

# ICCDACS-2008

## Technical Program

April 28, Monday	<i>Welcome / Opening Session</i>
8:30H – 9:00H	
Plenary	

April 28, Monday	<i>Keynote speaker: Dr. Chih-Tang Sah</i>
9:00H – 10:00H	<i>Chairperson: Juin J. Liou</i>
Plenary	<i>Univ. Central Florida (USA)</i>

### [The Bipolar Field-Effect Transistor](#)

Chih-Tang Sah (speaker) and Bin B. Jie

April 28, Monday	<i>Keynote speaker: Dr. José Luis Huertas</i>
10:20H – 11:20H	<i>Chairperson: Juin J. Liou</i>
Plenary	<i>Univ. Central Florida (USA)</i>

### [Title](#)

Dr. José Luis Huertas, (Centro Nacional de Microelectrónica, Universidad de Sevilla, Spain)

April 28, Monday	Session 1a: <i>Device Fabrication</i>
11:20H – 12:40H	Chairperson: <i>Magali Estrada del Cueto</i>
Room-1	<i>CINVESTAV - IPN (Mexico)</i>

[FIB and E-beam cross-linked Poly\(N-isopropylacrylamide\) Patterning for BioMEMS/NEMS](#)

Alexandro Castellanos, James Leffew, and Wilfrido Moreno

[Application of Electron Beam Induced Deposition in Nanofabrication](#)

Jay A. Bieber, Javier F. Pulecio, and Wilfrido A. Moreno

[Effects in GaN films grown by MOVPE on GaAs due to the distance of heat source](#)

Heber Vilchis, Victor Manuel Sanchez, and Arturo Escobosa

[A Self-Learning Method for Automatic Alignment in Wafer Processing](#)

HyungTae Kim, KangWon Lee, HaeJeong Yang, and SungChul Kim

April 28, Monday	Session 1b: <i>Analog Circuits I</i>
11:20H – 12:40H	Chairperson: <i>Gerard C. M. Meijer</i>
Room-2	<i>Technical University of Delft (The Netherlands)</i>

[A Novel Switched Capacitor Circuit for Efficient Voltage Regulation](#)

Rinkle Jain

[Capacitive-SAR ADC Input Offset Reduction by Stray Capacitance Compensation](#)

Vilson Rodrigo Mognon and Carlos A. dos Reis Filho

[Design of CCI-based tuneable active filters and sinusoidal oscillator](#)

David Moro-Frias, Esteban Tlelo-Cuautle, and Mourad Fakhfakh

[A Novel Piecewise Curvature-corrected CMOS Bandgap Reference](#)

Jing-hu Li

April 28, Monday	Session 1c: <i>Device Modeling I</i>
15:00H – 16:40H	Chairperson: <i>Tor A. Fjeldly</i>
Room-1	<i>Norwegian University of Science and Technology (Norway)</i>

[The Theory of the Bipolar Field-Effect Transistor with Two MOS Gets](#)

Bin B. Jie (speaker) and Chih-Tang Sah

[A Web Application For MOSFET Compact Model Validation using CMC Tests](#)

Oscar Camps, Rodrigo Picos, Miquel Roca, Benjamin Iniguez, and Eugeni Garcia-Moreno

[Electron diffusion in 0.18  \$\mu\text{m}\$  MOS transistors at 200°C](#)

Edmundo A. Gutierrez-D

[Characterization of PEDOT:PSS dilutions for inkjet printing applied to OLED fabrication.](#)

Miguel Angel Lopez, Juan Carlos Sanchez, and Magali Estrada de Cueto

[Bending Effect of Si MOSFETs on Flexible Plastic Substrate](#)

H. L. Kao, Y. C. Chang, B. S. Lin, M. H. Huang, and C. H. Kao

April 28, Monday	Session 1d: <i>Reliability and Test</i>
15:00H – 16:40H	Chairperson: <i>Fernando Guarin</i>
Room-2	<i>Semicond. R&amp;D Center, IBM Microelectronics (USA)</i>

[Current Transport in Carbon Nanotube Transistors](#)

M.Pourfath and S.Selberherr , (Technical University Vienna, Austria) - *Invited*

[Parametrical fault test of CMOS LNA](#)

Kay Suenaga Portugues, Rodrigo Picos Gaya, Sebastia Bota Ferragut, Miquel Roca Adrover, Eugeni Isern Riutort, and Eugeni Garcia Moreno

[Hot Carrier Reliability of High-Speed SiGe HBT's under Accelerated Collector-Base Avalanche Bias](#)

Zhijian Yang and Fernando Guarin

[Reliability and Improved Performance of AlGaIn/GaN High Electron Mobility Transistor Structures](#)

