# Ngai Wong

List of Publications by Year
in descending order

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Version: 2024-02-01

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|---|---|---|---|
| 125 papers | 882 citations | 516215 16 h-index | 642321 23 g-index |
| 126 all docs | 126 docs citations | 126 times ranked | 562 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Multilayer Perceptron-Based Stress Evolution Analysis Under DC Current Stressing for Multisegment Wires. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2023, 42, 544-557. | 1.9 | 4 |
| 2 | A Spaceâ€"Time Neural Network for Analysis of Stress Evolution Under DC Current Stressing. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2022, 41, 5501-5514. | 1.9 | 6 |
| 3 | EZCrop: Energy-Zoned Channels for Robust Output Pruning. , 2022, , . | | 1 |
| 4 | A Dataâ€Miningâ€Assisted Design of Structural Colors on Diamond Metasurfaces. Advanced Photonics Research, 2022, 3, . | 1.7 | 1 |
| 5 | Fast Classification and Action Recognition With Event-Based Imaging. IEEE Access, 2022, 10, 55638-55649. | 2.6 | 5 |
| 6 | MERACLE: Constructive Layer-Wise Conversion of a Tensor Train into a MERA. Communications on Applied Mathematics and Computation, 2021, 3, 257-279. | 0.7 | 3 |
| 7 | Overfitting Avoidance in Tensor Train Factorization and Completion: Prior Analysis and Inference. , 2021, , . | | 7 |
| 8 | Fast and Accurate Tensor Completion With Total Variation Regularized Tensor Trains. IEEE Transactions on Image Processing, 2020, 29, 6918-6931. | 6.0 | 32 |
| 9 | Extended Kalman Filtering with Low-Rank Tensor Networks for MIMO Volterra System Identification. , 2019, , . | | 2 |
| 10 | Matrix Product Operator Restricted Boltzmann Machines. , 2019, , . | | 2 |
| 11 | Sparse Tensor Network System Identification for Nonlinear Circuit Macromodeling. , 2018, , . | | 0 |
| 12 | An efficient homotopy-based PoincarÃ©-Lindstedt method for the periodic steady-state analysis of nonlinear autonomous oscillators. , 2017, , . | | 5 |
| 13 | A constructive arbitraryâ€degree Kronecker product decomposition of tensors. Numerical Linear Algebra With Applications, 2017, 24, e2097. | 0.9 | 19 |
| 14 | Tensor Network alternating linear scheme for MIMO Volterra system identification. Automatica, 2017, 84, 26-35. | 3.0 | 45 |
| 15 | Tensor-network-based predistorter design for multiple-input multiple-output nonlinear systems. , 2017, , . | | 2 |
| 16 | A novel tensor-based model compression method via tucker and tensor train decompositions. , 2017, , . | | 0 |
| 17 | Compact model order reduction of weakly nonlinear systems by associated transform. International Journal of Circuit Theory and Applications, 2016, 44, 1367-1384. | 1.3 | 8 |
| 18 | STORM: A nonlinear model order reduction method via symmetric tensor decomposition. , 2016, , . | | 2 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | STAVES: Speedy tensor-aided Volterra-based electronic simulator. , 2015, , . | | 1 |
| 20 | An adaptive dynamical low-rank tensor approximation scheme for fast circuit simulation. , 2015, , . | | 0 |
| 21 | Model Reduction and Simulation of Nonlinear Circuits via Tensor Decomposition. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2015, 34, 1059-1069. | 1.9 | 25 |
| 22 | A novel linear algebra method for the determination of periodic steady states of nonlinear oscillators. , 2014, , . | | 6 |
| 23 | Gramianâ€based model order reduction of parameterized timeâ€delay systems. International Journal of Circuit Theory and Applications, 2014, 42, 687-706. | 1.3 | 3 |
