Simon J Cooke

List of Publications by Year in descending order

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82 papers	716 citations	687363 13 h-index	642732 23 g-index
82 all docs	82 docs citations	82 times ranked	396 citing authors

#	Article	IF	Citations
1	Design Methodology and Experimental Verification of Serpentine/Folded-Waveguide TWTs. IEEE Transactions on Electron Devices, 2014, 61, 1679-1686.	3.0	105
2	A leapfrog formulation of the 3â€Ð ADIâ€FDTD algorithm. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2009, 22, 187-200.	1.9	88
3	Demonstration of a Wideband 10-kW Ka-Band Sheet Beam TWT Amplifier. IEEE Transactions on Electron Devices, 2014, 61, 1637-1642.	3.0	55
4	Wave coupling in sheet- and multiple-beam traveling-wave tubes. Physics of Plasmas, 2009, 16, .	1.9	49
5	Experimental observation of superradiance in millimeter-wave band. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1997, 393, 352-355.	1.6	41
6	Characterization of a Ka-band Sheet-Beam Coupled-Cavity Slow-Wave Structure. IEEE Transactions on Plasma Science, 2010, 38, 1244-1254.	1.3	38
7	Validation of the Large-Signal Klystron Simulation Code TESLA. IEEE Transactions on Plasma Science, 2004, 32, 1136-1146.	1.3	30
8	Simulation of Klystrons With Slow and Reflected Electrons Using Large-Signal Code TESLA. IEEE Transactions on Electron Devices, 2007, 54, 1555-1561.	3.0	30
9	Parallel Simulation of Independent Beam-Tunnels in Multiple-Beam Klystrons Using TESLA. IEEE Transactions on Plasma Science, 2008, 36, 670-681.	1.3	30
10	GPU-accelerated 3D large-signal device simulation using the particle-in-cell code ‘Neptune’. , 2012, , .		27
11	Eigenmode Solution of 2-D and 3-D Electromagnetic Cavities Containing Absorbing Materials Using the Jacobiâ€“Davidson Algorithm. Journal of Computational Physics, 2000, 157, 350-370.	3.8	17
12	A finite integration method for conformal, structured-grid, electromagnetic simulation. Journal of Computational Physics, 2006, 215, 321-347.	3.8	16
13	Spurious Reflection of Space Charge Fields in TWTAs. IEEE Transactions on Electron Devices, 2005, 52, 755-763.	3.0	14
14	Comparative Analysis of the Curnow and Malykhinâ€“Konnovâ€“Komarov (MKK) Circuits as Representations of Coupled-Cavity Slow-Wave Structures. IEEE Transactions on Electron Devices, 2005, 52, 774-782.	3.0	13
15	Monolayer and multilayer film characterisation using surface plasmon resonance. Thin Solid Films, 1992, 210-211, 685-688.	1.8	9
16	Millimeter-wave and sub-millimeter-wave vacuum electronics amplifier development at the US Naval Research Laboratory. Proceedings of SPIE, 2013, , .	0.8	9
17	Simultaneous axial and rotational electron beam velocity measurement using a phosphor scintillator. Review of Scientific Instruments, 2001, 72, 2268-2270.	1.3	8
18	Modeling of coupled cavity TWT with TESLA. , 2009, , .		8

#	Article	IF	Citations
19	16.1: 2D modeling of beam-wave interaction in coupled cavity TWT with TESLA. , 2010, , .		8
20	Compact 3-D Envelope ADI-FDTD Algorithm for Simulations of Coherent Radiation Sources. IEEE Transactions on Plasma Science, 2010, 38, 1439-1449.	1.3	8
21	Design of a low voltage folded waveguide four beam Mini-TWT. , 2018, , .		8
22	Three-Dimensional Modeling of AC Space Charge for Large-Signal TWT Simulation. IEEE Transactions on Electron Devices, 2005, 52, 764-773.	3.0	7
23	Design of a wideband high-power W-band serpentine TWT. , 2013, , .		7
24	Vacuum electronic device design using 3D EM-PIC. , 2014, , .		7
25	Design of a 233 GHz high-gain single-stage hybrid-serpentine TWT. , 2014, , .		7
26	Oscillation characteristics in waveguide-based TWT amplifiers. , 2015, , .		7
27	Experimental characterization of a Ka-band sheet-beam coupled-cavity slow-wave structure. , 2009, , .		6
28	High accuracy electron beam model development in MICHELLE: eBEAM. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, C6J8-C6J12.	1.2	6
29	Sheet electron beam millimeter-wave amplifiers at the Naval Research Laboratory. , 2013, , .		5
30	Modes in a MÃ¶bius wire-loaded cavity resonator*. Microwave and Optical Technology Letters, 2001, 31, 6-9.	1.4	4
31	A Comparison of Linearity and Efficiency in Conventional and Transverse TWT Amplifiers. IEEE Transactions on Electron Devices, 2007, 54, 194-201.	3.0	4
32	Demonstration of a wideband 10-kW Ka-band sheet beam TWT amplifier. , 2014, , .		4
33	Reduced-order simulation of large accelerator structures. Physics of Plasmas, 2008, 15, 056706.	1.9	3
34	Modeling of counter streaming charged beams in MICHELLE-eBEAM. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, 06F406.	1.2	3
35	Conformal time-domain particle-in-cell simulation of vacuum electronic devices with accurate surface loss. , 2013, , .		3
36	Modeling and simulation of millimeter wave vacuum electronic devices at the naval research laboratory. , 2015, , .		3

