

## THURSDAY May 9th - LAEDC 2024

### Session 3

**Session Chair: Marcelo Agüero**

START	END	#	Paper ID	Title	Authors	Subject Area
11:00 AM	11:15 AM	1	27	Encapsulated Solar Cells Based on PM6:Y7 with Inverted Architecture: Degradation Study	Sacramento, Angel*; Garduño, Salvador Ivan; Ramírez Como, Magaly; Balderrama Vazquez, Victor; Estrada, Magali	Optoelectronics, photovoltaic and photonic devices and systems
11:15 AM	11:30 AM	2	33	Investigating the Role of Solvent in the Improve the Performance of PBDB-T-2F:Y6-O Non-fullerene Organic Solar Cells	Ramírez Como, Magaly*; Sacramento, Angel; Hernández-García, Liliana Fernanda; Pallares, Josep ; Reséndiz , Luis ; Marsal, Lluís F.	Optoelectronics, photovoltaic and photonic devices and systems
11:30 AM	11:45 AM	3	54	DIPOLE JUNCTIONS FOR ENHANCED PHOTOVOLTAIC EFFICIENCY	Ros, Eloi; Tom, Thomas; Lopez, Julià; Segura, Oriol; Bertomeu, Joan; Saucedo, Edgardo; Voz, Cristobal; Puigdollers, Joaquim*	Optoelectronics, photovoltaic and photonic devices and systems
11:45 AM	12:00 PM	4	41	Amplification and Filtering CMOS Circuits for processing EEG Biosignals-A Review	Yerena, Misael*; Rocha , José Miguel; Guerrero, Luis; Sandoval, Federico	Biomedical Devices
12:00 PM	12:15 PM	5	24	Laser Induced Graphene Electrodes for Urine Osmolarity Estimation through Electrochemical Impedance Spectroscopy	Fajardo, Julio*; Lara, Andrea; Perez, Michaelle A; González , Edwin A	Novel materials and process modules
12:15 PM	12:35 PM	6	67	Liquid Content Level Measurement using Optical Interferometry with a p-emf sensor and Neural Networks: A Case-of-Study	Juan Manuel Ramirez-Cortez	Instrumentation and Measurement
<b>*INVITED SPEAKER</b>						

### Session 4

**Session Chair: Osamah Alharbi**

START	END	#	Paper ID	Title	Authors	Subject Area
2:00 PM	2:15 PM	1	26	Physical And Electrical Characterization of MoS2 Layers Deposited by RF Magnetron Sputtering for 2D FETs	García-Soriano, Abril A*; Estrada, Magali; Kudriavtsev, Yuriy; Cerdeira, Antonio	2D Materials and Devices
2:15 PM	2:35 PM	2	56	On-chip robust threshold-type resistive switching using two-dimensional materials	Alharbi, Osamah*; Lanza, Mario; Pazos, Sebastian; Zhu, Kaichen ; Yuan, Yue	2D Materials and Devices
2:35 PM	2:55 PM	3	40	Characterization and TCAD Simulation of the Electrostatic Potential Distortion in HV-ICs due to Losses in the Epoxy Mold Compound	Balestra, Luigi*; Gnani, Elena; Reggiani, Susanna; Rossetti, Mattia; Depetro, Riccardo	2D Materials and Devices
2:55 PM	3:10 PM	4	48	FPGA based image transmission system in VHF and digital processing of the received signal using Python	Daniel Flores (UNAH)*, Cinthia Irías (EIPRO)	Circuit-device interaction
3:10 PM	3:30 PM	5	53	Variability-Aware Circuit Design: Monte Carlo Simulation Versus Noise Analysis	Kloes, Alexander*; Dersch, Nadine; Nikolaou, Aristeidis	Circuit-device interaction
<b>*INVITED SPEAKER</b>						

## THURSDAY May 9th - LAEDC 2024

### Session 5

**Session Chair: Marcelo Agüero**

START	END	#	Paper ID	Title	Authors	Subject Area
4:00 PM	4:15 PM	1	9	Fast Circuit Simulation of Memristive Crossbar Arrays with Bimodal Stochastic Synaptic Weights	Dersch, Nadine*; Roemer, Christian; Pérez, Eduardo; Wenger, Christian; Iñiguez, Benjamin; Schwarz, Mike; Kloes, Alexander	Modeling and simulation
4:15 PM	4:30 PM	2	65	Modeling and Simulation of Vertical Organic Permeable Base Transistors	Ghader Darbandy (THM)*	Modeling and Simulation
4:30 PM	4:45 PM	x	15	Detection of rust and bacterial streak diseases in corn crops through a Convolutional Neural Network on the RoboFlow platform.	Aguilar, Samuel A*; Reyes, Alicia	Modeling and simulation
4:45 PM	5:00 PM	4	25	Implementation and remote control of a cart, using VHDL and DE10-Lite FPGA	Arellanos Tafur, Elmer Hugo*; Casablanca De La Cruz, Ivan; Nuñez, Moises	Modeling and simulation
5:00 PM	5:20 PM	5	35	Temperature Dependence of Quasi-Ballistic Transport in n-Type and p-Type Nanosheets	Bufler, Fabian M*; Vermeersch, Bjorn; Mishra, Subrat; Beckers, Arnout; Ritzenthaler, Romain; Grill, Alexander; Matagne, Philippe; Hellings, Geert	Modeling and simulation

