

Ngai Wong

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

85
papers

544
citations

13
h-index

17
g-index

126
ext. papers

715
ext. citations

2.5
avg, IF

3.93
L-index

| # | Paper | IF | Citations |
|----|--|-----|-----------|
| 85 | A generalized direct-form delta operator-based IIR filter with minimum noise gain and sensitivity. <i>IEEE Transactions on Circuits and Systems Part 2: Express Briefs</i> , 2001 , 48, 425-431 | | 29 |
| 84 | Tensor Network alternating linear scheme for MIMO Volterra system identification. <i>Automatica</i> , 2017 , 84, 26-35 | 5.7 | 28 |
| 83 | IIR Approximation of FIR Filters Via Discrete-Time Vector Fitting. <i>IEEE Transactions on Signal Processing</i> , 2008 , 56, 1296-1302 | 4.8 | 26 |
| 82 | Dynamic Multiscale Quantum Mechanics/Electromagnetics Simulation Method. <i>Journal of Chemical Theory and Computation</i> , 2012 , 8, 1190-9 | 6.4 | 25 |
| 81 | An Efficient Projector-Based Passivity Test for Descriptor Systems. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2010 , 29, 1203-1214 | 2.5 | 21 |
| 80 | Model Reduction and Simulation of Nonlinear Circuits via Tensor Decomposition. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2015 , 34, 1059-1069 | 2.5 | 18 |
| 79 | Passivity Enforcement for Descriptor Systems Via Matrix Pencil Perturbation. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2012 , 31, 532-545 | 2.5 | 15 |
| 78 | Frequency-domain multiscale quantum mechanics/electromagnetics simulation method. <i>Journal of Chemical Physics</i> , 2013 , 139, 244111 | 3.9 | 15 |
| 77 | Passivity Test of Immittance Descriptor Systems Based on Generalized Hamiltonian Methods. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2010 , 57, 61-65 | 3.5 | 15 |
| 76 | A Fast Passivity Test for Stable Descriptor Systems via Skew-Hamiltonian/Hamiltonian Matrix Pencil Transformations. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , 2008 , 55, 635-643 | 3.9 | 15 |
| 75 | Model Order Reduction for Neutral Systems by Moment Matching. <i>Circuits, Systems, and Signal Processing</i> , 2013 , 32, 1039-1063 | 2.2 | 14 |
| 74 | A Sub-1 V, 26 μ W, Low-Output-Impedance CMOS Bandgap Reference With a Low Dropout or Source Follower Mode. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , 2011 , 19, 1305-1309 | 3.6 | 14 |
| 73 | A constructive arbitrary-degree Kronecker product decomposition of tensors. <i>Numerical Linear Algebra With Applications</i> , 2017 , 24, e2097 | 1.6 | 13 |
| 72 | Analog circuit design by nonconvex polynomial optimization: Two design examples. <i>International Journal of Circuit Theory and Applications</i> , 2010 , 38, 25-43 | 2 | 13 |
| 71 | Fast Positive-Real Balanced Truncation Via Quadratic Alternating Direction Implicit Iteration. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2007 , 26, 1725-1731 | 2.5 | 13 |
| 70 | A Realistic Early-Stage Power Grid Verification Algorithm Based on Hierarchical Constraints. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2012 , 31, 109-120 | 2.5 | 12 |
| 69 | A multi-scale modeling of junctionless field-effect transistors. <i>Applied Physics Letters</i> , 2013 , 103, 062109 | 3.4 | 12 |

