Third Training School on

"Memristors - Devices, Models, Circuits, Systems and Applications"

A three-day intensive training school coupled with networking opportunities

Dates: 7-9 June, 2017 **Venue:** Haifa, Israel

The recently rediscovered *memristors* have been shown to possess unique and intriguing properties, such as small size, high density, nonvolatility, and state-dependent behavior of current-voltage profiles. They are a novel class of devices that promises to revolutionize the electronics industry, and has high potential for implementing novel types of brain-inspired computing architectures and logic operations. Previous MemoCIS training schools have concentrated on the devices and their use for learning and neural networks architectures.

In this training school, we will focus more on the use of memristors for digital computing systems. We will discuss their use in memory systems as well as their use for digital processing. We will cover a wide range of aspects concerning the development and use of memristors for such systems, ranging from circuit level to architecture and software, and explore their use for different architectures and applications, such as memcomputing, memory processing units, cellular neural networks, FPGA, and more.

The training school will offer opportunities to meet some of the world-leading experts in the field and to form a multi-disciplinary network of researchers geared toward the development of memristor-based information processing systems.

The training school will start on Wednesday June 7 and finish on Friday June 9, 2017. It will take place at the Technion, Israel's leading technical institute, located in Haifa, on the Carmel Mountain, next to the Mediterranean sea. The event will immediately follow the 2017 Seiden workshop on "Beyond CMOS: from Devices to Systems" (http://tce.technion.ac.il/events/beyond-cmos/) and will start by a shared social event in Caesarea together with the Seiden workshop speakers, as a unique opportunity for the school's students to take up with leading researchers in the memristor field. The students of the training school will also present a poster at the Seiden Workshop.

The training school is open to all. It has ***no registration fee***, as it is a service provided to the community, sponsored by the COST action and its members.

Financial support for travel and accommodation is available to participating COST country members. Due to budget constraints it will be limited to the most competitive applications. Application forms and instructions can be found at http://www.memocis.eu, under the Training School tab.

The training school is organized by the Technion Computer Engineering center. We will provide special rates for accommodation in selected hotels in Haifa in the training school website.
For more details, including assistance in finding appropriate accommodation, please contact Ms. Liraz Blumenkrantz Menchell (liraz@tce.technion.ac.il).

Important dates:

- Application deadline for the training school: **April 15th, 2017**
- Notification of acceptance: **April 30th, 2017**

Training Instructors:

- Alon Ascoli (Non-Linear Memristor-Based Circuits)
- Massimiliano Di Ventra (Memcomputing)
- Joseph Friedman (Logic with Spintronics)
- Pierre-Emmanuel Gaillardon (Low Power and Configurable Architectures with Memristors)
- Shahar Kvatinsky (Memristive Memory Processing Unit)
- Onur Mutlu (Memory Systems)
- Ioannis Vourkas (Logic with Memristors)

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