ENSM-SE/CMP*

03.00 pm **Embedded Flash Modeling and Test** – Arnaud Virazel – *LIRMM*

03.30 pm **Utilization of embedded NVM in automotive environment (end-user overview)** – François Gouyou – *Valeo*

04.00 pm *Coffee Break / Poster session*

SESSION 4. EMERGING TECHNOLOGIES AND CONCEPTS (PART 1)

Chairmen: Didier Save (Gemalto) &
Yves Leduc (Polytech'Nice)

04.30 pm **Resistive RAM memories: from promise to real silicon** – Dirk Wouters – *IMEC*

05.00 pm **CBRAM: New Opportunities through High Density, Low Power Novel Embedded NVM Technology** – Philippe Blanchard – *ADESTO Technologies*

05.30 pm *Poster session*

06.15 pm *Day 1 workshop closing*

Thursday 17th November, Evening

07.00 pm *Gala - Dinner*

Restaurant « Les 2 Garçons », Aix en Provence

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Friday 18th November

08.00 am Welcome & coffee
08.30 am Workshop Opening

SESSION 4. EMERGING TECHNOLOGIES AND CONCEPTS (PART 2)

Chairmen: Didier Save (Gemalto) & Yves Leduc (Polytech'Nice)

08.30 am **Invited speaker: Simone Raoux, IBM: Phase Change Random Access Memory: Recent developments and ultimate scaling limits**

09.10 am **From promises to products : Spin Transfer Torque and Themally-Assisted MRAM** – Jean-Pierre Nozières – *SPINTEC*

SESSION 5. ADDED VALUE FROM BIOMIMETICS?

Chairmen: Sylvain Blayac (ENSM-SE/CMP) & Luc Jeannerot (ARCSIS)

09.40 am **How do we store and retrieve memory?** – Dr. Christophe Bernard – *INSERM (French National Institute for health and medical research)*

10.20 am Coffee Break / Poster session

11.00 am **Invited Speaker: Gilberto Medeiros-Ribeiro, HP: Memristor challenges and progress**

11.45 am **Panel discussion: "Neuroinspired memory architectures: the next revolution?"**
Chaired by Christian Gamrat – *CEA* and Christophe Bernard – *INSERM*

12.30 pm Lunch

02.30 pm Workshop closing