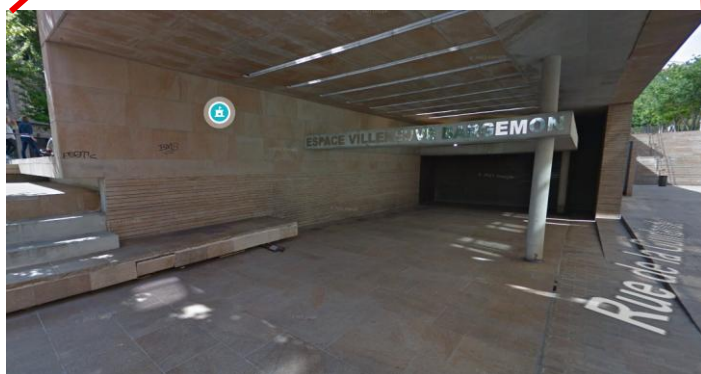
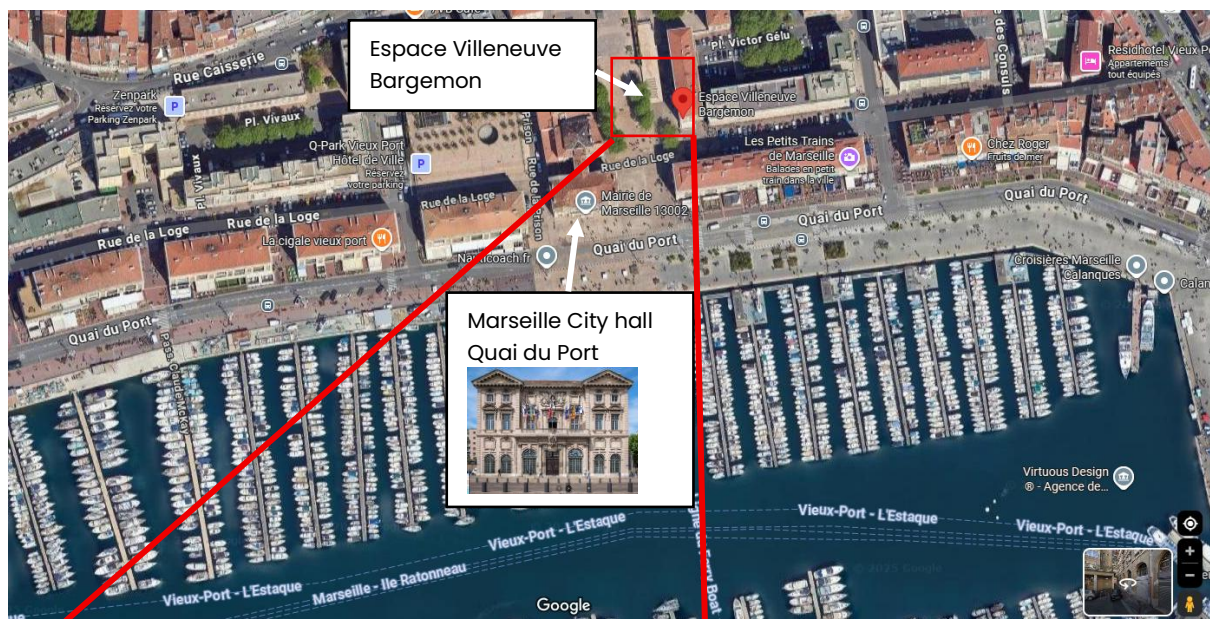


Program

Tuesday, Septembre 23

- 15:00-17:00 **Social Activity (optional)**
Guided tour of Marseille – Notre Dame de La Garde
Meeting time: no later than 14:45
Meeting point: [174 Quai du port, 13002 Marseille](#)
- 18:00-20:00 **Registration and Welcome Reception**
[Espace Villeneuve Bargemon](#), Marseille City Hall
13002 Marseille
- 19:30-22:00 **Committee meeting & dinner (restricted)**



Wednesday, Septembre 24

8:00–9:00 **REGISTRATION & Coffee**

9:00–9:15 **Opening remarks**

SESSION-1 High Resolution

9:15–9:50 **Ovshinsky Lecture Award**

Der Chang Kau, Intel & **Fabio Pellizzer**, Micron

9:50–10:15 **Invited: Ritesh Agarwal**– University of Pennsylvania, USA

Unconventional amorphization in layered materials from multimodal coupling of fields to competing orders

