

Schedule CCE 2021

Wednesday November 10th, 2021 CINVESTAV			
Hour	Room 1	Room 2	Room 3
10:00-11:30	Opening Ceremony and Plenary Prof. Gildas Besançon, PhD. Professor Grenoble INP / GIPSA-lab, France.		
11:30-12:00	Break		
12:00-14:00	BIO 1	NANO	AC 1
14:00-16:00	Break		
16:00-18:00	CS 1	SSM 1	AC 2

AC: AUTOMATIC CONTROL, **BIO:** BIOMEDICAL ENGINEERING/ BIOMIMETICS, **COMM:** COMMUNICATIONS SYSTEMS, **CS:** COMPUTER SCIENCE AND COMPUTER ENGINEERING, **MEC:** MECHATRONICS, **MEE:** MECHANICAL ENGINEERING, **NANO:** NANOTECHNOLOGY, **POW:** POWER ELECTRONICS, **SSM:** SOLID-STATE MATERIALS, ELECTRON DEVICES AND INTEGRATED CIRCUITS, **AU:** AUTONOMOUS NAVIGATION EXOSKELETONS

Thursday November 11th, 2021 CINVESTAV			
Hour	Room 1	Room 2	Room 3
9:00-11:00	CS 2	SSM 2	MEC 1
11:00-11:30	Break		
11:30-12:30	Plenary Prof. Jinjun Shan, PhD. Department of Earth and Space Science and Engineering . York University, Toronto, Canada.		
12:30-15:00	Break		
15:00-17:20	BIO 2	MEE	AC 3

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Friday November 12th, 2021 CINVESTAV			
Hour	Room 1	Room 2	Room 3
9:00-11:00		SSM 3	AU
11:00-11:30	Break		
11:30-12:30	Plenary Prof. Des McLernon, PhD. School of Electronic and Electrical Engineering. The University of Leeds. United Kingdom.		
12:30-13:00	Break		
13:00-14:00	CS 3	POW/COMM	MEC 2
14:15-14:30	Closing ceremony		

AC: AUTOMATIC CONTROL, **BIO:** BIOMEDICAL ENGINEERING/ BIOMIMETICS, **COMM:** COMMUNICATIONS SYSTEMS, **CS:** COMPUTER SCIENCE AND COMPUTER ENGINEERING, **MEC:** MECHATRONICS, **MEE:** MECHANICAL ENGINEERING, **NANO:** NANOTECHNOLOGY, **POW:** POWER ELECTRONICS, **SSM:** SOLID-STATE MATERIALS, ELECTRON DEVICES AND INTEGRATED CIRCUITS, **AU:** AUTONOMOUS NAVIGATION EXOSKELETONS

TECHNICAL PROGRAM

ID	Hour	Automatic Control (AC)
		Session AC 1 - IDENTIFICATION/ADAPTABLE Wednesday November 10th, 2021 12:00-14:00 Room 3 Session Chair: Dr. Rubén Garrido Moctezuma
ID 47	12:00-12:20	Nonlinear Least Squares-based Identification of a Continuous Friction Model. Antonio Concha Sánchez and Suresh Thenozhi.
ID 48	12:20-12:40	Adaptive Tracking Control of an Uncertain Duffing-Holmes System. Suresh Thenozhi and Antonio Concha Sánchez.
ID 68	12:40-13:00	Parameter identification from hybrid model using PSO and penalty functions. Ricardo Cortez, Yair Lozano and Ruben Garrido.
ID 1	13:00-13:20	An Input Error Method for Parameter Identification of a Class of Euler-Lagrange Systems. Adolfo Perrusquia, Ruben Garrido and Wen Yu.
ID 80	13:20-13:40	Bio-Inspired Optimization to Improve Neural Identifiers for Discrete-time Nonlinear Systems. J. Felipe Guerra, Ramon Garcia-Hernandez and Miguel A. Llama.
ID 14	13:40-14:00	Nonlinear Modeling and Least Squares Optimization on Consolidation Property of Composite Soil Samples. Hang Yin, Zhengmao Ye, Huey Lawson and Albertha Lawson.
		Session AC 2 - CONTROL APLICACIONES Wednesday November 10th, 2021 16:00-18:00 Room 3 Session Chair: Dr. Javier Ruiz León
ID 15	16:00-16:20	Control Scheme for Rotary Base Inverted Pendulum by Means of Nested Saturation Functions. Cesar Alejandro Villaseñor Rios and Octavio Gutierrez-Frias.
ID 127	16:20-16:40	A Lipchitz Observer Application in Photobioreactors for Microalgae Cultivation. Abraham Rodriguez Mata, Jose Luis Robles and Leonel Amabilis.

