

Christophe Lallement

List of Publications by Year in descending order

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69
papers

1,243
citations

430874

18
h-index

395702

33
g-index

72
all docs

72
docs citations

72
times ranked

739
citing authors

#	ARTICLE	IF	CITATIONS
1	Charge-Based Modeling of Junctionless Double-Gate Field-Effect Transistors. IEEE Transactions on Electron Devices, 2011, 58, 2628-2637.	3.0	218
2	A design oriented charge-based current model for symmetric DG MOSFET and its correlation with the EKV formalism. Solid-State Electronics, 2005, 49, 485-489.	1.4	148
3	CNTFET Modeling and Reconfigurable Logic-Circuit Design. IEEE Transactions on Circuits and Systems I: Regular Papers, 2007, 54, 2365-2379.	5.4	144
4	A simple efficient model of parasitic capacitances of deep-submicron LDD MOSFETs. Solid-State Electronics, 2002, 46, 2191-2198.	1.4	54
5	Accounting for quantum mechanical effects from accumulation to inversion, in a fully analytical surface-potential-based MOSFET model. Solid-State Electronics, 2004, 48, 781-787.	1.4	51
6	Explicit compact model for symmetric double-gate MOSFETs including solutions for small-geometry effects. Solid-State Electronics, 2008, 52, 99-106.	1.4	48
7	A Common Core Model for Junctionless Nanowires and Symmetric Double-Gate FETs. IEEE Transactions on Electron Devices, 2013, 60, 4277-4280.	3.0	46
8	An advanced explicit surface potential model physically accounting for the quantization effects in deep-submicron MOSFETs. Solid-State Electronics, 2004, 48, 427-435.	1.4	41
9	Generalization of the Concept of Equivalent Thickness and Capacitance to Multigate MOSFETs Modeling. IEEE Transactions on Electron Devices, 2012, 59, 60-71.	3.0	34
10	Physics-based compact model for ultra-scaled FinFETs. Solid-State Electronics, 2011, 62, 165-173.	1.4	33
11	Improved analytical modeling of polysilicon depletion in MOSFETs for circuit simulation. Solid-State Electronics, 2000, 44, 905-912.	1.4	30
12	Explicit Compact Model for Ultranarrow Body FinFETs. IEEE Transactions on Electron Devices, 2009, 56, 1543-1547.	3.0	28
13	Accounting for quantum effects and polysilicon depletion from weak to strong inversion in a charge-based design-oriented MOSFET model. IEEE Transactions on Electron Devices, 2003, 50, 406-417.	3.0	25
14	The Equivalent-Thickness Concept for Doped Symmetric DG MOSFETs. IEEE Transactions on Electron Devices, 2010, 57, 2917-2924.	3.0	24
15	Modelling and characterization of non-uniform substrate doping. Solid-State Electronics, 1997, 41, 1857-1861.	1.4	22
16	Theoretical characterization of the topology of connected carbon nanotubes in random networks. Nanotechnology, 2011, 22, 345703.	2.6	21
17	Modeling Biology With HDL Languages: A First Step Toward a Genetic Design Automation Tool Inspired From Microelectronics. IEEE Transactions on Biomedical Engineering, 2014, 61, 1231-1240.	4.2	20
18	Synthetic biology methodology and model refinement based on microelectronic modeling tools and languages. Biotechnology Journal, 2011, 6, 796-806.	3.5	19

#	ARTICLE	IF	CITATIONS
19	Explicit modelling of the double-gate MOSFET with VHDL-AMS. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2006, 19, 239-256.	1.9	16
20	Compact modeling of magnetic tunnel junction. , 2008, , .		16
21	Compact Modeling and Applications of CNTFETs for Analog and Digital Circuit Design. , 2006, , .		15
22	Experimental $\{g\}_m/\{I\}_D$ Invariance Assessment for Asymmetric Double-Gate FDSOI MOSFET. IEEE Transactions on Electron Devices, 2018, 65, 11-18.	3.0	15
23	Modeling and simulation of biological systems using SPICE language. PLoS ONE, 2017, 12, e0182385.	2.5	14
24	An accurate compact model for CMOS cross-shaped Hall effect sensors. Sensors and Actuators A: Physical, 2011, 171, 69-78.	4.1	12
25	A general framework improving teaching ligand binding to a macromolecule. Biochimica Et Biophysica Acta - Molecular Cell Research, 2014, 1843, 2348-2355.	4.1	12
26	Analysis of the efficiency of spinning-current techniques thru compact modeling. , 2011, , .		7
27	Compact modeling of vertical hall-effect devices: electrical behavior. Analog Integrated Circuits and Signal Processing, 2013, 77, 183-195.	1.4	7
28	An improved compact model of the electrical behaviour of the 5-contact vertical Hall-effect device. Analog Integrated Circuits and Signal Processing, 2014, 81, 677-691.	1.4	7
29	Analog and RF modeling of FDSOI UTBB MOSFET using Leti-UTSOI model. , 2016, , .		7
30	Multiphysics Simulation of Biosensors Involving 3D Biological Reactionâ€“Diffusion Phenomena in a Standard Circuit EDA Environment. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 2188-2197.	5.4	7
31	One-dimensional analytical modeling of the VDMOS transistor taking into account the thermoelectrical interactions. Annales Des Telecommunications/Annals of Telecommunications, 1994, 49, 543-553.	2.5	6
32	Is SystemC-AMS an appropriate "promoter" for the modeling and simulation of bio-compatible systems?. , 2010, , .		6
33	Synthetic biology and microelectronics: A similar design flow. , 2009, , .		5
34	Multi-abstraction modeling in synthetic biology. , 2010, , .		5
35	A game-of-life like simulator for design-oriented modeling of BioBricks in synthetic biology. , 2012, 2012, 5462-5.		5
36	An improved compact model for CMOS cross-shaped Hall-effect sensor including offset and temperature effects. Analog Integrated Circuits and Signal Processing, 2012, 73, 719-730.	1.4	5