| 24 | Efficient matrix exponential method based on extended Krylov subspace for transient simulation of large-scale linear circuits. , 2014, , . | | 3 |
| 25 | Volterra series approximation for rational nonlinear system. Journal of Applied Mathematics and Computing, 2014, 45, 411-432. | 1.2 | 0 |
| 26 | Design space exploration for sparse matrixâ€matrix multiplication on FPGAs. International Journal of Circuit Theory and Applications, 2013, 41, 205-219. | 1.3 | 19 |
| 27 | Autonomous Volterra Algorithm for Steady-State Analysis of Nonlinear Circuits. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2013, 32, 858-868. | 1.9 | 9 |
| 28 | Low-cost global MPPT scheme for Photovoltaic systems under partially shaded conditions. , 2013, , . | | 4 |
| 29 | Automatic adaptive multi-point moment matching for descriptor system model order reduction. , 2013, , . | | 1 |
| 30 | Model Order Reduction for Neutral Systems by Moment Matching. Circuits, Systems, and Signal Processing, 2013, 32, 1039-1063. | 1.2 | 16 |
| 31 | Frequency-domain multiscale quantum mechanics/electromagnetics simulation method. Journal of Chemical Physics, 2013, 139, 244111. | 1.2 | 19 |
| 32 | Study of visual stimulus waveforms via forced van der Pol oscillator model for SSVEP-based brain-computer interfaces. , 2013, , . | | 0 |
| 33 | A multi-scale modeling of junctionless field-effect transistors. Applied Physics Letters, 2013, 103, 062109. | 1.5 | 13 |
| 34 | A hybrid MPPT method for Photovoltaic systems via estimation and revision method. , 2013, , . | | 5 |
| 35 | A multi-scale framework for nano-electronic devices modeling with application to the junctionless transistor. , 2013, , . | | 0 |
| 36 | Fast transistor-level circuit simulation and variational analysis via the ultra-compact virtual source model. , 2013, , . | | 2 |

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|---|---|---|---|
| 37 | A Numerically Efficient Formulation for Time-Domain Electromagnetic-Semiconductor Cosimulation for Fast-Transient Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2013, 32, 802-806. | 1.9 | 4 |
| 38 | Piecewise-polynomial associated transform macromodeling algorithm for fast nonlinear circuit simulation. , 2013, , . | | 3 |
| 39 | Integration of a wireless sensor network project for introductory circuits and systems teaching. , 2013, , . | | 1 |
| 40 | An operational matrix-based algorithm for simulating linear and fractional differential circuits. , 2012, , . | | 0 |
| 41 | Efficient variation-aware EM-semiconductor coupled solver for the TSV structures in 3D IC. , 2012, , . | | 0 |
| 42 | WISE: Warped Impulse Structure Estimation for Time-Domain Linear Macromodeling. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2012, 2, 131-139. | 1.4 | 4 |
| 43 | Dynamic Multiscale Quantum Mechanics/Electromagnetics Simulation Method. Journal of Chemical Theory and Computation, 2012, 8, 1190-1199. | 2.3 | 33 |
| 44 | Weakly nonlinear circuit analysis based on fast multidimensional inverse Laplace transform. , 2012, , . | | 1 |
| 45 | Globally stable, highly parallelizable fast transient circuit simulation via faber series. , 2012, , . | | 1 |
| 46 | A Realistic Early-Stage Power Grid Verification Algorithm Based on Hierarchical Constraints. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2012, 31, 109-120. | 1.9 | 14 |
| 47 | Passivity Enforcement for Descriptor Systems Via Matrix Pencil Perturbation. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2012, 31, 532-545. | 1.9 | 19 |
| 48 | EM-TCAD solving from 0–100 THz: A new implementation of an electromagnetic solver. , 2011, , . | | 1 |
