



## **12th International Conference on Computer-Aided Design for thin Film Transistor Technologies**

Chairs: Andrew Flewitt and Ahmed Nejim

*Organizers:*

**University of Cambridge (UK)**

**Silvaco Europe (UK)**

*Friday 3rd September 2021*

*Programme (times in GMT+1)*

**9:00-9:05**

*Welcome by the Conference Organisers*

**Andrew Flewitt**

University of Cambridge (UK)

### **SESSION 1**

### **PHYSICS-BASED MODELS I**

Chair: Andrew Flewitt

**9:05 Plenary talk:** *Noise analysis as generic method for fast simulation of statistical TFT circuit variability*

Professor Alexander Kloes (Technische Hochschule Mittelhessen, Germany)

**9:40** *Compact Device Modeling of Ultralow Power TFT Sensor Interfaces*

Professor Jiang Chen (Tsinghua University, China)

### **SESSION 2 DESIGN, TECHNOLOGY AND APPLICATIONS I**

Chair: Ahmed Nejim

**9:55 Plenary talk:** *TFT Foundry Multi-Project-Glass*

Yukun Huang (Tianma Microelectronics Co., Ltd., China) Plenary

**10:30** *A Compact Model for Dual-Gate thin Film Transistors Applied in the Sensing Applications*

Yaxin Liu (Shanghai Jiao Tong University, China)

**10:45 Invited talk:** *A Process Design Kit for a Gravure Printed OTFT Technology*

Professor Eugenio Cantatore (TU Eindhoven, Netherlands)

**11:10** *Design Flexible Logic and Memory Circuit Blocks Based on the Device Model of Elevated-Metal Metal-Oxide (EMMO) TFT*

Professor Lei Lu (Peking University, China)

**11:25** *Electric Field of MSM Device for Near-Infrared Biometric Sensing*

Chi Hao Lin (National Yang Ming Chiao Tung University, Taiwan)

**11:40 Invited talk:** *Design and modelling of high speed oxide TFTs*

Professor Aimin Song (University of Manchester, UK)

**12:05 Discussion**

**12:20 Session Close**

### **SESSION 3 COMPACT MODELS**

Chair: Arokia Nathan

**12:50 Plenary talk:** *Compact Modeling Approaches for Organic and Amorphous Oxide Semiconductor TFTs*

Benjamin Iñiguez (University Rovira i Virgili, Spain)

**13:25** *Integration of RRAMs with TFTs for Power-Saving AMLCDs*

Yuezhou Luo (University of Cambridge, UK)

**13:40 Invited talk** *Compact Modeling of Hysteretic Metal-Insulator Transition in Vanadium Dioxide Thin-Film Devices*

Slobodan Mijalkovic (Silvaco, UK)

## **SESSION 4 DESIGN, TECHNOLOGY AND APPLICATIONS II**

Chair: Xiaojun Guo

**14:05 Invited talk:** *Numerical exploration of spiking neuron circuits in organic pOTFT technology*

Professor Laurie Calvet (University Paris Saclay, France) Invited

**14:30 Invited talk:** *Multimodal transistor biasing for the reduction of hot-carrier effects*

Dr Radu Sporea (University of Surrey, UK)

**14:55 Discussion**

**15:10 Session Close**

## **SESSION 5 PHYSICS-BASED MODELS II**

Chair: Samar Saha

**15:30 Plenary talk:** *Physics of charge transport and channel length scaling in organic and polymer TFTs*

Professor Ananth Dodabalapur (University of Texas at Austin, USA)

**16:05 Invited talk:** *Title pending*

Professor Yvan Bonnasieux (Ecole Polytechnique, France)

**16:30 Invited talk:** *Modeling Organic Transistors for Single Molecule Bioelectronics*

Professor Fabrizio Torricelli (University of Brescia, Italy) Invited

**16:55 Discussion**

## **CLOSE**

**17:05 Closing remarks and discussion**