- ID 101** **16:40-17:00** **Modeling and simulation of a Furuta pendulum actuated by an inertial Wheel.**
Israel Alejandro Cadena Luqueño, Martin Bustamante Enciso and Rafael Stanley Nuñez Cruz.
- ID 39** **17:00-17:20** **Simplified Reactive Power Control of a Multilevel Inverter for Grid-Connected Photovoltaic Applications.**
Jose Francisco Perez, Roberto Morales and Marco A. Morales-Caporal.
- ID 78** **17:20-17:40** **Model Reference Adaptive Control for an unmanned aerial vehicle with variable-mass payloads.**
Juan Carlos López-Hoyos, Jorge Said Cervantes-Rojas, Patricio Ordaz and Omar Sandre-Hernández.
- ID 55** **17:40-18:00** **Low-Level Control of a Quadrotor using Twin Delayed Deep Deterministic Policy Gradient (TD3).**
Mazen Shehab, Ahmed Zaghoul and Ayman El-Badawy.

Session AC 3 - NONLINEAR/DIAGNOSIS

Thursday November 11th, 2021

15:00-17:00

Room 3

Session Chair: **Dr. Antonio Ramírez Treviño**

- ID 60** **15:00-15:20** **Concurrent Fault Diagnosis Based on an Extended Kalman Filter.**
Adrian Lizarraga, Ofelia Begovich and Antonio Ramírez.
- ID 36** **15:20-15:40** **Neuronal Sliding Mode Output Control Application in a Attitude for Quadrotor.**
Abraham Efram Rodriguez-Mata, Auerelian Cabarbaye R, Rogelio Baray-Arana, Pedro Acosta-Cano de Los Rios and Hector Rodriguez-Rangel.
- ID 3** **15:40-16:00** **A systematic method for backstepping via linear matrix inequalities.**
Jorge Ibarra, Jesús Alonso Díaz, Raymundo Márquez and Miguel Bernal.
- ID 42** **16:00-16:20** **A Disturbance Observer Based Control scheme using an Active Disturbance Rejection Controller: An underactuated moving crane example.**
Brian Camilo Gomez Leon, Mario Andres Aguilar-Orduña and Hebertt José Sira-Ramírez.
- ID 59** **16:20-16:40** **PID Control and Fuzzy Logic System to the Obstacle Avoidance in an Autonomous Robot.**
Dionicio Meza Solano, Raul Eusebio Grande and Mariana Ibarra Bonilla.
- ID 65** **16:40-17:00** **A Novel Method to Analyze Input-Output Controllability.**
Muhammad Ibrahim and Imran Hameed.

