Nonlinear PDE Based Cellular Neural Network Models
Fernando Corinto, Mario Biey, Marco Gilli.

Robustness of complete stability: Hopfield model vs. cellular neural network model
Mauro Di Marco, Mauro Ford, Alberto Tesi.

On Nonlinear Filtering Using Two-Grid Coupled Cellular Neural Networks
Liviu Goras, Iulian Ciocoiu, Emilian David; Paul Ungureanu.

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DFT Filter Bank Based on All-Pass Transformation
M. Parfieniuk, A. Petrovsky.

Towards an Algorithm for Matrix Multiplier Blocks
A G Dempster, O Gustafsson, J O Coleman.

On Designing a Variable Fractional Delay Filter
Ewa Hermanowicz.

Two-channel linear-phase FIR filter banks utilizing the frequency response masking approach
Linnéa Rosenbaum, Håkan Johansson.

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Marissa Condon, Emira Dautbegovic.

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Radha Krishna Atukula, Reimund Wittmann, Ralf Kakerow, Mohsen Darianian.

Modelling the dependence on temperature of the GaAs MESFET parameters
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Intuitive Graphical Approach for Modeling High-Frequency Effects of IC Packages and Bond Wires
Hiroshi Akina, Yoshihiko Horio, Aleksander Dec, Ken Suyama.

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L. Latessa, A. Pecchia, A. Di Carlo, P. Lugli.

Improving Dynamic CMOS Circuit Noise Tolerance Using Resonant Tunneling Devices
Li Ding, Pinaki Mazumder.

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Simulation of Single-Electron Transistor (SET) CNN Cells
S. Goodnick, C. Geroussi, W. Porod.

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Francesco Grasso, Stefano Manetti, Maria Cristina Piccirilli.

A Diakoptic Approach for Symbolic Computation of the Circuit Functions and of Large-change Multiparameter Sensitivities
Mihai Iordache, Lucia Dumitriu.

Parameter identification using symbolic pole/zero expressions
Florin Constantinescu, Constantin Viorel Marin, Miruna Nitescu, Doina Marin.

On Deriving Symbolic Chain Parameters of "Useful" Transactor Circuits
Jürgen Schmitz, Eberhard H.-A. Gerbracht.

Symbolic SFG Resolution of SI/SC Filtering Networks using Vago matricial method
Luis Mourão, Helena Fino.

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Naoki Kamijima, Tomoya Murotani, Hiroyuki Kamata, Tetsuro Endo.

Spread Spectrum Clock Generation - Chaotic and Periodic Modulation Schemes
Joerg Krupar, Wolfgang Schwarz.

Optimal selection of embedding parameters for time series modelling
Michael Small, Chi K. Tse.

Recurrence Plot Based Measures of Complexity to Predict Life-Threatening Cardiac Arrhythmias
Jürgen Kurths, Norbert Marwan, Niels Wessel.

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Towards a DSP implementation of an MRF-based cellular circuit for image segmentation and edge detection
Federico Bizzarri, Lorenzo Repetto, Marco Storace, Mauro Parodi.

Two-wavelength POAC (Programmable Opto-electronic Analogic Computer) using bacteriorhodopsin as dynamic holographic material
Szabolcs Tőkés, László Orzó, Ahmed Ayoub.

Improved architecture for svcnn systems
Mario Salerno, Fausto Sargeni, Vincenzo Bonaiuto, Maurizio Bonifazi.

A Study of Correlation Process of a Modified JTC for Optical Cellular Neural Networks
Ahmed Ayoub, Szabolcs Tőkés, László Orzó.

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Critically Sampled Frequency-Warped Perfect Reconstruction Filterbank
Christian Feldbauer, Gemot Kubin.

Design of 2-D FIR Centro-Symmetric Filters with Equiripple Passband and Least-Squares Stopband
Felicia Wysocka-Schillak.

Computationally Efficient Algorithms for Parallelized Digital Filters Applying Sample-by-Sample Processing
Alexandra Groth, Heinz G. Göckler.

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Audio Features Extraction and Reduction Using Auditory Model – Application to Violin Voices Discrimination
Agnieszka Ligocka, Ewa Lukasik.

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Classification of Spatio-Temporal Features: the Nearest Neighbor Family
D. Balya, T. Gergely, I. Szatmari, Csaba Rekeczky.

A New Method for a Nonstandard Band Pass Filter Design
Jan Vondraš, Pravoslav Martinek.

Fractal-aided Analysis of Eyeground Images
Maciej Slomczyński, Bożena Świdzińska.

Fractal-aided Monitoring of the Electrocardiogram
Maciej Slomczyński, Bożena Świdzińska.

Analysis of Intracardiac Masses in Cardiac Tumour Echocardiograms
Michał Strzelecki, Jarosław Kasprzak, Jarosław Drożdż, Maria Krzemińska-Pakula.

