

MemoCIS 8th Workshop and MC Meeting
'Memristors – Devices, Models, Circuits, Systems and Applications', Dresden, Germany
20.09. – 21.09.2018

PROGRAM

Day 1 - Thursday, September 20th, 2018

08:00 – 08:45	Registration
08:45 – 09:00	Welcome
	<u>Session Chair: Ronald Tetzlaff</u>
09:00 – 10:00	Keynote Talk: Leon O. Chua , „Remembrance of Things Past“
10:00 – 10:30	Daniele Ielmini , „Computing with ReRAM devices: opportunities and challenges“
10:30 – 11:00	Coffee Break
	<u>Session Chair: Daniele Ielmini</u>
11:00 – 11:30	Dalibor Biolek , „Synthesis of predictive models of nonlinear phenomena“
11:30 – 12:00	Francesco Marrone , „Fundamentals of Nonlinear Circuits and Systems with Memristors“
12:00 – 12:30	Ronald Tetzlaff , „Nature inspired computing by complex behavior of memristor arrays“
12:30 – 14:00	Lunch
	<u>Session Chair: Dalibor Biolek</u>
14:00 – 14:30	Victor Erokhin , „Polyaniline-based memristive devices“
14:30 – 15:00	Sandro Carrara , „Very Recent Advances on Memristive Sensors“
15:00 – 15:30	Coffee Break
	<u>Session Chair: Stavros Stavrinos</u>
15:30 – 17:00	Poster Session
17:00 – 19:00	Management Committee Meeting



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Day 2 - Friday, September 21st, 2018

	<u>Session Chair: Ronald Tetzlaff</u>
08:45 – 09:45	Themis Prodromakis , „Practical applications of Memristive Technologies – beyond memory“
09:45 – 10:15	Sabina Spiga , „Memristive devices for spiking neural networks“
10:15 – 10:45	Coffee Break
	<u>Session Chair: Themis Prodromakis</u>
10:45 – 11:15	Bernabé Linares-Barranco , „Memristive Neuromorphic Systems“
11:15 – 11:45	Damien Querlioz , „Neural-like computing with populations of superparamagnetic devices“
11:45 – 13:15	Lunch
	<u>Session Chair: Sabina Spiga</u>
13:15 – 13:45	Shahar Kvatinsky , „A Taxonomy and Evaluation Framework for Memristive Logic“
13:45 – 14:15	Alon Ascoli , „Insights into the complex dynamics of a TaO resistance switching memory“
14:15 – 14:45	Said Hamdioui , „Memristive devices for computing“
14:45 – 15:15	Coffee Break
	<u>Session Chair: Alon Ascoli</u>
15:15 – 16:30	Regular Papers (talks)
16:30 – 17:30	Round-Table Discussion „Memristor Device Technology in the Future“



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Mahdi Kiani, „Novel neuromorphic circuit to drive perovskite oxide memristive artificial synapse“

Nan Du, „Security aspects of BFO based memristive devices“

Danilo Bürger, „PLD- and Magnetron sputtering of BFO“

Venkata Rao Rayapati, „Modelling and design of BFO crossbar-structures“

Emily Growney Kalaf, „Biological interfacing for neural implants and nanomaterials: a review“

Jarmila Vilčáková, „Methacrylate polymers with pendant carbazole groups: synthesis and characterization“

Daniel Blaschke, „Resistive switching of HfO₂ thin films - influence of crystal structure and electrode material“

M. Apostolopoulou and S.G. Stavrinos, „Evaluation of the Chua Memristor Center Website“

I.-A. Fyrigos, N. Almesry, V. Ntinis, G. Ch. Sirakoulis, I. Karafyllidis, and P. Dimitrakis, „Silicon Nitride ReRAM Device Modelling“

R.-E. Karamani, I.-A. Fyrigos, V. Ntinis, I. Vourkas, and G. Ch. Sirakoulis, „Memristor Cellular Automata for Conway's Game of Life“

V. Ntinis, I. Vourkas, G. Ch. Sirakoulis, A. Rubio, and A. Abusleme, „FPGA Memristor implementation for Unsupervised STDP learning“



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- 15:15 – 15:30 **Bratislav P. Marinkovic**, „Memresistive behavior of Pt/TiO₂/Pt nanodevices prepared by focused electron beam induced deposition”
- 15:30 – 15:45 **Heidemarie Schmidt**, „Boolean and Fuzzy logics realized with electroforming-free complementary BiFeO₃ memristors”
- 15:45 – 16:00 **Oliver Pabst**, „Introduction to the human skin memristor”
- 16:00 – 16:15 **Andres Udál**, „Study of worldwide trends in memristor research – updated”
- 16:15 – 16:30 **M. Apostolopoulou and S.G. Stavrínides**, „Building a digital marketing strategy for the Chua Memristor Center”



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