ID **Hour** **Autonomous Navigation - Exoskeletons**

Session AU

Friday November 12th, 2021

9:00-11:00

Room 3

Session Chair: **Dra. Fátima Oliva**

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|--------|-------------|---|
| ID 44 | 9:00-9:20 | A New Positioning Algorithm Robust to Measured Distances Errors for Non-Overdetermined Systems.
Luis Angel Arellano Cruz, Giselle Monserrat Galvan Tejada and Rogelio Lozano Leal. |
| ID 109 | 9:20-9:40 | Collision-Free Path Planning Applied Robotic Arms Using Homotopy Continuation Methods for Embedded Systems.
Gerardo César Vélez López, Luis Hernández Martínez and Héctor Vázquez Leal. |
| ID 61 | 9:40-10:00 | Toward a single-pixel near-infrared low-resolution 2D image reconstruction strategy.
Carlos Alexander Osorio Quero, Andrés Mauricio García, Daniel Durini Romero Romero, José de Jesús Rangel Magdaleno, Jose Martinez-Carranza and Rubén Ramos-Garcia. |
| ID 110 | 10:00-10:20 | Development of an Efficient Path Planning Algorithm for Indoor Navigation.
Omar Vicente Perez Arista, Oscar Rafael Vargas Barona and Rafael Stanley Nuñez Cruz. |
| ID 105 | 10:20-10:40 | Control and cable deployment of a tethered PVTOL aircraft.
Carlos Guillermo Valerio Naranjo, Eduardo Steed Espinoza Quesada and Rogelio Lozano Leal. |
| ID 126 | 10:40-11:00 | Autonomous navigation of a mobile robot using a network of Hindmarsh-Rose (HR) neurons.
Enrique Martinez Sanchez, Alejandro Rodriguez Angeles and Jonatan Pena Ramirez. |

ID	Hour	Biomedical Engineering/ Biomimetics (BIO)
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Session BIO 1

Wednesday November 10th, 2021

12:00-14:00

Room 1

Session Chair: **Dra. Blanca Tovar Corona**

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|-------|-------------|---|
| ID 5 | 12:00-12:20 | An objective analysis of human snoring based on an acoustic technique to determine the obstruction site.
Judith Guzman, Eladio Cardiel, Laura I. Garay-Jimenez and Pablo Rogelio Hernandez. |
| ID 8 | 12:20-12:40 | Vestibulo Ocular Reflex Analysis while Using a Virtual Reality Headset.
Geovanny Palomino-Roldan and Ernesto Suaste-Gomez. |
| ID 10 | 12:40-13:00 | Phoniatic system based on acoustical analysis for early detection of anomalies in voice production.
Ana Laura Cazarín, Eladio Cardiel, Laura I. Garay-Jimenez and Pablo Rogelio Hernández. |

- ID 69** **13:00-13:20** **EEG motor/imagery signal classification comparative using machine learning algorithms.**
Alicia Guadalupe Lazcano-Herrera, Rita.Q. Fuentes-Aguilar and Mariel Alfaro-Ponce.
- ID 82** **13:20-13:40** **Semantic Segmentation of Mammograms Using Pre-Trained Deep Neural Networks.**
Rodrigo Leite-Prates, Wilfrido Gómez-Flores and Wagner Coelho de Albuquerque Pereira.
- ID 83** **13:40-14:00** **Temperature prediction based on ANN linear regression with an LWIR sensor for the study of diabetic foot.**
Rafael Bayareh Mancilla, Christian Daul, Josefina Gutiérrez Martínez, Arturo Vera Hernández, Didier Wolf and Lorenzo Leija Salas.

Session BIO 2

Thursday November 11th, 2021

15:00-17:20

Room 1

Session Chair: Dra. Blanca Tovar Corona

- ID 7** **15:00-15:20** **Design and Manufacture of a Training System for Ventriculostomy.**
Abimael Terrones Acosta, Daniel Lorias-Espinoza, Vicente González Carranza, Fernando Pérez-Escamirosa, Jose Antonio Gutiérrez-Gnecchi and Rigoberto Martínez Méndez.
- ID 25** **15:20-15:40** **Interpedicular screw placement image guided navigation surgery simulator.**
Jose Ruben Huerta Osnaya.
- ID 63** **15:40-16:00** **Anisotropy properties of chicken muscle tissues with bioimpedance measurements via AD5933EBZ.**
Karla Itzel Suárez Pérez, Daniel Sarir Apátiga Pérez, Antonio Héctor Dell'Osa and Miguel Ramírez-Barrios.
- ID 17** **16:00-16:20** **Ictal Periods Detection in Photoplethysmographic and Electrodermal Signals.**
María Fernanda Ramírez-Peralta, María Fernanda Romo-Fuentes, Blanca Tovar-Corona, Martin Arturo Silva-Ramírez and Laura Ivoone Garay-Jiménez.
- ID 104** **16:20-16:40** **Artifacts removal in electrodermal signals.**
Rosario Ríos-Prado, Blanca Tovar-Corona and Laura Ivoone Garay-Jiménez.
- ID 114** **16:40-17:00** **Prototype of an Ambulatory Long-Term ECG Monitoring System For Real-Time Detection Of QRS Complex and T-Wave end Based on an FPGA.**
Jose Alberto García Limón, Frank Martínez Suárez and Carlos Alvarado Serrano.
- ID 37** **17:00-17:20** **Open-Ended Coaxial Probe Technique for the measurement of the ionic strength due to magnesium sulfate heptahydrate in wáter.**
Edel-Serafin Hernandez-Gomez, Jose-Luis Olvera-Cervantes, Benito Corona-Vasquez, Alonso Corona-Chavez, Tejinder-Kaur Kataria and Maria-Elena Sosa-Morales.