Linear Prediction of Noisy Speech with Spectral Transformation
Teiuya Shimamura, Aya Nakagawa.

Optimization of the Selected Parameters in HMM-Based Polish Speech Recognition
Robert Wiegat.

Vector Quantization Based Speaker Verification
Adam Dustor.

A New Speech Signal Modeling and Word Recognition Method by Using Signature and Envelope Feature Spaces
Ümit Güz, Hakan Gürkan, B. S. Yarman.

Multirate Implementation for Restoration of Voiced Speech Signals
S. Paulikas, D. Navakauskas.

Tonal and Noise Components Separation Based on a Pitch Synchronous DFT Analyzer as a Speech Coding Method
Alexander Petrovsky, Piotr Zubrycki, Andrzej Sawicki.

Spline neural networks for speech noise reduction operating in time and frequency domain
Giovanni Costantini, Daniele Casali.

Instantaneous Frequency Estimation Using a Least Squares Evolutionary Spectrum
Mahmut Öztürk, Aydin Akan.

VLSI Design of a (255,239) Reed-Solomon Decoder
A.G.M. Strollo, N. Petra, D. De Caro, E. Napoli.

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A Code-Density Method for On-line Correction of Static Nonlinearity in a Nyquist-rate A/D Converter
U. Eduri, F. Maloberti.

Analytic Methods in Sub-Optimal Cyclic ADC Design
A.A Platonov, L.M. Malkiewicz.

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Anatoliy Platonov, Konrad Jedrzejewski.

Fully Digital DAC Mismatch Error Cancellation Methods for Multibit Delta-Sigma Analog to Digital Converters
Marko Neitola, Timo Rahkonen.

Applying Model-Based Testing Theory to Reduce Test Setup Limitations on High-Performance ADCs.
G. Maugard, C. Wagener, T. O'Dwyer, M.P. Kennedy.

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Substrate Coupling Evaluation from a Harmonics Perspective
Shiva P. Kagganti, Kjell O. Jeppson.

Electrical Equivalent-Circuit Model for Small-Current Electromechanic Metal Contact
Timo Veijola, Sami Lähteemäki.

A Split-Drain MAGFET Sensing Device: Evaluation at 77K
P.J. Garcia-Ramirez, F. Sandoval-Ibarra.

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Vision Systems-on-Chip: General Purpose Architectures and Limitations
Stephanie McBader, Peter Lee.

A Processing Element for an Analogue SIMD Vision Chip
Piotr Dudek.

A Universal Switched Capacitor Computation Cell Applied to a Programmable Vision Chip
Jacques-Olivier Klein, Antoine Dupret, Abdallah Nshare, Sébastien Moutsaut, Patrice de Carmé.

ACE16K: A Programmable Focal Plane Processor

A CMOS Test Chip for 3D Vision Applications with High Dynamic Range
Luigi Viarani, David Steppa, Lorenzo Gonzo, Massimo Gottardi, Andrea Simon.

SESSION R44: Chaos Communication

An M-ary Spread-Spectrum Communication System Based on Permutated Chaotic Sequences
Kai Y. Cheong, Francis C.M. Lau, Chi K. Tse.

A New Description of Chaotic Waveform Communications: The Fourier Analyzer Approach
Géza Kolumbán, Francis C.M. Lau, Michael Small.

Real-time video communication secured by a chaotic key stream cipher

How to repair CSK using small perturbation control - Case study and performance analysis
Slobodan Kozic, Kumiko Oshima, Thomas Schirrmeing.

A New Frequency-Domain FM-DCSK Detector
Géza Kolumbán.

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Simulation of Optical CNN Template Library Based on t2-JTC
Ahmed Ayoub, Szabolcs Tókés, László Orzó.

CNN Image Processing on a Xilinx Virtex-II 6000
Suleyman Malki, Lambert Spannburg.

Interfacing the CASTLE emulated digital array processor to the ALADDIN system
T. Hidvégi, I. Súto, P. Keresztes, P. Szolgy.

An Implementation Oriented Coding System for Nested CNNs
Ari Paasio, Jonne Poikonen.

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A from-scratch Analog Design of the Processing Core of an Infrared-Based Landmine Detection System
F. Pardo, V. M. Brea, G. Doménech, P. López, R. Ruiz, D. Cabello.

The Cramer-Rao Bounds for Parameters of a Polynomial Phase Signal
Rafal Rytel-Andrianik.

Low-Complexity Image Compression Without A/D Conversion Using Analog Multilayer Perceptron
José Gabriel R. C. Gomes, Sanjit K. Mitra.

Active component implementation of a biomorphic Hopf cochlea
Jan-Jan van der Vyver, Albert Kern, Ruedi Stoop.

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Analysis of Continuous-Time-Input Sigma-Delta Modulators and Their Generalizations
Per Löwenborg, Håkan Johansson.

Designing rail-to-rail CMOS input stages with constant behavior over the entire input voltage range
Juan M. Carrillo, J. Francisco Duque-Carrillo, Guido Torelli, José L. Ausín.