10:15–10:30 **Andriy Lotnyk**– IOM Leipzig, Germany

In situ atomic-scale investigation of structural transitions in $\text{Ge}_2\text{Sb}_2\text{Te}_5$ thin films

10:30–11:05 **COFFEE BREAK**

SESSION-2 Theory – atomistics

11:05–11:30 **Invited: Matthias Wuttig** – RWTH Aachen University, Germany

Tailoring Phase Change Materials for different Applications: The Role of Metavalent Bonding

10:30–11:45 **Wei Zhang** – Xi'an Jiaotong University, China

High-throughput screening for layered phase-change memory materials

11:45–12:00 **Omar Abou El Kheir** – University of Milano-Bicocca, Italy

(STMicroelectronics Luca Laurin's prize)

Million-atom simulation of the set process in phase change memories at the real device scale

12:00–12:25 **Invited: Martin Salinga** – University of Münster, Germany

State dynamics in amorphous PCMs – a closer look.

12:25–12:40 **Nils Holle** – University of Münster, Germany

Effect of Peierls-like distortions on transport in amorphous phase change devices

12:40–12:50 **GROUP PHOTO**

12:50–14:40 **Lunch & Posters Session 1**

12:50 – 14:40 POSTER SESSION 1: all odd-numbered posters

SESSION-3 Alternative materials & properties

14:40–15:05 **Invited: Pierre Noé** – CEA-LETI, France

Large-Scale Deposition of Thin Films Based on Chalcogenide Phase-Change Materials: From $\text{GeTe}/\text{Sb}_2\text{Te}_3$ Superlattices for Phase-Change Memory Toward Spin-Orbitronic and Reconfigurable Photonic Devices

15:05–15:20 **Jules Lagrave** – CEA-LETI, France

	<i>Van der Waals Epitaxy of Self-Poled α-GeTe(111) Ferroelectric Thin Films for Spin-Orbitronic Devices</i>
15:20-15:45	Invited: Joao M. J. Lopes – Paul Drude Institut für Festkörperelektronik, Germany <i>Above room temperature ferromagnetism in epitaxial thin films of the layered ternary chalcogenides Fe_5GeTe_2 and Fe_3GaTe_2</i>
15:45-16:00	Shih-Yuan Li – Tohoku University, Japan <i>The volatile and non-volatile resistance switching behavior in MnTe_2-based device</i>
16:00-16:15	Shuhei Orihara – Tohoku University, Japan <i>Characterization of Phase-Change Behaviors and Memory Operation Properties in V-Te Thin Film</i>
16:15-16:45	COFFEE BREAK

SESSION-4 GaSb, GST & Ge-rich GST

16:45-17:00	Jacopo Remondina – Aix-Marseille Univ. & CNRS – IM2NP, France <i>Tuning the properties of GaSb with C-doping</i>
17:00-17:25	Invited: Sabrina Calvi – University of Rome Tor Vergata & CNR-IMM – Italy <i>Storage class memories for flexible edge electronics</i>
17:25-17:40	Sijia Ran – CEMES-CNRS Toulouse, France <i>Partial RESET and partial SET states in Ge-rich GeSbTe-based phase change memory cells</i>
17:40-18:05	Invited: Enrico Piccinini – Applied Materials, Italy <i>Evolution of Ge-rich GST from post deposition to programming operations: a simulative approach</i>

Thursday, Septembre 25

8:30–9:00 **REGISTRATION & Coffee**

SESSION-5 Photonics & Metasurfaces 1

- 9:00–9:25 **Invited: David Wright** – University of Exeter, UK
Reconfigurable phase-change metasurfaces for optical mode conversion and optical angular momentum control
- 9:25–9:40 **Anbarasu Manivannan** – Indian Institute of Technology Madras, India
Optical Phase Change Materials for hyperspectral sensing
- 9:40–9:55 **Konstantinos Iliopoulos** – Aix-Marseille Univ. & CNRS – Fresnel, France
Tunable colour coatings using phase change materials
- 9:55–10:10 **Shaojie Yuan** – Huazhong University, China
Dynamically Tunable Asymmetric Bragg-Enhanced Fabry-Pérot Cavity for Near-Perfect Mid-Infrared Absorption
- 10:10–10:35 **Invited: Juejun Hu** – Massachusetts Institute of Technology (MIT) – USA
Mid-infrared PCM spatial light modulator
- 10:35–11:10 **COFFEE BREAK**