ID	Hour	Computer Science and Computer Engineering (CS)
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Session CS 1

Wednesday November 10th, 2021

16:00-18:00

Room 1

Session Chair: **Dra. Alicia Morales Reyes**

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|--------|-------------|---|
| ID 22 | 16:00-16:20 | Visual-based Real Time Driver Drowsiness Detection System Using CNN.
Jonathan Flores-Monroy, Mariko Nakano-Miyatake, Gabriel Sánchez-Pérez and Hector Pérez-Meana. |
| ID 72 | 16:20-16:40 | Discovering Structurally Simple Workflow Nets by Vector-Based Trace Clustering.
Cesar Barron-Rubio and Ernesto Lopez-Mellado. |
| ID 74 | 16:40-17:00 | Instance Selection Based on Linkage Trees.
Wilfrido Gómez-Flores, Samuel Omar Tovias-Alanis and Gregorio Toscano-Pulido. |
| ID 121 | 17:00-17:20 | Comparison of performance of two virtual screening software on acetylcholinesterase protein molecular docking.
Aldo Yair Tenorio Barajas, Dulce Estefanía Nicolás Álvarez, Andres Reyes Chaparro, Claudia Oliva Mendoza Barrera, Brenda Magaña Trejo and Victor Manuel Altuzar Aguilar. |
| ID 87 | 17:20-17:40 | Automatic Generation of Test Cases from Formal Specifications using Mutation Testing.
Román Jaramillo, Raúl González and Pedro Mejía. |

Session CS 2

Thursday November 11th, 2021

9:00-11:00

Room 1

Session Chair: **Dr. Wilfrido Gómez Flores**

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|-------|------------|--|
| ID 12 | 9:00-9:20 | Multimodal Deep Learning via Late Fusion for Non-destructive Papaya Fruit Maturity Classification.
Cinmayii Garillos-Manliguez and John Chiang. |
| ID 20 | 9:20-9:40 | A Comparative Study with Different Machine Learning Algorithms for Diabetes Disease Prediction.
Hafsa Binte Kibria, Abdul Matin, Nusrat Jahan and Sanzida Islam. |
| ID 81 | 9:40-10:00 | A Novel Hybrid Gene Selection Based on Random Forest Approach and Binary Dragonfly Algorithm.
Sayed Pedram Haeri Boroujeni and Elnaz Pashaei. |

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|--------|-------------|--|
| ID 92 | 10:00-10:20 | Quantitative Comparisons of Edge Based and Region Based Feature Detection in Digital Aerial Imagery Analysis.
Zhengmao Ye. |
| ID 111 | 10:20-10:40 | Effect of Rate of Change of Stock Prices with News Sentiment Analysis.
Sashank Sridhar and Sowmya Sanagavarapu. |
| ID 123 | 10:40-11:00 | Supervised Neural Network for Offline Forgery Detection of Handwritten Signature.
Muhammad Aslam, Ana Maria Martinez Enriquez and Saleem Summra. |