Low-Voltage Low-Power Active Bias Cascode Current Mirror
Nicodimus Retián, Shigetaka Takagi, Nobuo Fujii.

A Contribution to the Analog Wave Filters Design
Daša Tichá, Pravoslav Martinek.

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A computationally efficient technique for the optimization of two stage operational amplifiers
Paolo Bruschi, Dino Navarrini, Giovanni Tarroboiro, Giuseppe Raffa.

Using of Genetic Algorithms to Synthesis and Optimization of Broadband Matching Networks
Giennadij Czawka, Norbert Litwińczuk.

Using evolutionary techniques for chosen optimization problems related to analog circuits design.
Jerzy Rutkowski, Łukasz Zielinski.

A Study on Network Optimization Based on Tie-set Flow Vector Space with Application to Max-Flow Problem
Haruki Kubo, Toshio Koide, Hitoshi Watanabe.

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Harmonic Distortion of Nonlinear Amplifiers with Nonlinear Feedback in the Frequency Domain
Gaetano Palumbo, Salvatore Pennisi.

The Effect of Fitting Techniques on the Accuracy of Distortion Simulations Using Polynomial Device Models
Janne Aikio, Timo Rahkonen.

Distortion analysis of nonlinear amplifiers
A. Buonomo, A. Lo Schiavo, G. Palumbo, S. Pennisi.

Analysis of Charge Injection in Sample and Hold MOS Switches in terms of Harmonic Distortion
Alberto Dei Maurizio Valle.

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Digital Pseudo-Random Bit Generators Based on Chaotic Maps

Topological Conjugacies in Number Sequences Generation with Cauchy and Rayleigh Distribution
Mieczyslaw Jessa, Marecin Walentynowicz.

On the linear complexity of stream ciphers based on PLM sequences
Khanfouci Mourad, Sylvie Marcos.

On the Suitability of Digital Maps for Integrated Pseudo-RNGs
Massimo Alioto, Simone Bernardi, Ada Fort, Santina Rocchi, Valerio Vignoli.

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0.18um CMOS Image Sensor for Cellular Computers
Mikko Talonen, Mika Laiho, Ari Paasio, Kari Halonen.

A Compact CMOS Realization for Nested CNNs
Ari Paasio, Jonne Poikonen.

On the Mathematical Domain of a CMOS Discrete-Time Cellular Non-linear Network Cell

Robustness Analysis of a Physical Multi-Nested CNN Implementation
Jonne Poikonen, Ari Paasio.

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Signal Processing and Alarm Handling in Process Control
Tord Bergquist, Jonas Ahnlund, Jan Eric Larsson, Lambert Spaanenburg.

Discrete Signal Processing Approach to the Analysis of Windings in Alternating Current Electrical Machines
Adam Dąbrowski.

Diagnostics of mechatronic systems using fuzzy logic and wavelet transform
Piotr Bilski, Jacek Wojelechowski, Wolodymyr Brygilewicz.
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An inductorless differential LC VCO
A. Buonomo, A. Lo Schiavo.

A Comparative Study of Three Stage Amplifier Frequency Compensation
João Ramos, Xiaohong Peng, Michiel Steyaert, Willy Sansen.

Tunable, Very-Large Time Constant CMOS Integrator for an Implantable Neural Recording System
Robert Rieger, Andreas Demosthenous, John Taylor.

Optimization-Based Design Space Exploration of Analog Circuits
Emil Hjalmarson, Robert Hägglund, Lars Wanhammar.

CDTA-Building Block for Current-Mode Analog Signal Processing
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A New Design Procedure for Optimization of Gain-boosted Cascode Amplifiers for High Speed Applications
Mohammad M. Ahmadi, Vahidollah Najafi, Kamyar Khosraviani.

A 5.8-GHz CMOS VCO with Injection-Locked Frequency Divider for IEEE 802.11a Application Sau-Mou Wu, Wei-Liang Chen.

A 2.2 GHz all-NPN low-Rx pseudo-class-AB Controlled Current Conveyor
Fabrice Seguin, Balwant Godara, Frédéric Alicalapa, Alain Fabre.

A 2 GHz Two-Stage SiGe Power Amplifier with Base Ballasting
Ville Saari, Pasi Juurakko, Jussi Ryynänen, Kari Halonen.

SESSION R55: Neural Networks Applications

Attractor learning with recurrent, artificial, nonlinear, neural network
Norman Uts Baier.

Analog Filter Diagnosis Using Support Vector Machine
Robert Salat, Stanisław Osowski.

Asynchronous Digital Pulse Mode Neuron with Adjustable Activation Function
Kazuya Harayama, Masahiro Kato, Hiromi Hikawa.

Equilibrium and Stability Analysis of Bidirectional Associative Memory Neural Networks with Constant Time Delays
Sabri Arik, Vedat Tavsanoglu.