#	Article	IF	Citations
37	Full 2D Model for DC Space Charge Fields in the Large-Signal Code TESLA. , 2007, , .		2
38	Modelling of MBK with Parallel Version of Large-Signal Code TESLA. , 2007, , .		2
39	Large-signal code TESLA: Current status and recent development. , 2008, , .		2
40	TESLA modeling of the linear-beam amplifiers. , 2009, , .		2
41	16.2: Stability and higher-order mode interaction of a sheet-beam coupled-cavity slow-wave structure. , 2010, , .		2
42	GPU-accelerated 3D time-domain simulation of vacuum electron devices. , 2011, , .		2
43	High-power Multiple-Beam IOT design. , 2012, , .		2
44	Current status of the large-signal code TESLA: Recent development and new applications. , 2012, , .		2
45	Using whole structure modes in the large-signal modeling of TWTs with arbitrary slow-wave structures. , 2014, , .		2
46	Monolithic Fabrication Concepts for a Ka-band Sheet-Beam Coupled-Cavity TWT. , 2021, , .		2
47	Modelling of Klystrons with Reflected Electrons Using the Large-Signal Code TESLA. , 2007, , .		1
48	TESLA modelling of klystrons with multigap resonators. , 2008, , .		1
49	Characterization of a Ka-band sheet-beam coupled-cavity slow-wave structure: Simulation and experiment. , 2009, , .		1
50	Modeling and design of high-power single-beam and multiple-beam Inductive Output Tubes. , 2009, , .		1
51	5.5: A new complex envelope ADI-FDTD algorithm for 3D simulation of slow wave structures. , 2010, , .		1
52	Design of broadband kilo-watt class W-band serpentine TWTs. , 2014, , .		1
53	Development of simulation tools for design of multiple beam folded waveguide TWTs. , 2016, , .		1
54	High performance parametric design optimization of RF devices. , 2016, , .		1

#	Article	IF	Citations
55	Validation of the Stability Analysis Framework Based on the Large-signal Code TESLA-Z by Its Application to the Experimental TWTs. , 2021, , .		1
56	Modeling Sheet Beam Slow Wave Interaction Structures. , 2007, , .		0
57	Linear TWT analysis for sheet-beam interaction. , 2008, , .		0
58	Numerical modeling of cavities with low external Q. , 2008, , .		0
59	Single and multiple beam klystron modeling with TESLA. , 2008, , .		0
60	15.5: Beam driven terahertz plasmons in graphite and graphene layers. , 2010, , .		0
61	8.1: Nonlinear characteristics of transverse interaction in sheet beam amplifiers. , 2010, , .		0
62	P2-29: High accuracy electron beam model development: MICHELLE eBEAM. , 2010, , .		0
63	Counter streaming beams model in MICHELLE eBEAM. , 2012, , .		0
64	Multi-source, complex beamline model development in MICHELLE eBEAM. , 2013, , .		0
65	Using whole structure modes in the large-signal modeling of TWTS with arbitrary slow-wave structures. , 2014, , .		0
66	RF amplifier design using 3D EM-PIC. , 2014, , .		0
67	Guest Editorial Special Issue on Vacuum Electronic Devices. IEEE Transactions on Electron Devices, 2014, 61, 1627-1629.	3.0	0
68	Parallel parametric design optimization for RF amplifiers with 3D EM-PIC. , 2014, , .		0
69	High-power MMW sheet beam amplifiers. , 2015, , .		0
70	Developments in parallelization and the user environment of the MICHELLE charged particle beam optics code. , 2016, , .		0
71	Accurate Electromagnetic simulation of dielectrics in device structures using Neptune. , 2016, , .		0
72	Advances in supercomputer optimization of RF devices. , 2017, , .		0

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73	Compact, efficient, high-power millimeter-wave power boosters. , 2017, , .		0
74	Broadband waveguide port matching in Neptune. , 2017, , .		0
75	High performance uncertainty quantification analysis of RF devices. , 2017, , .		0
76	Design of low voltage folded waveguide multiple beam mini-TWTs. , 2017, , .		0
77	Developments of the MICHELLE charged particle beam optics code for high performance computing. , 2017, , .		0
78	MICHELLE simulation and performance using domain decomposition. , 2018, , .		0
79	MICHELLE post processing for large scale problems and HPC environments using ParaView with a custom GUI interface. , 2018, , .		0
80	MICHELLE for high-level optimization, large scale problems and HPC environments. , 2018, , .		0
81	The Michelle Code: Advanced Emission, Multiple Design Environment Implementations, and High Energy Applications *. , 2021, , .		0
82	Conformal Space-Charge Limited Emission Modeling in the Neptune Em-Pic Code*. , 2021, , .		0