Session CS 3

Friday November 12th, 2021

13:00-14:00

Room 1

Session Chair: **Dr. Miguel Morales Sandoval**

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|-------|-------------|---|
| ID 38 | 13:00-13:20 | A Lightweight Security Protocol for Beacons BLE.
Karla J. Campos-Cruz, Cuauhtemoc Mancillas-López and Brisbane Ovilla-Martínez. |
| ID 66 | 13:20-13:40 | A Generalized Lagrange Multiplier Method for Support Vector Regression.
Sara Eugenia Rodríguez Reyes, Pablo Benavides Herrera, Gregorio Alberto Álvarez Álvarez, Riemann Ruiz Cruz and Juan Diego Sánchez Torres. |
| ID 77 | 13:40-14:00 | Edge computing SoC implementation of compressive sensing algorithm for single-pixel cameras.
Andres Manjarrés García, Carlos Osorio Quero, Jose Rangel-Magdaleno, Jose Martinez-Carranza and Daniel Durini. |

ID	Hour	Mechanical Engineering (MEE)
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Session MEE

Thursday November 11th, 2021

16:00-17:00

Room 2

Session Chair: **Dr. Manuel Arias Montiel**

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|-------|-------------|---|
| ID 2 | 16:00-16:20 | Influence of MMT Reinforcement Fraction Variation on the Mechanical Properties of a Polycarbonate Polymer Matrix with an ABS Additive.
Jean Carlos Criado Jiménez, Carolina Abril Carrascal and Carlos Steven Sánchez Rincón. |
| ID 98 | 16:20-16:40 | Parametric identification of a magnetorheological damper based on Genetic Algorithm.
Andres Rodriguez-Torres, Jesús Morales Valdez and Wen Yu. |

ID 29 **16:40-17:00** **Soft computing tools for multiobjective optimization of offshore crude oil and gas separation plant for the best operational condition.**
José H. Mendoza, Rasikh Tariq, Luis F Santis Espinosa, Francisco Anguebes and A. Bassam.

ID **Hour** **Mechatronics (MEC)**

Session MEC 1

Thursday November 11th, 2021

9:00-11:00

Room 3

Session Chair: Dr. Alejandro Rodríguez Ángeles

ID 50 **9:00-9:20** **Comparative performance of two 2-D detectors in the case of multipixel low contrast object on a real sea Surface.**
Maria Karen Gonzalez, Victor Golikov, Hussain Alazki and Oleg Samovarov.

ID 54 **9:20-9:40** **Obstacle avoidance in leader-follower formation using artificial potential field algorithm.**
Javier Lagunas, Rafael Castro and Jaime Alvarez.

ID 94 **9:40-10:00** **Single-Board Computer based Architecture and Firmware for Radiometers with Radio Astronomy applications.**
Jetzael Cuazon, Daniel Ferrusca, Jesus Contreras, Eduardo Ibarra-Medel, Miguel Velázquez, Stanley Kurtz and David Hiriart.

ID 95 **10:00-10:20** **Automotive engine fault detection and isolation using LSTM for model-based residual sequence classification.**
Mohammed Youssef and Hesham Ibrahim.

ID 108 **10:20-10:40** **Tuning, Control and Path Planning of a Spherical Robot using Stochastic Signals.**
Sergio Daniel Sanchez Solar, Gustavo Rodriguez Gomez, Angelica Muñoz Melendez and Jose Martinez Carranza.

Session MEC2

Friday November 12th, 2021

13:00-14:00

Room 3

Session Chair: Dr. Jesús Linares-Flores

ID 24 **13:00-13:20** **Implementation of a BLDC Motor Observer Scheme using the INSTASPIN Platform.**
Axel Coronado, Alejandra de la Guerra Carrasco and Luis Alvarez-Icaza.

ID 102 **13:20-13:40** **FPGA-based accuracy mechatronics of a feed-drive system with ball screw.**
Carlos Emilio Márquez García, Jesus Lopez Gomez, Fermin Martinez Solis, M. A. Diozcora Vargas Treviño, Sergio Vergara Limon and Victor Manuel Velazquez Aguilar.

ID 113 13:40-14:00 **Rotor position estimation in a bldc motor at low speed using g-functions and extended state observers.**
Isaí Jiménez Hernández, Carlos Garcia Rodríguez and Jesús Linares Flores.

ID Hour **Nanotechnology (Materials and Applications) (NANO)**

Session NANO

Wednesday November 10th, 2021

12:00-14:00

Room 2

Session Chair: **Dra. Eugenia Paola Arévalo-López**

ID 56 12:00-12:20 **Effect of argon plasma treatment on electronic properties of doped hydrogenated Silicon thin films for photovoltaic applications.**
Manmohan Jain, Sucheta Juneja, Mohit Jain, Kalpana Lodhi, Chander Kant, Ateet Dutt, Yasuhiro Matsumoto and Sushil Kumar.