| 49 | Balanced truncation for time-delay systems via approximate Gramians. , 2011, , . | | 13 |
| 50 | A Sub-1 V, 26 $mu$W, Low-Output-Impedance CMOS Bandgap Reference With a Low Dropout or Source Follower Mode. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2011, 19, 1305-1309. | 2.1 | 19 |
| 51 | Hilbert-Schmidt-Hankel norm model reduction for matrix second-order linear systems. Journal of Control Theory and Applications, 2011, 9, 571-578. | 0.8 | 1 |
| 52 | On IIRâ€based bitâ€stream multipliers. International Journal of Circuit Theory and Applications, 2011, 39, 149-158. | 1.3 | 2 |
| 53 | Finite difference schemes for heat conduction analysis in integrated circuit design and manufacturing. International Journal of Circuit Theory and Applications, 2011, 39, 905-921. | 1.3 | 2 |
| 54 | Frequency-domain transient analysis of multitime partial differential equation systems. , 2011, , . | | 2 |

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|---|---|---|---|
| 55 | Process-variation-aware electromagnetic-semiconductor coupled simulation. , 2011, , . | | 1 |
| 56 | Analog circuit design by nonconvex polynomial optimization: Two design examples. International Journal of Circuit Theory and Applications, 2010, 38, 25-43. | 1.3 | 14 |
| 57 | PEDS: Passivity enforcement for descriptor systems via Hamiltonian-symplectic matrix pencil perturbation. , 2010, , . | | 9 |
| 58 | Discussion of "A Half-Size Singularity Test Matrix for Fast and Reliable Passivity Assessment of Rational Models". IEEE Transactions on Power Delivery, 2010, 25, 1212-1213. | 2.9 | 3 |
| 59 | Passivity Test of Immittance Descriptor Systems Based on Generalized Hamiltonian Methods. IEEE Transactions on Circuits and Systems II: Express Briefs, 2010, 57, 61-65. | 2.2 | 18 |
| 60 | An Efficient Projector-Based Passivity Test for Descriptor Systems. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2010, 29, 1203-1214. | 1.9 | 27 |
| 61 | An extension of the generalized Hamiltonian method to S-parameter descriptor systems. , 2010, , . | | 2 |
| 62 | VISA: Versatile Impulse Structure Approximation for time-domain linear macromodeling. , 2010, , . | | 2 |
| 63 | Design space exploration for sparse matrix-matrix multiplication on FPGAs. , 2010, , . | | 14 |
| 64 | New simulation methodology of 3D surface roughness loss for interconnects modeling. , 2009, , . | | 1 |
| 65 | The impact of dispersion fluctuation on the optimization of Parametric wavelength exchange. , 2009, , . | | 1 |
| 66 | Designing globally optimal deltaâ€"sigma modulator topologies via signomial programming. International Journal of Circuit Theory and Applications, 2009, 37, 453-472. | 1.3 | 10 |
| 67 | Efficient numerical modeling of random rough surface effects in interconnect resistance extraction. International Journal of Circuit Theory and Applications, 2009, 37, 751-763. | 1.3 | 4 |
| 68 | Operation scheduling for FPGA-based reconfigurable computers. , 2009, , . | | 3 |
| 69 | IIR Approximation of FIR Filters Via Discrete-Time Hybrid-Domain Vector Fitting. IEEE Signal Processing Letters, 2009, 16, 533-537. | 2.1 | 11 |
| 70 | Digital IIR filter design for communication systems by discrete-time vector fitting. , 2009, , . | | 3 |
| 71 | Automatic system architecture synthesis for FPGA-based reconfigurable computers. , 2009, , . | | 2 |
| 72 | Robust Simulation Methodology for Surface-Roughness Loss in Interconnect and Package Modelings. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2009, 28, 1654-1665. | 1.9 | 14 |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | 37.2: Fiberâ€Coupled Emissive Microâ€Lightâ€Emitting Diode Arrays. Digest of Technical Papers SID International Symposium, 2009, 40, 526-529. | 0.1 | 0 |