Svetlana Vitusevich, Andrey M. Kurakin, Norbert Klein, Michail V. Petrychuk, Andrey V. Naumov, and Alexander E. Belyaev

[Analysis of emission spectra evolution after accelerated aging of integrated circuits](#)

Amadou Cisse Ndoeye, Sonia Ben Dhia, Alexandre Boyer, Laurent Guillot, and Bertrand Vrignon

April 28, Monday	Session 1e: <i>Control and Automation</i>
17:00H – 18:40H	Chairperson: <i>Victor Manuel Guzmán Arguis</i>
Room-1	<i>Univ. Simón Bolívar (Venezuela)</i>

[Design of a Programmable Platform for the Control of Mobile Robots Based on a Multi-FPGA Architecture](#)

José Guzmán, Gerardo Fernández, Vanessa Gutiérrez

[Methodology for Implementation of Unmanned](#)

Shashikala Narasimha Murthy, Wendy Alvis, Rakesh Shirodkar, Kimon Valavanis, and Wilfrido Moreno

[Deadbeat Controller Design for an Eolic Generator](#)

Luis Augusto Colmenares and Arnoldo Nicolas Rodriguez

[Using a Genetic Algorithm for exploring a semiconductor model](#)

Rodrigo Sandoval

[Numerically Stable Compact Strong Avalanche Model for Four-Layer Device Simulation](#)

Rodolfo Quintero-Romo

April 28, Monday	Session 1f: <i>System Characterization and Test</i>
17:00H – 18:40H	Chairperson: <i>Eugenio Garcia</i>
Room-2	<i>Universitat de les Illes Balears (Spain)</i>

[RF magnetic emission and electrical coupling in silicon integrated circuits](#)

Edmundo A. Gutierrez-D and Pedro J. Garcia-R

[RF-Extraction Methods for MOSFET Series Resistances: a fair comparison](#)

Julio César Tinoco and Jean-Pierre Raskin

[A New Cognitive-Based Massive Alarm Management System in Electrical Power Administration.](#)

Omar Olmedo Aizpurúa, Ramón Galán and Agustin Jimenez

[Testing and Validation of a Multi-sensor Distributed Surveillance System](#)

Tomi Rätý, Miao Luo, Johannes Oikarinen, and Mikko Nieminen

[Gate Oxide Evaluation under Very Fast Transmission Line Pulse \(VFTLP\) CDM-Type Stress](#)

Slavica Malobabic, David F. Ellis, Javier A. Salcedo, Yuanzhong (Paul) Zhou, Jean-Jacques Hajjar, and Juin J. Liou

April 28, Monday	<i>Welcome Cocktail</i>
20:30H	
Place	

April 29, Tuesday	<i>Keynote speaker: Dr. Suresh Venkatesan</i>
9:00H – 10:00H	Chairperson: <i>Jesús L. Finol</i>
Plenary	<i>Fineau Consultants (USA)</i>

[Technology Drivers in an Embedded World](#)

Dr. Suresh Venkatesan, (Freescale Fellow and Director, USA)

April 29, Tuesday	<i>Keynote speaker: Dr. Terry Heng</i>
10:20H – 11:20H	Chairperson: <i>Jesús L. Finol</i>
Plenary	<i>Fineau Consultants (USA)</i>

[Future Requirements and Trends in Semiconductor Markets](#)

Dr. Terry Heng, (Gridline Communications Holding, Inc., USA)

April 29, Tuesday	Session 2a: <i>Networks</i>
11:20H – 12:40H	Chairperson: <i>Wilfrido Moreno</i>
Room-1	<i>University of South Florida (USA)</i>

[Barrier Synchronization Simulator for Wireless Sensor Networks](#)

Rogério Esteves Salustiano and Carlos Alberto dos Reis Filho

[Wireless Networking Services for Implementation of Ambient Intelligence at Home](#)

Reinhard Moeller and Ayman Sleman

[A Low Complexity Partial Crosstalk Cancellation Algorithm By Using Successive Linear Convex Relaxation And Branch And Bound Approaches In Vdsl Networks](#)

Mohsen Maesoumi and M. Ali Masnadi-shirazi

[Mobile Personal Electrocardiogram Monitoring System and Transmission Using MMS](#)

Ashraf A. Tahat

April 29, Tuesday	Session 2b: <i>Interconnects</i>
11:20H – 12:40H	Chairperson: <i>Siegfried Selberherr</i>
Room-2	<i>Technical University Vienna ( Austria)</i>

[Identification of High Speed Jittered Digital Interconnects Using Bicoherence Spectra](#)

Kyungtae Han, Keith R. Tinsley, and Jorge Aguilar-Torrentera

[Package to board interconnect design for minimum return loss](#)