ID 16 12:20-12:40 **Photoluminescence properties of SiO_xC_y-films deposited under argon atmosphere and Si-based organometallic precursor by O-Cat-CVD.**
Manmohan Jain, Andrés Galdámez-Martínez, Ateet Dutt and Yasuhiro Matsumoto.

ID 70 12:40-13:00 **Bandgap dependence on facet and size engineering of TiO₂: A DFT Study.**
Francisco Javier Gomez Cano, Araceli Romero-Nuñez, Anish Jantrania, Hongbo Liu, Abdelhadi Kassiba and Velumani Subramaniam.

ID 97 13:00-13:20 **Synthesis and Characterization of Ge Nanoclusters in Amorphous GeO_x (x~0.1) Nano-Films Grown by Magnetron Sputtering.**
Javier Sotelo Medina, Daniel Ortiz Gutiérrez, Vyacheslav Elyukhin and Ramón Peña Sierra.

ID 103 13:20-13:40 **A Resampling Approach for the Data-Based Optimization of Nanosensors.**
Patricia Guadalupe López-Cárdenas, Emmanuel Alcalá, Juan Diego Sánchez-Torres and Elsie Araujo.

ID 75 13:40-14:00 **Improvement the optical properties of the P3HT:PC70BM film using CdSe QD.**
Jorge Cruz-Gómez, Aruna Devi Rasu-Chettiar, Francisco Javier de Moure-Flores, Sandra Andrea Mayén-Hernández, Adrián Sosa-Domínguez and José Santos-Cruz.

ID Hour **Power Electronics /Communications Systems**

Session POW/COMM

Friday November 12th, 2021

13:00-14:00

Room 2

Session Chair: **Dr. Adrián René Ramirez López**

- ID 73** **13:00-13:20** **Model Predictive Current Control of a Permanent Magnet Synchronous Machine with Exponential Cost Function.**
Francisco B. González Sáenz and Omar Sandre Hernández.
- ID 96** **13:20-13:40** **DFT-based phasor estimator using a MAF with a phase-lead compensator.**
Rafael Escudero, Luis Ibarra, Pedro Ponce and Arturo Molina.
- ID 13** **13:40-14:00** **5G Connectivity for Aerial Scenarios: a New Spatial and Temporal Perspective for Wireless Networks.**
Giselle Galvan-Tejada and Jorge Aguilar-Torrentera.

ID **Hour** **Solid-state materials, Electron Devices and Integrated Circuits (SSM)**

Session SSM 1

Wednesday November 10th, 2021

16:00 – 18:00

Room 2

Session Chair: **Dr. José Santos Cruz**

- ID 40** **16:00-16:20** **Improving thermal stability of perovskite solar cell through interface modification by PbS quantum dots.**
Evelyn B. Díaz-Cruz, E. Regalado-Pérez, Jorge Cruz-Gómez, X. Mathew, F. J. de Moure-Flores, Francisco Paraguay-Delgado and José Santos-Cruz.
- ID 41** **16:20-16:40** **Numerical Optimization of Materials Properties for High-Efficiency CIGSe Thin Film Solar Cells Using SCAPS-1D Simulator.**
Ashok Adhikari, Ganesh Regmi, Dr. Velumani Subramaniam, Luis Dorian Valencia Ordonez, Jorge Evaristo Conde Diaz and Homero Castaneda-Lopez.
- ID 19** **16:40-17:00** **Double ETL in ITO-free poly-3-hexylthiophene-based organic solar cells.**
Jesus Fernando Solis Vivanco, Rasu Chettiar Aruna Devi, Maria Concepcion Arenas Arrocena, Adrian Sosa Dominguez, Francisco Javier De Moure Flores and Jose Santos Cruz.
- ID 46** **17:00-17:20** **Graphene for a green-environmentally methodology with organic surfactants.**
Bruno Renato Flores-Hernández, Francisco Javier de Moure-Flores, Sandra Andrea Mayén-Hernández and José Santos-Cruz.
- ID 85** **17:20-17:40** **Numerical Study of the Recombination Profiles in CIGSe Thin Film Solar Cells Through Silvaco Atlas Simulator after using Experimental Parameters.**
Luis Dorian Valencia Ordoñez, Jorge Evaristo Conde Diaz, Carlos Alonso Meza Avendaño, Marco Antonio Zúñiga Reyes, Irving Geovanny Zuñiga Santiz, Ashok Adhikari, Velumani Subramaniam and Heber Vilchis Bravo.

