

First Training School on

“Memristors - Devices, Models, Circuits, Systems and Applications”

A three-day intensive training school coupled with networking opportunities

Dates: 9-11 May, 2015

Venue: Alghero, Italy

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.

In this training school we will provide introductory material to describe the basic properties of memristive devices, and present state-of-the-art results in modeling, fabricating and using such devices in system applications. We will cover a wide range of aspects concerning the development and use of memristors, ranging from their device physics, to their equivalent circuit models, to their fabrication techniques, to their application in learning and neural network architectures.

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 Saturday May 9 and finish on Tuesday May 11, 2015. It will take place in a spectacular location on the Mediterranean sea, close to the town of Alghero, Italy. The event will immediately follow the 2015 CapoCaccia Cognitive Neuromorphic Engineering Workshop (<http://capocaccia.ethz.ch/>)

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. The organizers have negotiated a special price with the Hotel, for the registered participants. The price of 120 EUR/day, for the basic room type, is for full-board accommodation and includes breakfast+lunch+dinner.

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 logistics have been organized by IniForum (<http://iniforum.ch/>). In order to get access to all training school facilities and to take advantage of the special rates that have been negotiated with the Hotel, all trainees and trainers must register through:

<http://www.iniforum.ch/admin/modules/iniforum/registration.php/ccmem2015/>

Important dates:

- Application deadline for the training school: **Extended Deadline March 27th**
- Registration deadline: **Extended Deadline March 30th** (Can cancel until 12 noon of March 31st)
- Notification of acceptance: March 30
- Payment for *Registration/Special Hotel Rate* Deadline: **March 31st (by 12 noon)**.

Training Instructors:

- Andy Thomas (Memristor device technologies)
- Daniele Ielmini (Switching Mechanisms in Memristor Device Technologies)
- Ronald Tetzlaff (Circuit and system theoretic notions)
- Alon Ascoli (Non-linear dynamics in memristor-based circuits)
- Dalibor Biolek (The art of behavioral modeling and simulation of mem-devices in SPICE)
- Christian Gamrat (Circuit Design for Memristors)
- Giacomo Indiveri (Integrating memristive devices in neuromorphic electronic systems)
- Timothée Masquelier (Spike-based computing and learning in brains, machines, and visual systems)