SESSION-6 Photonics & Metasurfaces 2

- 11:10–11:25 **Yoann Brûlé** – CEA-LETI, France
Low-Energy and High Endurance All-Optical Reconfigurable Silicon Photonic Devices based on Phase-Change Materials
- 11:25–11:40 **Peter Kopic** – Brno University of Technology, Czech Republic
Inverse-designed Si-Sb₂S₃ tunable integrated meta-switch
- 11:40–11:55 **Robert E. Simpson** – School of Engineering, University of Birmingham, UK
The metastable phase of Bi₂Te₃
- 11:55–12:10 **Nicolas Bottin** – STMicroelectronics & CNRS-IM2NP, France
PCM cycling endurance Monitored in situ by engineered multi-beam Laser irradiations
- 12:10–12:35 **Invited: Thomas Taubner** – RWTH Aachen University, Germany
Programmable Nanophotonics with Phase-Change Materials: From Metasurfaces to Polaritons
- 12:35–14:30 **Lunch & Posters Session 2**

12:35 – 14:30 POSTER SESSION 2: all even-numbered posters

SESSION-7 Non-digital computing

- 14:30–14:55 **Invited: Wen Zhou** – Xi'an Jiaotong University, China
Neuromorphic photonic computing devices based on phase-change memory
- 14:55–15:10 **Xilin Zhou** – Shanghai Inst. of Microsystem&Information Techno., China
A Verification-Free Multi-Level Phase Change Memory for On-Chip Activation Compressed Training

- 15:10-15:35 **Invited: Valeria Bragaglia** – IBM Research Europe – Zurich, Switzerland
A Scalable Oscillatory Neural Network Architecture Based on VO₂ Neurons and Multibit ReRAM Coupling Elements
- 15:35-16:00 **Invited: Hongsik Jeong** – UNIST, Republic of Korea
Deep-Cryogenic Phase Change Memory
- 16:00-16:30 **COFFEE BREAK**

SESSION-8 OTS & Applications

- 16:30-16:45 **Suyoun Lee** – Korea Institute of Science and Technology, Korea
True random number generator (TRNG) based on Ovonic Threshold Switch (OTS) and its applications for Restricted Boltzmann Machine (RBM)
- 16:45-17:00 **Yoshimasa Matsushita** – Nippon Electric Glass Co., Ltd., Japan
High-Selectivity Ge-Te-Based Ovonic Threshold Switching Material for Selectors
- 17:00-17:25 **Invited: Daniele Garbin** – IMEC, Belgium
Innovations in OTS Selectors and Memory Materials: Theoretical Insights and Experimental Validations
- 19:00 - ... GALA DINNER at Fort Ganteaume**

Friday, Septembre 26

8:30–9:00 **Coffee**

SESSION-9 OTS & SOM

- 9:00–9:25 **Invited: Min Zhu** – Shanghai Jiao Tong University, China
Volatile to Non-Volatile Switching Transition in Chalcogenides
- 9:25–9:40 **Rivka-Galya Nir-Harwood** – Israel Institute of Technology, Israel
Exploring Sub-Nanosecond Programming of Selector-Only Memory
- 9:40–10:05 **Invited: Massimo Borghi** – STMicroelectronics, Italy
Programmable OTS. An interesting option for the embedded PCM scaling roadmap?
- 10:05–10:20 **Renzo Antonelli** – CEA-LETI & CNRS-LTM, France
OTS+PCM Material Exploration and Thermal Analysis for Crossbar Arrays
- 10:20–10:55 **COFFEE BREAK**

SESSION-10 Growth, Heterostructures

- 10:55–11:10 **Mark Clark** – Intermolecular, USA
Efficient Screening of Chalcogenides and Down-Selection to Promising Compositions for ALD Process Development
- 11:10–11:25 **Stefano Cecchi** – Paul-Drude-Institut für Festkörperelektronik, Germany
Van der Waals epitaxy and characterization of two-dimensional tellurium on silicon
- 11:25–11:40 **Seppe van Dyck** – Ghent University, Belgium
Taming Thermal Transport: TMD Superlattices are the Key to Controlling Heat in Phase Change Memory
- 11:40–12:05 **Invited: Simone Prili** – University of Rome Tor Vergata & CNR-IMM – Italy
Growth, Epitaxy and Thermal Stability of Phase Change Heterostructures
- 12:05–12:25 **BREAK (Processing Votes for Awards)**

12:25 – 12:40 Closing + AWARD CEREMONY (3 prizes for oral & 3 prizes for posters)

12:40–13:30 **Lunch (Take away / Packed lunches)**