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| 68 | Robust Simulation Methodology for Surface-Roughness Loss in Interconnect and Package Modelings. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2009 , 28, 1654-1665 | 2.5 | 12 |
| 67 | Bit-Stream Adders and Multipliers for Tri-Level SigmaDelta Modulators. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2007 , 54, 1082-1086 | 3.5 | 12 |
| 66 | Design space exploration for sparse matrix-matrix multiplication on FPGAs. <i>International Journal of Circuit Theory and Applications</i> , 2013 , 41, 205-219 | 2 | 11 |
| 65 | Roundoff noise minimization in a modified direct-form delta operator IIR structure. <i>IEEE Transactions on Circuits and Systems Part 2: Express Briefs</i> , 2000 , 47, 1533-1536 | | 11 |
| 64 | Fast and Accurate Tensor Completion With Total Variation Regularized Tensor Trains. <i>IEEE Transactions on Image Processing</i> , 2020 , 29, 6918-6931 | 8.7 | 10 |
| 63 | Design space exploration for sparse matrix-matrix multiplication on FPGAs 2010 , | | 10 |
| 62 | DC stability analysis of high-order, lowpass /spl Sigma//spl Delta/ modulators with distinct unit circle NTF zeros. <i>IEEE Transactions on Circuits and Systems Part 2: Express Briefs</i> , 2003 , 50, 12-30 | | 10 |
| 61 | An efficient algorithm for downconverting multiple bandpass signals using bandpass sampling | | 10 |
| 60 | Balanced truncation for time-delay systems via approximate Gramians 2011 , | | 9 |
| 59 | Efficient Linear Macromodeling via Discrete-Time Time-Domain Vector Fitting 2008 , | | 7 |
| 58 | Autonomous Volterra Algorithm for Steady-State Analysis of Nonlinear Circuits. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2013 , 32, 858-868 | 2.5 | 6 |
| 57 | A novel linear algebra method for the determination of periodic steady states of nonlinear oscillators 2014 , | | 6 |
| 56 | PEDS: Passivity enforcement for descriptor systems via Hamiltonian-symplectic matrix pencil perturbation 2010 , | | 6 |
| 55 | Designing globally optimal delta-sigma modulator topologies via signomial programming. <i>International Journal of Circuit Theory and Applications</i> , 2009 , 37, 453-472 | 2 | 6 |
| 54 | Efficient Positive-Real Balanced Truncation of Symmetric Systems Via Cross-Riccati Equations. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2008 , 27, 470-480 | 2.5 | 6 |
| 53 | A Signomial Programming Approach for Binary Image Restoration by Penalized Least Squares. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2008 , 55, 41-45 | 3.5 | 6 |
| 52 | Gain bandwidth optimization in two-pump fiber optical parametric amplifiers under bounded zero-dispersion wavelength fluctuations. <i>Optics Communications</i> , 2007 , 272, 514-520 | 2 | 6 |
| 51 | Optimized RF CMOS Low Noise Amplifier Design Via Geometric Programming 2006 , | | 6 |

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| 50 | Compact model order reduction of weakly nonlinear systems by associated transform. <i>International Journal of Circuit Theory and Applications</i> , 2016 , 44, 1367-1384 | 2 | 6 |
| 49 | An efficient homotopy-based Poincaré-Lindstedt method for the periodic steady-state analysis of nonlinear autonomous oscillators 2017 , | | 5 |
| 48 | A Numerically Efficient Formulation for Time-Domain Electromagnetic-Semiconductor Cosimulation for Fast-Transient Systems. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2013 , 32, 802-806 | 2.5 | 4 |
| 47 | Efficient numerical modeling of random rough surface effects in interconnect resistance extraction. <i>International Journal of Circuit Theory and Applications</i> , 2009 , 37, 751-763 | 2 | 4 |
| 46 | IIR Approximation of FIR Filters Via Discrete-Time Hybrid-Domain Vector Fitting. <i>IEEE Signal Processing Letters</i> , 2009 , 16, 533-537 | 3.2 | 4 |
| 45 | Global optimization of common subexpressions for multiplierless synthesis of multiple constant multiplications 2008 , | | 4 |
| 44 | Fast detection of instability in sigma-delta modulators based on unstable embedded limit cycles. <i>IEEE Transactions on Circuits and Systems Part 2: Express Briefs</i> , 2004 , 51, 442-449 | | 4 |
| 43 | Gramian-based model order reduction of parameterized time-delay systems. <i>International Journal of Circuit Theory and Applications</i> , 2014 , 42, 687-706 | 2 | 3 |
| 42 | Designing Globally Optimal Delta-Sigma Modulator Topologies via Signomial Programming 2007 , | | 3 |
| 41 | Fast balanced stochastic truncation via a quadratic extension of the alternating direction implicit iteration | | 3 |
| 40 | A Data-Mining-Assisted Design of Structural Colors on Diamond Metasurfaces. <i>Advanced Photonics Research</i> , 2100292 | 1.9 | 3 |
| 39 | A Second-Order Cone Bounding Algorithm for Robust Minimum Variance Beamforming. <i>Lecture Notes in Computer Science</i> , 2005 , 223-247 | 0.9 | 3 |
| 38 | Overfitting Avoidance in Tensor Train Factorization and Completion: Prior Analysis and Inference 2021 , | | 3 |
| 37 | Efficient matrix exponential method based on extended Krylov subspace for transient simulation of large-scale linear circuits 2014 , | | 2 |
| 36 | WISE: Warped Impulse Structure Estimation for Time-Domain Linear Macromodeling. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , 2012 , 2, 131-139 | 1.7 | 2 |
| 35 | On IIR-based bit-stream multipliers. <i>International Journal of Circuit Theory and Applications</i> , 2011 , 39, 149-158 | 2 | 2 |
| 34 | Finite difference schemes for heat conduction analysis in integrated circuit design and manufacturing. <i>International Journal of Circuit Theory and Applications</i> , 2011 , 39, 905-921 | 2 | 2 |
| 33 | Discussion of a Half-Size Singularity Test Matrix for Fast and Reliable Passivity Assessment of Rational Models <i>IEEE Transactions on Power Delivery</i> , 2010 , 25, 1212-1213 | 4.3 | 2 |