Adan S. Sanchez, Gerardo Romo, and Luis F. Armenta

[Characterization and Modeling of Electronic Packages Using S-Parameters](#)

Gaudencio Hernández-Sosa

[Time-Domain Analysis of Carbon Nanotubes](#)

Hossein Aghababa, Nasser Masoumi, Ali Afzali, and Behjat Forouzandeh

April 29, Tuesday	Session 2c: <i>Analog Circuits II</i>
15:00H – 16:40H	Chairperson: <i>Arturo Sarmiento</i>
Room-1	<i>INAOE, Puebla (México)</i>

[New chances for Asynchronous Sensor Interfaces](#)

Dr. Gerard C. M. Meijer, (Delft University of Technology) - *Invited*

[Simulation of Chua's Chaotic Oscillator Using Unity-Gain Cells](#)

Carlos Sanchez Lopez, Rodolfo Trejo Guerra, and Esteban Tlelo Cuautle

[Simulation-Based Optimization of UGCs Performances](#)

Ivick Guerra-Gomez, Esteban Tlelo-Cuautle, Peng Li, and Georges Gielen

[Magfet with Embedded Gilbert Gain Cell](#)

Carlos A. M. Cruz, Erik A. Ferraz, Carlos A. dos Reis Filho, Vilson Mognon and Filipe A. Tabarani

[Low-Voltage and Low-Power Adjustable Differential Delay Line using the FGMOS Transistor](#)

Jesus de la Cruz Alejo, Jesus Alonso Pastrana, Felipe Gomez Castaneda, and Jose Antonio Moreno Cadenas

April 29, Tuesday	Session 2d: <i>Digital Circuits</i>
15:00H – 16:40H	Chairperson: <i>Victor Grimblatt</i>
Room-2	<i>Synopsys (Chile)</i>

[What will Microprocessor-based Systems look like in the next Decade?](#)

Dr. Ricardo Suárez-Gärtner, (Physicals Technology Lab, Intel) - *Invited*

[CSDL & GLIDER: Tools for implementing cellular structures into FPGAs](#)

Nestor Ferrando, Joaquin Cerda, Rafael Gadea, and Vicente Herrero

[Asynchronous Circuits Design Using Quantum-dot Cellular Automata for Molecular Computing](#)

Hossein Aghababa, Mojtaba Jourabchian, Ali Afzali, and Behjat Forouzandeh

[High Speed and Leakage-Tolerant Domino Circuits for High Fan-in Applications in 70nm CMOS Technology](#)

Farshad Moradi

[Simplified Quantum-dot Cellular Automata Implementation of Counters](#)

Hossein Aghababa, Mohammad Hossein Yazdinejad, Ali Afzali, and Behjat Forouzandeh

April 29, Tuesday	Session 2e: <i>Telecommunication</i>
17:00H – 18:40H	Chairperson: <i>Uwe Krauss</i>
Room-1	<i>University of Wuppertal (Germany)</i>

[Propagation channel and MIMO capacity in arched tunnels](#)

Jose Maria Molina Garcia Pardo, Martine Lienard, and Pierre Degauque

[Analytic Evaluation of the Uplink Erlang Capacity of CDMA Macrocells With Hotspot Microcells](#)

Jose G. Viveros and Domingo Lara Rodriguez

[A 9 slots antenna designed by Chebyshev Technique and modeled by Finite Difference Time Domain](#)

Jorge Sosa, Marco Acevedo, and Manuel Benavides

[Third Order Distortion in Digital Receiver Front-Ends as the Dominant Interference Mechanism above 470 MHz](#)

Charles W. Rhodes

[Design and Modeling of an RFIC PAD Structure and Probe Contact Impedance Correction for On-Wafer Measurements](#)

Carlos Eduardo Capovilla, Andre Tavora Silva, and Luiz Carlos Kretly

April 29, Tuesday	Session 2f: <i>Circuits and Methods</i>
17:00H – 18:40H	Chairperson: Dr. <i>Jacobus Swart</i>
Room-2	<i>Cenpra (Brazil)</i>

[Advanced Methods for Algorithmic Corrections of Errors in Immitance Measurements](#)

Oleg Starostenko, Vicente Alarcon\_Aquino, and Jorge Rodriguez\_Asozoza

[Synchronization of n-Scrolls Chaotic Systems Synthesized from High-Level Behavioral Modeling](#)

Jesus Manuel Munoz-Pacheco, Esteban Tlelo-Cuautle, Rodolfo Trejo-Guerra, and Cesar Cruz-Hernandez

[Authentication and Digital Signature USB Device for Telemedicine Applications](#)

Alfredo Espitia, Karen Ortega, Eduardo Romero, and Ivan Jaramillo

[A Row Chain Cell Array Structure and Current Sense Amplifier for PoRAM](#)