| 74 | IIR Approximation of FIR Filters Via Discrete-Time Vector Fitting. IEEE Transactions on Signal Processing, 2008, 56, 1296-1302. | 3.2 | 34 |
| 75 | Efficient Positive-Real Balanced Truncation of Symmetric Systems Via Cross-Riccati Equations. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2008, 27, 470-480. | 1.9 | 8 |
| 76 | Efficient Linear Macromodeling via Discrete-Time Time-Domain Vector Fitting. , 2008, , . | | 14 |
| 77 | A 0.9V 2.7µW small-area 100µs+ analog CMOS tunable-delay circuit utilizing Miller effect. , 2008, , . | | 1 |
| 78 | Direct sigma-delta modulated signal processing in FPGA. , 2008, , . | | 2 |
| 79 | Efficient numerical modeling of random rough surface effects for interconnect internal impedance extraction. , 2008, , . | | 0 |
| 80 | Global optimization of common subexpressions for multiplierless synthesis of multiple constant multiplications. , 2008, , . | | 5 |
| 81 | A Fast Passivity Test for Stable Descriptor Systems via Skew-Hamiltonian/Hamiltonian Matrix Pencil Transformations. IEEE Transactions on Circuits and Systems I: Regular Papers, 2008, 55, 635-643. | 3.5 | 17 |
| 82 | A Signomial Programming Approach for Binary Image Restoration by Penalized Least Squares. IEEE Transactions on Circuits and Systems II: Express Briefs, 2008, 55, 41-45. | 2.2 | 8 |
| 83 | Interconnect thermal simulation with higher order spatial accuracy. , 2008, , . | | 1 |
| 84 | Processor frequency assignment in three-dimensional MPSoCs under thermal constraints by polynomial programming. , 2008, , . | | 4 |
| 85 | Quad-level bit-stream signal processing on FPGAs. , 2008, , . | | 2 |
| 86 | Synthesis of optimal OTA-C filter structures with arbitrary transmission zeros via MINLP. , 2008, , . | | 1 |
| 87 | Efficient linear macromodeling via least-squares response approximation. , 2008, , . | | 6 |
| 88 | Design of hybrid continuous-time discrete-time delta-sigma modulators. , 2008, , . | | 8 |
| 89 | Passivity-preserving model order reduction of linear time-varying macromodels. , 2007, , . | | 0 |
| 90 | Bit-Stream Adders and Multipliers for Tri-Level Sigmaâ€"Delta Modulators. IEEE Transactions on Circuits and Systems II: Express Briefs, 2007, 54, 1082-1086. | 2.2 | 15 |

| # | Article | IF | Citations |
|---|---|---|---|
| 91 | Design of 2D Linear-Phase IIR Filters Via Schur Decomposition and Discrete-Time Vector Fitting. , 2007, , . | | 2 |
| 92 | FIR Filter Approximation by IIR Filters Based on Discrete-Time Vector Fitting. , 2007, , . | | 5 |
| 93 | An efficient stochastic integral equation method for modeling the influence of conductor surface roughness on interconnect ohmic loss. Midwest Symposium on Circuits and Systems, 2007, , . | 1.0 | 2 |
| 94 | Designing Globally Optimal Delta-Sigma Modulator Topologies via Signomial Programming. , 2007, , . | | 6 |
| 95 | Fast Positive-Real Balanced Truncation of Symmetric Systems Using Cross Riccati Equations. , 2007, , . | | 3 |
| 96 | A low-power high-output-driving CMOS voltage reference with Â±0.5% trimming accuracy. , 2007, , . | | 1 |
| 97 | Fast Positive-Real Balanced Truncation Via Quadratic Alternating Direction Implicit Iteration. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2007, 26, 1725-1731. | 1.9 | 17 |
| 98 | Design and optimization of highly linear CMOS low noise amplifiers via geometric programming. , 2007, , . | | 0 |
| 99 | Gain bandwidth optimization in two-pump fiber optical parametric amplifiers under bounded zero-dispersion wavelength fluctuations. Optics Communications, 2007, 272, 514-520. | 1.0 | 9 |