**\*INVITED SPEAKER**

### Session 6

**Session Chair: Fernando Guarín**

START	END	#	Paper ID	Title	Authors	Subject Area
2:00 PM	2:20 PM	1	17	New Categories for Standards in Data Centers Considering Effects Over Electronic Devices	Jose-Ignacio Castillo-Velazquez	Humanitarian Projects
2:20 PM	2:35 PM	2	7	Phase estimation and error correction in superconducting quantum processors	Bello, Cristian E*; Montoya, Alcides	Quantum Computing
2:35 PM	2:55 PM	3		Sustainable Nanoelectronic Devices for the end of the Roadmap	Francis Balestra	Sustainable Electronics, Technology Roadmaps
2:55 PM	3:10 PM	4	45	A Study on Partial Energy Harvesting by a Solar Cage	Mohammad A Khan (Saginaw Valley State University)*	Energy Harvesting
3:10 PM	3:30 PM	5	62	Triboelectric Nanogenerators (TENG) for Future Energy Harvesting Devices	Vaid, Rakesh*; Singh Sambyal, Ashish	Energy Harvesting

**\*INVITED SPEAKER**

**THURSDAY May 9th - LAEDC 2024****Session 7****Session Chair: Héctor Reyes**

START	END	#	Paper ID	Title	Authors	Subject Area
4:00 PM	4:10 PM	1	Poster	Circuit Analysis of a Device Combination in an Amplifier	Mohammad A Khan (Saginaw Valley State University)*	Circuit-device interaction
4:10 PM	4:20 PM	2	Poster	Graphical interface design and monitoring of respiratory movement using artificial vision	Giovana Franshesca Vaca Benalcazar	Biomedical Devices
4:20 PM	4:30 PM	3	Poster	AI-Powered Insights: Unlocking Photoacoustic Imaging Potential	Karen Tovar Parra	
4:30 PM	4:40 PM	4	Poster	Apollo-ULSA 2.0 mechanical ventilator prototype design in Nicaragua in times of COVID 19 at La Salle Technological University	Claudia Martínez Darce, Delvin Díaz Membreño, Solon Téllez Prado	Biomedical Devices

**Session 8 (Virtual)****Session Chair: Marcelo Agüero**

START	END	#	Paper ID	Title	Authors	Subject Area
9:00 AM	9:20 AM	1	58	HPE Costa Rica R&D: Creating solutions at worldwide level	Jose Luis Uribe (HPE)	STEM Initiatives
9:20 AM	9:35 AM	2	18	Developing Process Design Kit (Q-PDK) for Co-Integrated Quantum computers	Singh, sujit Kumar*; Dixit, Abhisek	Quantum Computing
9:35 AM	9:50 AM	3	10	Sensitivity and Reliability Assessment of a Strained Silicon Junctionless FinFET-based Hydrogen Gas Sensor	Gandhi, Navneet; Rathore, Sunil; Jaisawal, Rajeewa Kumar; Kondekar, P. N.; Kumar, Naveen; Dixit, Ankit; Georgiev, Vihar; Bagga, Navjeet*	Sensors and actuators
9:50 AM	10:05 AM	4	36	Stuck-at Faults in ReRAM Neuromorphic Circuit Array and their Correction through Machine Learning	Sawal , Vedant ; Wong, Hiu Yung*	Circuit-device interaction
10:05 AM	10:20 AM	5	52	Revealing Ferroelectric Scaling Effect on Multidomain Negative Capacitance FET: Design Guidelines	Nitanshu Chauhan	Circuit-device interaction

**\*INVITED SPEAKER**

**THURSDAY May 9th - LAEDC 2024****Session 9 (Virtual)****Session Chair: Oscar González Lira**

START	END	#	Paper ID	Title	Authors	Subject Area
11:00 AM	11:15 AM	1	11	Artificial Neural Network Driven Optimization for Analog Circuit Performance	Singhal, Anant*; Goyal, Priyanshi; Agarwal, Harshit	Modeling and simulation
11:15 AM	11:30 AM	2	20	Scalability Perspective of Nanotube TFET Capacitorless DRAM in Sub-20 nm Regime	kamal, Alok*; Kamal, Neha; Lahgere, Dr. Avinash	Modeling and simulation
11:30 AM	11:45 AM	3	39	Performance Analysis and Compact Modeling of 12-nm P-channel Bulk FinFETs at Cryogenic Operating Temperatures for Quantum Computing Applications	Sarkar, Amit*; Singh, sujit Kumar; Purushothaman, Srinivasan; Dixit, Abhisek	Modeling and simulation
11:45 AM	12:00 PM	4	16	Classification algorithm for wheelchair operation in real conditions using POF-based pressure sensors	Gonzalez Cely, Aurne Ximena*; Blanco Diaz, Cristian Felipe; Rodriguez Diaz, Camilo Arturo; Bastos Filho, Teodiano Freire	Biomedical Devices

**\*INVITED SPEAKER**