

Sessão 1. Dia 13/05 às 8h30

Analysis of a cascode RF CMOS power amplifier with and without digital pre-distortion

Paulo Warken Junior, Bernardo Leite

Performance comparison among different heights of cascode CMOS power amplifiers

Cauê Carneiro, Bernardo Leite

A Study of Planar Microwave Filters Under Different Substrates and Layouts

Juliana Vargas, André Mariano, César Dartora

A Survey of CMOS Power Amplifiers in X-Band

Alexandre Morais, André Mariano, Bernardo Leite

A Low-Power First-Order gm-c LPF for Ultra-Low Cutoff Frequencies

Victor Lima, Gabriel Ogawa, Raul Oliveira, Alessandro Girardi, Paulo Aguirre

Sessão 2. Best papers. Dia 13/05 às 11h00

Performance Evaluation of the Adaptive Loop Filter Classification Step in VVC Across Multiple Programming Paradigms

Vitória Fabricio, Iago Storch, Daniel Palomino

Energy-Efficient Approximate SRAM for VVC Intra-Frame Prediction

Yasmin Camargo, Felipe Sampaio, Daniel Palomino, Bruno Zatt, Matheus Isquierdo

Fast VVC Encoding Through Machine Learning-Driven Transform Mode Selection

Caroline Camargo, Bianca Silveira, Guilherme Correa

Sessão 3. Dia 13/05 às 13h30

Logical Synthesis of a RISC-V Core Using Multi-Bit Libcells

Mathias Michelotti, Vinícius Schultz, Bruno Spies, Augusto Weber, Leonardo Oliveira, Everton Carara

A Comparative Analysis of Implementing a CNN Hardware Accelerator on Different FPGA Devices

George Nardes, Wesley Grignani, Thiago Rausch, Luiz Duarte, Douglas Melo, Cesar Zeferino

A Digital Block Control for A Photoplethysmography System in CMOS 65 nm.

Gabriel Ogawa, Raul Oliveira, Victor Lima, Paulo Aguirre, Alessandro Girardi

Sessão 4. Dia 13/05 às 16h30

Concurrent Dual-band Power Amplifier Modeling Using Memory Polynomial with Sparse Nonlinearities and Delays

Maria Eduarda Rizo, Eduardo Gonçalves de Lima

DPD Saturation for Concurrent Multi-Band Transmitters

Luís Miliavacca, Luis Schuartz

Nonlinear Perceptron Applied to Electrical Circuit Modeling

Manuela Xavier da Silveira, Eduardo Gonçalves de Lima, Sibilla Batista da Luz França

Memory Polynomials Based on Difference Between Two Time Samples Applied to Power Amplifier Modeling

Maria Eduarda Araujo, Eduardo Lima, Sibilla França

Sessão 5. Dia 14/05 às 8h30

Machine Learning-Based Acceleration of VVC Test Zone Search and Affine Motion Estimation

Ramiro Viana, Marta Loose, Ruhan Conceição, Marcelo Porto, Guilherme Corrêa, Luciano Agostini

Inter-Frame Prediction Analysis over Quadtree Partitioning on VVC Encoders

Rodrigo Feldens, Sergio Bampi, Felipe Sampaio

Design and Synthesis of Hardware Accelerators for Convolution with a Focus on High Performance

Fabricao Lorenzon, Mateus Grellert, Lorenzo Nemitz

Quality-Complexity Analysis of Pruning Strategies for Neural Image Compression

Vitor Arguilar, Mateus Grellert

Fast Heuristic for VVC Intra-frame Prediction Targeting 360° Video Formats

Rogério Rosado, Otavio Santos, Franklin Oliveira, Lucas Silva, Vanessa Aldrighi, Iago Storch, Daniel Palomino, Luciano Agostini, Gustavo Sanches

Sessão 6. Dia 14/05 às 11h00

A Sigma-Delta Modulator Design Tutorial

Martim Presser

Design and Comparison of Multi-Stage Low-Offset Comparators in 65 nm CMOS

João Lucas Johan Brum, Beatriz E. H. Rezende, Alessandro Girardi, Paulo César C. de Aguirre

Evaluating RPL in VANETs for Post-Collision Warning System

Fábio Oliveira, João Bittencourt, Carlos Marcelo Pedroso

Sessão 7. Dia 14/05 às 15h00

VVCPy: a Framework for Analysis and Data Visualization of Versatile Video Coding Encoders

Luis Mendes, Cláudio Diniz

Hardware Design for Preprocessing Smoothing Filters in VVC Intra Prediction

Sara Vitória Henssler, Luciano Agostini, Marcel Correa

Design and Analysis of Approximate Hardware Accelerators for VVC Intra Angular Prediction

Lucas De Fraga, Claudio Diniz

Sessão 8. Dia 14/05 às 16h30

FIR Filters for DPD Saturation Improvement

Clayson Oliveira, Luis Schuartz

Behavioral Models of Power Amplifiers Based on Products of One-Dimensional Polynomial Functions and Moving Average Filters

Lara Eimy Kuada, Eduardo Gonçalves de Lima

Behavioral Modeling of an RF Energy-Harvesting Circuit: Impact of Rectenna and Boost Converter

Polyana de Lacerda, André Mariano, Glauber Brante, Richard Souza

Complex-Valued Convolutional Neural Networks for Modeling and Linearization of Concurrent Multi-Band Wireless Transmitters

Amanda PASSERO, Luis Schuartz, Eduardo Lima

Sessão 9. Dia 15/05 às 11h00

Optimization Strategy to Enhance Near-Data Processing Speculative Motion Compensation

Laiane Souza, Felipe Sampaio

Solar Cells for an Accurate Indoor Positioning System Based on Visible Light Communication

Vitória Monteiro, Tawan Chrysther dos Santos, Cristian Muller, Paulo César C. de Aguirre, Alessandro G. Girardi

LED Control Optmization for Energy Efficient Wearable Pulse Oximeter

Carolina Rosa, Claudio Pedroso Júnior, Alessandro Girardi

Study of LoRaWAN Networks and Their Coverage Applied to Public Lighting and Smart Cities

Eduardo Faccin, Luis Lolis, Lucas Souza

Sessão 10. Best papers. Dia 15/05 às 15h00

Cross-Platform Neural Video Coding: A Case Study

Ruhan da Conceição, Marcelo Porto, Wen-Hsiao Peng, Luciano Agostini

Enabling Parallel Intra Prediction with Improved Coding Efficiency using Alternative References

Iago Storch, Nuno Roma, Sergio Bampi, Daniel Palomino

A Power-Efficient Architecture for LES Solving and Δ MV Calculation of VVC Affine Prediction

Denis Maass, Murilo Perleberg, Marcello Munoz, Luciano Agostini, Marcelo Porto

Sessão 11. Dia 16/05 às 11h00

**Experimental Validation of Battery Internal Resistance Approximation by
Least Squares**

Matheus Ferreira, Luis Schuartz, André Mariano

Behavioral Modeling of an AFE Circuit for ECG Signals Acquisition

Felipe Righi, Vinícius Guimarães, Alessandro Girardi, Paulo Aguirre

**Design and Analysis of an Analog Front End for ECG in Wearable Devices:
High-Pass Filter, Instrumentation Amplifier, and Driven Right Leg**

Vinícius Guimarães, Felipe Righi, Alessandro Girardi, Paulo Aguirre

**A Low-Power Analog Front-End Photoplethysmogram Employing Offset
Compensation for Wearable Devices**

RAUL DE OLIVEIRA, Gabriel Ogawa, Victor Lima, Paulo de Aguirre, Alessandro Girardi