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| 32 | An extension of the generalized Hamiltonian method to S-parameter descriptor systems 2010, | 2 |
| 31 | Operation scheduling for FPGA-based reconfigurable computers 2009, | 2 |
| 30 | Design of hybrid continuous-time discrete-time delta-sigma modulators 2008, | 2 |
| 29 | FIR Filter Approximation by IIR Filters Based on Discrete-Time Vector Fitting 2007, | 2 |
| 28 | Fast Positive-Real Balanced Truncation of Symmetric Systems Using Cross Riccati Equations 2007, | 2 |
| 27 | A geometrical approach to robust minimum variance beamforming | 2 |
| 26 | Binary Image Restoration by Signomial Programming 2007, | 2 |
| 25 | Extended Kalman Filtering with Low-Rank Tensor Networks for MIMO Volterra System Identification 2019, | 2 |
| 24 | STAVES: Speedy tensor-aided Volterra-based electronic simulator 2015, | 1 |
| 23 | A hybrid MPPT method for Photovoltaic systems via estimation and revision method 2013, | 1 |
| 22 | Fast transistor-level circuit simulation and variational analysis via the ultra-compact virtual source model 2013, | 1 |
| 21 | Weakly nonlinear circuit analysis based on fast multidimensional inverse Laplace transform 2012, | 1 |
| 20 | EM-TCAD solving from 0 to 100 THz: A new implementation of an electromagnetic solver 2011, | 1 |
| 19 | New simulation methodology of 3D surface roughness loss for interconnects modeling 2009, | 1 |
| 18 | Automatic system architecture synthesis for FPGA-based reconfigurable computers 2009, | 1 |
| 17 | Efficient linear macromodeling via least-squares response approximation 2008, | 1 |
| 16 | An Efficient Transfer-Function-Based Approach for the Fast Tuning and Design of DC-DC Converters 2007, | 1 |
| 15 | Design of Nested Transconductance-Capacitance Compensation Amplifier Via Nonconvex Polynomial Optimization 2006, | 1 |

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| 14 | Multiplierless Polynomial-Operator-Based IR Filters for Efficient VLSI Implementation 2006, | | 1 |
| 13 | Systematic Power Minimization in Multibit Delta-Sigma Analog-to-Digital Converters 2006, | | 1 |
| 12 | Design of 2D Linear-Phase IIR Filters Via Schur Decomposition and Discrete-Time Vector Fitting 2007, | | 1 |
| 11 | A Stochastic Integral Equation Method for Resistance Extraction of Conductors with Random Rough Surfaces 2006, | | 1 |
| 10 | Quadratic alternating direction implicit iteration for the fast solution of algebraic Riccati equations 2005, | | 1 |
| 9 | Matrix Product Operator Restricted Boltzmann Machines 2019, | | 1 |
| 8 | A Space-Time Neural Network for Analysis of Stress Evolution under DC Current Stressing. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2022 , 1-1 | 2.5 | 1 |
| 7 | Hilbert-Schmidt-Hankel norm model reduction for matrix second-order linear systems. <i>Journal of Control Theory and Applications</i> , 2011 , 9, 571-578 | | 0 |
| 6 | Fast Classification and Action Recognition with Event-based Imaging. <i>IEEE Access</i> , 2022 , 1-1 | 3.5 | 0 |
| 5 | Multilayer Perceptron Based Stress Evolution Analysis under DC Current Stressing for Multi-segment Wires. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2022 , 1-1 | 2.5 | 0 |
| 4 | Volterra series approximation for rational nonlinear system. <i>Journal of Applied Mathematics and Computing</i> , 2014 , 45, 411-432 | 1.8 | |
| 3 | 37.2: Fiber-Coupled Emissive Micro-Light-Emitting Diode Arrays. <i>Digest of Technical Papers SID International Symposium</i> , 2009 , 40, 526 | 0.5 | |
| 2 | MERACLE: Constructive Layer-Wise Conversion of a Tensor Train into a MERA. <i>Communications on Applied Mathematics and Computation</i> , 2021 , 3, 257-279 | 0.9 | |
| 1 | A Data-Mining-Assisted Design of Structural Colors on Diamond Metasurfaces. <i>Advanced Photonics Research</i> , 2022 , 3, 2270008 | 1.9 | |