

SForum 2023 - Program

Tuesday, August 29th

Poster Session I

Time	Title/Authors
15:40 – 17:00	Fast Simulation-Based Method for Characterization of CMOS Ring Oscillators in a 180 nm Process Nicole Corradini and Fabian Olivera
	Efficient Hardware for VVC Residual Syntax Elements Generation Gabriel Bitencourt Cardoso, Jiovana Gomes, Sergio Bampi and Fábio Luís Livi Ramos
	Adaptive Biasing Circuitry for a CMOS Power Amplifier Luciano Auer, Alexandre Arrivé and Bernardo Leite
	Building a Low Cost Spin Coater with Arduino André Linhares, Raphael Nunes da Silva Moreira Souza and Germano Maioli Penello
	Area and Energy Evaluation of an FME Hardware Architecture for HEVC and VVC Encoders Nicole Citadin, Vanio Rodrigues Filho, Ismael Seidel, Marcio Monteiro, Mateus Grellert and José Güntzel
	Design of a Linear Transconductance OTA using the Open Sky130 Process Design Kit Carolina Vieira Souza, Edmar Philipe Ribeiro and Estêvão Coelho Teixeira
	A Comparative Analysis of Ring Oscillator Configurations Utilizing CMOS Inverters and Differential Pair Amplifiers as Delay Elements Felipe Righi, Vinícius Guimarães, Lucas Compassi-Severo, Paulo César Comassetto de Aguirre and Alessandro Girardi
	Comparative Design of CMOS Class-D Audio Amplifier for Switching and Conduction Losses Operation Thiago Oliveira, Luciana Pedrosa Salles and Dalton Martini Colombo
	Systematically Classifying Trusthub Hardware Trojan Benchmarks Ana Flávia Bomfim and José Augusto Nacif
	Design of a Low-Cost Nanosatellite for Atmospheric Monitoring Juliana Silva Marquione, Igor Daher Cabral, Rafael Bonioli Kneip, Estêvão Coelho Teixeira and Washington Orlando Irrazabal Bohorquez
	Implementation of a Semi-Automatic Design Procedure of Preamplifiers in a Multistage CMOS Comparator João Brum, BEATRIZ REZENDE, Cristian Müller, Lucas Compassi Severo, Alessandro Girardi and Paulo César Comassetto de Aguirre

	<p>A Hardware Design for Linear Equation System Solving of VVC Affine ME</p> <p>Denis Maass, Marcello Muñoz, Murilo Perleberg, Marcelo Schiavon Porto and Luciano Agostini</p>
	<p>Design and Implementation of a Simple Moving Average Filter for a UWB/UHF Hybrid RFID Tag</p> <p>Hércules Santos and Gilmar Beserra</p>
	<p>A 915 MHz Active Inductor-Based Band-pass Filter for sub-GHz RF Receivers</p> <p>Raul deOliveira, Tailize Cordeiro de-Oliveira, Alessandro Girardi, Paulo César Comassetto de Aguirre and Lucas Compassi-Severo</p>
	<p>PUPPY Microprocessor: a RISC-V MCU for IoT Applications</p> <p>Gabriel Gouveia, Ivan Hirata, Catherine Pancotto, Laisa Costa de Biase, Bruno Sanches, Wilhelmus Van Noije and Marcelo Zuffo</p>

Thursday, August 31st

Poster Session II

Time	Title/Authors
14:20 – 17:00	<p>Ultra Wide Band Transmitter Layout for a Vital Sign Monitoring Passive Tag</p> <p>Julia Silva, Wellington Amaral and Ciro Barbosa Costa</p>
	<p>Millimeter-wave CMOS Transformers for Power Amplifier Impedance Matching</p> <p>Enzo Coutinho and Bernardo Leite</p>
	<p>Investigation of the Doping Profile of a Non-intentionally Doped Epitaxial Layer of a PIN Photodiode</p> <p>Raphael Steimvacher, Cristian Anderson Delfino, Gustavo Soares Vieira, Rudy Massami Kawabata, Mauricio Pamplona Pires and Patricia Lustoza de Souza</p>
	<p>Fifty Years of the 555 Timer – A Tribute from a Didactic IC Design Perspective</p> <p>Guilherme S. Albuquerque, Diego S. Silva, Wesley M. Cantarino and Estêvão Coelho Teixeira</p>
	<p>Behavioral Modeling of Radio Frequency Power Amplifiers Using a Multiple Depth Memory Volterra Series</p> <p>Felipe Ribeiro and Eduardo Lima</p>
	<p>Optimization of Multi-Junction Solar Cells for the Martian Orbit</p> <p>Jéssica Lorenzi and Daniel Neves Micha</p>
	<p>Characterization of Si and Simulation of III-V Sub-Cell for Double Junction Photovoltaics</p> <p>Willian Bazilio, Rudy Kawabata, Guilherme Torelly and Patricia Souza</p>
	<p>Design of a 3-Stage Decimation Filter for a Sigma-Delta ADC</p>

	Otavio Elias Viana de Freitas, Edivania Ferreira Silva, Lucas Compassi-Severo, Alessandro Girardi, Cristian Müller and Paulo César Comassetto de Aguirre
	Three-dimensional TCAD Simulation of n-Type Nanowires Operating at Cryogenic Temperatures down to 20K João Victor da Silveira and Marcelo Pavanello
	Linearization of Volterra series based on first order Taylor series expansion Daniele Richartz and Eduardo Golçalves de Lima
	A 0.5-V Low-Power Negative Resistance-based TIA for Passive Down-conversion Mixer Suzian Santos, Alessandro Girardi, Paulo César Comassetto de Aguirre and Lucas Compassi-Severo
	A Power Management System for High-Altitude Pico Balloon Radiation Monitoring Platform Matheus Carvalho, Tawan Chryster dos Santos, Renan D. P. de Oliveira, Lucas Compassi-Severo, Alessandro Girardi, Paulo César Comassetto de Aguirre and Edson Pereira
	Analysis of topologies of MOSFET Current Mirrors Vinícius Guimarães, Felipe Righi, Alessandro Girardi, Paulo César Comassetto de Aguirre and Lucas Compassi-Severo
	Preliminary Design and Comparative Analysis Between Different DT Sigma-Delta Modulators Victor Lima, Tawan Chryster dos Santos, Renan D. P. de Oliveira, Lucas Compassi Severo, Alessandro Girardi, Cristian Müller and Paulo César Comassetto de Aguirre
	Analysis of the Discrepancies Between Simulation and Measurement of an Antenna Erik Mezzomo and Sandro Binsfeld Ferreira

Friday, September 1st

Session I – Invited Talk and Best Paper Candidates

Time	Title/Authors
08:40	Invited Talk: Open Source Silicon Prof. Francisco Brito Filho (UFERSA, Brazil)
09:20	Optimization of Multi-Junction Solar Cells for the Martian Orbit Jéssica Lorenzi and Daniel Neves Micha
09:35	Behavioral Modeling of Radio Frequency Power Amplifiers Using a Multiple Depth Memory Volterra Series Felipe Ribeiro and Eduardo Lima

09:50	Area and Energy Evaluation of an FME Hardware Architecture for HEVC and VVC Encoders Nicole Citadin, Vanio Rodrigues Filho, Ismael Seidel, Marcio Monteiro, Mateus Grellert and José Güntzel
10:05	A Hardware Design for Linear Equation System Solving of VVC Affine ME Denis Maass, Marcello Muñoz, Murilo Perleberg, Marcelo Schiavon Porto and Luciano Agostini