ID 112 **17:40-18:00** **Molecular Dynamics simulation of Cu-Se interactions for CIGS solar cells growth process.**
Citlalli Vázquez, César Camas, Jorge Conde and Héber Vilchis.

Session SSM 2

Thursday November 11th, 2021

9:00-11:00

Room 2

Session Chair: Dr. Yasuhiro Matsumoto

ID 67 **9:00-9:20** **Optimized Graphene Nanoribbon UV Phototransistor Based on ZnO Sensitive Gate for Optical Wireless Communications.**
Faycal Djeflal and Hichem Ferhati.

ID 23 **9:20-9:40** **Optoelectrothermoelectric properties of ternary chalcogenides thin films of CuSbS₂ and Cu₁₂Sb₄S₁₃.**
Daniel Trejo-Zamudio, Sandra Andrea Mayén-Hernández, José Guadalupe Quiñones-Galván, Francisco Javier de Moure-Flores, María Lucero Gómez-Herrera and José Santos-Cruz.

ID 84 **9:40-10:00** **Structural, optical and morphological characterization of Sb₂S₃ thin films grown by Physical Vapor Deposition.**
David Santos Cruz, Maria de La Luz Olvera Amador, Sayda Dinorah Coria Quiñones, Francisco Javier de Moure Flores and Jose Santos Cruz.

ID 45 **10:00-10:20** **Optoelectronic properties of Sb₂S₃ thin films grown by Physical Vapor Deposition.**
Jorge Cruz-Gómez, Enrique Hernández-Cantero, David Santos-Cruz, Sandra Andrea Mayén-Hernández, Francisco Javier De Moure-Flores and José Santos-Cruz.

ID 33 **10:20-10:40** **Synthesis, characterization, and structure computational calculations of the oxycalcogenide LaCuOSe for thermoelectric applications.**
J.A. Melchor-Robles, T.G. Díaz-Rodríguez, Jacobo Martínez-Reyes, A. Maldonado-Álvarez and María de La Luz Olvera-Amador.

ID 122 **10:40-11:00** **Reduction Of Energy Consumption in NoC Through The Application Of Novel Encoding Techniques.**
Dr. Ramakrishna V.

Session SSM 3

Friday November 12th, 2021

9:00-11:00

Room 2

Session Chair: Dra. Griselda Stephany Abarca-Jiménez

ID 89 **9:00-9:20** **High Transconductance Gain Low Voltage Class AB OTA.**
Jasiel Hernandez and Ivan Padilla.

ID 27 **9:20-9:40** **A Two-level Modeling Methodology for Memristive Devices.**
Jesús Jiménez-León, Arturo Sarmiento Reyes and Pedro Rosales Quintero.

- ID 62** **9:40-10:00** **Micromotors unit based on CMOS-MEMS technology integrated on a single chip.**
Andrea López-Tapia, Luis Sánchez-Márquez, Mario Alfredo Reyes-Barranca, Griselda Stephany Abarca-Jiménez and Luis Martín Flores-Nava.
- ID 43** **10:00-10:20** **Analysis of On-Silicon-Vias for an Advanced RF-CMOS Process: Experimental Characterization and Modeling.**
Carlos Alberto Sanabria Díaz, Mónico Linares Aranda and Rogelio Manuel Higuera González.
- ID 49** **10:20-10:40** **Genetic Algorithm-based Approach to Enhance the Performance of Gate Engineered InGaZnO UV Thin-Film Phototransistor.**
Hichem Ferhati and Fayçal Djeflal.