| 100 | An Efficient Transfer-Function-Based Approach for the Fast Tuning and Design of DC-DC Converters. , 2007, , . | | 6 |
| 101 | Binary Image Restoration by Signomial Programming. , 2007, , . | | 2 |
| 102 | A Stochastic Integral Equation Method for Resistance Extraction of Conductors with Random Rough Surfaces. , 2006, , . | | 8 |
| 103 | Investigation of Random Rough Surface Effects in Interconnect Resistance Extraction Utilizing Effective Conductivity. , 2006, , . | | 0 |
| 104 | Optimized RF CMOS Low Noise Amplifier Design Via Geometric Programming. , 2006, , . | | 12 |
| 105 | Restoration of Binary Images Using Positive Semidefinite Programming. , 2006, , . | | 2 |
| 106 | Efficient Positive Real Balanced Truncation of SISO Systems Via Cross-Riccati Equations. , 2006, , . | | 0 |
| 107 | Design of Nested Transconductance-Capacitance Compensation Amplifier Via Nonconvex Polynomial Optimization. , 2006, , . | | 2 |
| 108 | Multiplierless Polynomial-Operator-Based IR Filters for Efficient VLSI Implementation. , 2006, , . | | 2 |

| # | Article | IF | Citations |
|---|---|---|---|
| 109 | Model Order Reduction of Frequency-Dependent Interconnect Models Via Linear Fractional Transformation Techniques. , 2006, , . | | 0 |
| 110 | Systematic Power Minimization in Multibit Delta-Sigma Analog-to-Digital Converters. , 2006, , . | | 3 |
| 111 | SPC08-2: Signal Detection for MIMO-OFDM Systems with Time Offsets. IEEE Global Telecommunications Conference (GLOBECOM), 2006, , . | 0.0 | 0 |
| 112 | Quadratic alternating direction implicit iteration for the fast solution of algebraic Riccati equations. , 2005, , . | | 2 |
| 113 | Robust gain bandwidth optimization in two-pump fiber optical parametric amplifiers with dispersion fluctuations. , 2005, , . | | 1 |
| 114 | A Second-Order Cone Bounding Algorithm for Robust Minimum Variance Beamforming. Lecture Notes in Computer Science, 2005, , 223-247. | 1.0 | 3 |
| 115 | Fast Detection of Instability in Sigmaâ€"Delta Modulators Based on Unstable Embedded Limit Cycles. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 2004, 51, 442-449. | 2.3 | 7 |
| 116 | DC stability analysis of high-order, lowpass Î£Î" modulators with distinct unit circle NTF zeros. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 2003, 50, 12-30. | 2.3 | 14 |
| 117 | A generalized direct-form delta operator-based IIR filter with minimum noise gain and sensitivity. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 2001, 48, 425-431. | 2.3 | 57 |
| 118 | Roundoff noise minimization in a modified direct-form delta operator IIR structure. IEEE Transactions on Circuits and Systems Part 2: Express Briefs, 2000, 47, 1533-1536. | 2.3 | 25 |
| 119 | An efficient algorithm for downconverting multiple bandpass signals using bandpass sampling. , 0, , . | | 19 |
| 120 | Improved roundoff noise performance in a direct-form IIR filter using a modified delta operator. , 0, , . | | 2 |
| 121 | A geometrical approach to robust minimum variance beamforming. , 0, , . | | 3 |
| 122 | A fast Newton/Smith algorithm for solving algebraic Riccati equations and its application in model order reduction. , 0, , . | | 2 |
| 123 | Fast balanced stochastic truncation via a quadratic extension of the alternating direction implicit iteration. , 0, , . | | 5 |
| 124 | Time domain equalization for OFDM systems. , 0, , . | | 1 |
| 125 | A Dataâ€Miningâ€Assisted Design of Structural Colors on Diamond Metasurfaces. Advanced Photonics Research, 0, , 2100292. | 1.7 | 4 |