



UNIVERSITAT  
ROVIRA I VIRGILI

## SUMMER SCHOOL ON ORGANIC ELECTRONICS AND NEUROMORPHIC SYSTEMS

Sala de juntes, Campus Catalunya

Department of Electronic, Electrical and Automatic Control Engineering, University Rovira i Virgili

Tarragona, Catalonia, Spain

Chairperson: Benjamin Iñiguez, URV

### Monday, June 17 2024

**8.20 - 8.30:** Overview, B. Iñiguez

**8.30 - 10.00:** "Physics and compact modeling of Organic Thin Film Transistors and Organic Electrochemical Transistors," Benjamin Iñiguez, Universitat Rovira I Virgili, Tarragona (Spain), [benjamin.iniguez@urv.cat](mailto:benjamin.iniguez@urv.cat)

**10.00 - 11.30:** "Flexible transistor-based biosensors: from materials to systems and application," Luisa Petti, University of Bolzano (Italy) [luisa.petti@unibz.it](mailto:luisa.petti@unibz.it)

**11.30 - 12.00:** Coffee break

**12.00 - 13.30:** "Signatures of Complexity in Organic Electrochemical Transistors," Hans Kleemann, TU-Dresden (Germany), [hans.kleemann1@tu-dresden.de](mailto:hans.kleemann1@tu-dresden.de)

**13.30 - 15.00:** Lunch

**15.00 - 16.30:** "OECT devices: from materials to applications in circuits." Sébastien Sanaur, IMT, France, [sanaur@emse.fr](mailto:sanaur@emse.fr)

### Tuesday, June 18 2024

**8.30 - 10.00:** "Materializing Cognition - Information processing in cognitive matter." Wilfred G. van der Wiel. Chair NanoElectronics Group / Director BRAINS Center for Brain-Inspired Nano Systems (organic+neuromorphic), [w.g.vanderwiel@utwente.nl](mailto:w.g.vanderwiel@utwente.nl)

**10.00 - 11.30:** "Flexible printed electronics and Organic thin film transistors for neuromorphic applications", Lina Kadura, CEA-Liten, Grenoble (France), [lina.kadura@cea.fr](mailto:lina.kadura@cea.fr)



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**11.30 - 12.00:** Coffee break

**11.30 - 13.00:** "Seamless organic bioelectronic interfaces: from the fabrication to the health monitoring.," Esma Ismailova, EMSE (France) [ismailova@emse.fr](mailto:ismailova@emse.fr)

**13.30 - 15.00:** Lunch

**15.00 - 16.30:** "Polymer electronic memory: from bistable memory devices to memristors and artificial neurosynapses." Jiri Pflieger, Czech Academy of Sciences (organic memristors), [pfleger@imc.cas.cz](mailto:pfleger@imc.cas.cz)

### Wednesday, June 19 2024

**8.30 - 10.00:** "Stochastic computing using imperfect hardware", Laurie Calvet, École Polytechnique (France), [laurie.calvet@polytechnique.edu](mailto:laurie.calvet@polytechnique.edu)

**10.00 - 11.30:** "Event-based sensing with mixed-signal neuromorphic circuit design." Simeon Bamford, Italian Institute of Technology, Italy, [simeon.bamford@iit.it](mailto:simeon.bamford@iit.it)

**11.30 - 12.00:** Coffee break

**12.00 - 13.30:** "Energy efficient spiking neurons: application to mimic or monitor biodiversity," François Danneville, IEMN, Lille, France (spiking neurons), [francois.danneville@univ-lille.fr](mailto:francois.danneville@univ-lille.fr)

**13.30 - 15.00:** Lunch

**15.00 - 16.30:** "Persistent photocurrent effects in organic semiconductor and IGZO devices, and applications to neuromorphic circuits." Ioannis (John) Kymissis, Columbia University SEAS, New York (IGZO/organic hybrid based neuromorphic devices), [johnkym@ee.columbia.edu](mailto:johnkym@ee.columbia.edu)

**20.30 - 23.55: Gala Dinner**

### Thursday, June 20 2024

**8.30 - 10.00:** "Organic Electrochemical Neurons and Synapses", Simone Fabiano, Linköping University, Sweden, [simone.fabiano@liu.se](mailto:simone.fabiano@liu.se)

**10.00 - 11.30:** "EEG Wearable devices for at home diagnosis and treatment of brain related disorders." Luis Montesano (BitBrain), Zaragoza (Spain), [luis.montesano@bitbrain.es](mailto:luis.montesano@bitbrain.es)



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**11.30 - 12.00:** Coffee break

**12.00 - 12.30:** "Introduction to Smartkem transistor technology and design of OTFT circuits using open-source EDA," Simon Ogier (SmartKem, UK), [s.ogier@smartkem.com](mailto:s.ogier@smartkem.com)

**12.30 - 13.00:** "Organic device TCAD modeling," Ahmed Nejim, Silvaco Europe Ltd. (UK), [ahmed.nejim@silvaco.com](mailto:ahmed.nejim@silvaco.com)

**13.30 - 15.00:** Lunch

**15.00 - 18.00: Poster Session**

### Friday, June 21 2024 - EDS Mini-Colloquium on Flexible Electronics

Chairperson: Lluís F. Marsal Universitat Rovira i Virgili, Tarragona (Spain).

Co-Chairperson: Benjamin Iñiguez

**8.50 - 9.00:** Overview, Lluís F. Marsal

**9.00 - 9.45:** "Nanostructured Organic Solar Cells," Lluís F. Marsal, Universitat Rovira i Virgili, Tarragona (Spain), [lluis.marsal@urv.cat](mailto:lluis.marsal@urv.cat)

**9.45 - 10.30:** "Low Power Devices for Flexible Electronics", Arokia Nathan, University of Cambridge, Darwin College, UK, [an299@cam.ac.uk](mailto:an299@cam.ac.uk)

**10.30 - 11.15:** "Organic Electronic Devices," Paul Berger, Ohio State University, USA, [berger.143@osu.edu](mailto:berger.143@osu.edu)

**11.15 - 11.45:** Coffee Break

**11.45 - 12.30:** "Flexible photovoltaics: opportunities and challenges in large area printed electronics" Angèle Reynders, TU-Eindhoven, The Netherlands, [a.h.m.e.reinders@tue.nl](mailto:a.h.m.e.reinders@tue.nl)

**12.30 - 13.15:** "Source-Gated Transistor for Flexible and Large Area Electronics, Radu A. Sporea, University of Surrey, UK, [r.a.sporea@surrey.ac.uk](mailto:r.a.sporea@surrey.ac.uk)

**13.15 - 13.25:** Closing remarks, Lluís F. Marsal and Benjamin Iñiguez

**13.25:** Lunch