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37	GeNeDA: An Open-Source Workflow for Design Automation of Gene Regulatory Networks Inspired from Microelectronics. <i>Journal of Computational Biology</i> , 2016, 23, 841-855.	1.6	5
38	Efficient Modeling and Simulation of Space-Dependent Biological Systems. <i>Journal of Computational Biology</i> , 2018, 25, 917-933.	1.6	5
39	Fuzzy logic, an intermediate description level for design and simulation in synthetic biology. , 2013, , .		4
40	EDA inspired open-source framework for synthetic biology. , 2013, , .		4
41	Modeling and simulation of a Lab-On-Chip for micropollutants detection. , 2014, , .		4
42	FOSS EKV2.6 Verilog-A Compact MOSFET Model. , 2019, , .		4
43	Transadmittance Efficiency Under NQS Operation in Asymmetric Double Gate FDSOI MOSFET. <i>IEEE Transactions on Electron Devices</i> , 2019, 66, 300-307.	3.0	4
44	Quantum compact model for ultra-narrow body FinFET. , 2009, , .		3
45	Environment for Modeling and Simulation of Biosystems, Biosensors, and Lab-on-Chips. <i>IEEE Transactions on Electron Devices</i> , 2019, 66, 34-43.	3.0	3
46	A MOS Transistor Model for Mixed Analog-digital Circuit Design and Simulation. , 2004, , 49-95.		2
47	Fourth generation MOSFET model and its VHDL-AMS implementation. <i>International Journal of Numerical Modelling: Electronic Networks, Devices and Fields</i> , 2005, 18, 39-48.	1.9	2
48	Computer-aided design in synthetic biology. , 2011, , .		2
49	Compact modeling of vertical hall-effect devices: Electrical behavior. , 2012, , .		2
50	An improved compact model of the electrical behaviour of the 5-contact vertical hall-effect device. , 2013, , .		2
51	Small area charge pump using low voltage capacitors. , 2014, , .		2
52	Modeling and optimization of a latched charge pump loaded by a resistive circuit. <i>Analog Integrated Circuits and Signal Processing</i> , 2015, 83, 353-367.	1.4	2
53	Integration of SBML models for the description of biological system in a lab-on-chip. , 2015, , .		2
54	Virtual prototyping for biosystems: A spicy challenge. , 2017, , .		2

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55	Virtual prototyping of biosensors involving reaction- diffusion phenomena. , 2018, , .		2
56	Compact Model for Continuous Microfluidic Mixer. , 2020, , .		2
57	Compact modeling of offset sources in vertical hall-effect devices. , 2014, , .		1
58	Automated design of artificial biological functions based on fuzzy logic. , 2014, , .		1
59	Verilog-A compact space-dependent model for biology. , 2015, , .		1
60	Challenges in design-oriented modeling in biology. , 2015, , .		1
61	Analog RF and mm-Wave design Tradeoff in UTBB FDSOI: Application to a 35 GHz LNA. , 2018, , .		1
62	Compact Modeling of Reaction-Diffusion-Advection Mechanisms for the Virtual Prototyping of Lab-on-Chip. , 2021, , .		1
63	Compact modeling of both n- and p-type ultrashort FinFETs. , 2009, , .		0
64	Gate-level modeling for CMOS circuit simulation with ultimate FinFETs. , 2012, , .		0
65	Opportunities and challenges for the virtual prototyping of synthetic biological functions. , 2014, , .		0
66	Live demonstration: Automated design of artificial biological functions based on fuzzy logic. , 2014, , .		0
67	A microelectronic approach to identifying and modeling biological noise. , 2017, , .		0
68	Feasibility and reliability of sequential logic with gene regulatory networks. PLoS ONE, 2021, 16, e0249234.	2.5	0
69	Analytic modelling of passive microfluidic mixers. Mathematical Biosciences and Engineering, 2022, 19, 3892-3908.	1.9	0