Kim Jung Ha, Ahn Chang Yong, and Lee Sang Sun

[High Q-Factor Monolithic Inductor for RF Devices Using Double Ground Shield](#)

Paulo Lagoia Fonseca Junior and Luiz Carlos Kretly

April 29, Tuesday	<i>Gala Dinner</i>
20:30H	
Place	

April 30, Wednesday	Session 3a: <i>Device Modeling II</i>
9:00H – 10:00H	Chairperson: Dr. <i>Adelmo Ortiz-Conde</i>
Room-1	<i>Univ. Simón Bolívar (Venezuela)</i>

[Electronic System Level \(ESL\) - Myth or Reality](#)

Dr. Victor Grimblatt, Synopsys (USA) - Invited

[Current and Capacitance Modeling of Short-Channel DG MOSFETs](#)

Håkon Børli, Sigbjørn Kolberg, Tor A. Fjeldly, and Benjamin Iniguez

[Compatibility of Co-Tunneling and Power-Law Models of Soft Breakdown Current in MOS Structures](#)

Adelmo Ortiz-Conde, Enrique Miranda, Francisco Garcia, and Juan Muci

April 30, Wednesday	Session 3b: <i>Microwave/RF Circuits</i>
9:00H – 10:00H	Chairperson: Dr. <i>Antonio Cerdeira</i>
Room-2	<i>CINVESTAV - IPN (Mexico)</i>

[A Bipolar MMIC Frequency Tripler](#)

You Zheng and Carlos E. Saavedra

[Electromagnetic Scattering Effects in Wave Guides fed by Reflectors](#)

Jorge Sosa

[Diplexer using a Circulator and Interchangeable Filters](#)

Carlos E. Saavedra

April 30, Wednesday	Session 3a: <i>Power Electronics</i>
10:20H – 12:20H	Chairperson: Dr. <i>Krishna Shenai</i>
Room-1	<i>University of Toledo, (USA)</i>

[Active Energy Recovering Snubber for the Asymmetric Inverter](#)

Victor M. Guzman, Maria I. Gimenez, Jose A. Restrepo, Gerardo Ceglia, Julio Walter, and Alexis Cabello

[A Simplified Rectifier Voltage Vector Selection for Direct Power Control](#)

Jose Alex Restrepo, Jose Manuel Aller, Julio Cesar Viola, and Alexander Bueno

[PLATAFORMA: A Useful Tool for High Level Education, Research and Development](#)

María Isabel Giménez, Víctor Manuel Guzmán, José Alex Restrepo, José Manuel Aller, Julio César Viola, and Alexander Bueno

[A Reconfigurable Battery Pack for Improving Power Conversion Efficiency in Portable Devices](#)

Horacio Visairo and Pavan Kumar

[Psim and Matlab Simulations Analysis on 3-Phase Z-Source Inverter](#)

Tao Yu, Ji-Seok Song, Hwa-Chun Lee, Dong-Ok Kim, Sung-Jun Park, Chae-Joo Moon, and Doo-Young Song

[The Isolated Multilevel Inverter using Common-arm Scheme for 3-phase system](#)

Sung Geun Song, In Hyuk Lee, Sung Jun Park, Hae Kon Nam, and Feel Soon Kang

April 30, Wednesday	Session 3b: <i>Image Signal Processing</i>
10:20H – 12:20H	Chairperson: Dr. <i>Martin Buchholz</i>
Room-2	<i>University of Applied Sciences, (Germany)</i>

[Implementation of Error Decoders for A-VSB Systems with Additional Use of Transport Stream Information as Forward Error Correction](#)

Christian Stoerte and Markus Machmerth

[FPGA Based Radar Image Enhanced: A Robust Evolutionary Controlled Filter Approach](#)

Alejandro Arturo Castillo Atoche, Jaime Silverio Ortegon Aguilar, and Javier Vazquez Castillo

[An Approach for an effectively Implemented Transmission Adapter enableing the Adaption Field by Reorganizing a Common MPEG-2 Transport Stream](#)

Markus Machmerth and Christian Stoerte

[Peruvian Scallop Larvae Counting System Using Image Processing Techniques](#)

Andres Flores, Pedro Crisostomo, and Paul Lopez

[Draw-Lines Algorithm in 2D for Iris Image](#)

Samuel Sanchez Islas

[A Fingertip Detection and Tracking System as a Virtual Mouse, a Signature Input Device and an Application Selector](#)

Abhimanyu Sanghi, Himanshu Arora, Kshitij Gupta, and Vipin Bihari Vats

April 30, Wednesday	<i>Closing Session</i>
12:20H	
Plenary	