# Christophe Lallement

List of Publications by Year
in descending order

| 69 papers | 1,243 citations | 430874<br>18 h-index | 395702<br>33 g-index |
|---|---|---|---|
| 72 all docs | 72 docs citations | 72 times ranked | 739 citing authors |

| # | Article | IF | Citations |
|---|---------|-----|-----------|
| 1 | Analytic modelling of passive microfluidic mixers. Mathematical Biosciences and Engineering, 2022, 19, 3892-3908. | 1.9 | 0 |
| 2 | Feasibility and reliability of sequential logic with gene regulatory networks. PLoS ONE, 2021, 16, e0249234. | 2.5 | 0 |
| 3 | Compact Modeling of Reaction-Diffusion-Advection Mechanisms for the Virtual Prototyping of Lab-on-Chip. , 2021, , . |  | 1 |
| 4 | Compact Model for Continuous Microfluidic Mixer. , 2020, , . |  | 2 |
| 5 | FOSS EKV2.6 Verilog-A Compact MOSFET Model. , 2019, , . |  | 4 |
| 6 | Environment for Modeling and Simulation of Biosystems, Biosensors, and Lab-on-Chips. IEEE Transactions on Electron Devices, 2019, 66, 34-43. | 3.0 | 3 |
| 7 | 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 |
| 8 | Transadmittance Efficiency Under NQS Operation in Asymmetric Double Gate FDSOI MOSFET. IEEE Transactions on Electron Devices, 2019, 66, 300-307. | 3.0 | 4 |
| 9 | 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 |
| 10 | Virtual prototyping of biosensors involving reaction- diffusion phenomena. , 2018, , . |  | 2 |
| 11 | Efficient Modeling and Simulation of Space-Dependent Biological Systems. Journal of Computational Biology, 2018, 25, 917-933. | 1.6 | 5 |
| 12 | Analog RF and mm-Wave design Tradeoff in UTBB FDSOI: Application to a 35 GHz LNA. , 2018, , . |  | 1 |
| 13 | A microelectronic approach to identifying and modeling biological noise. , 2017, , . |  | 0 |
| 14 | Modeling and simulation of biological systems using SPICE language. PLoS ONE, 2017, 12, e0182385. | 2.5 | 14 |
| 15 | Virtual prototyping for biosystems: A spicy challenge. , 2017, , . |  | 2 |
| 16 | Analog and RF modeling of FDSOI UTBB MOSFET using Leti-UTSOI model. , 2016, , . |  | 7 |
| 17 | GeNeDA: An Open-Source Workflow for Design Automation of Gene Regulatory Networks Inspired from Microelectronics. Journal of Computational Biology, 2016, 23, 841-855. | 1.6 | 5 |
| 18 | Modeling and optimization of a latched charge pump loaded by a resistive circuit. Analog Integrated Circuits and Signal Processing, 2015, 83, 353-367. | 1.4 | 2 |

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|---|---------|-----|-----------|
| 19 | Verilog-A compact space-dependent model for biology. , 2015, , . | | 1 |
| 20 | Integration of SBML models for the description of biological system in a lab-on-chip. , 2015, , . | | 2 |
| 21 | Challenges in design-oriented modeling in biology. , 2015, , . | | 1 |
| 22 | 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 |
| 23 | Opportunities and challenges for the virtual prototyping of synthetic biological functions. , 2014, , . | | 0 |
| 24 | Compact modeling of offset sources in vertical hall-effect devices. , 2014, , . | | 1 |
| 25 | Automated design of artificial biological functions based on fuzzy logic. , 2014, , . | | 1 |
| 26 | Small area charge pump using low voltage capacitors. , 2014, , . | | 2 |
| 27 | Live demonstration: Automated design of artificial biological functions based on fuzzy logic. , 2014, , . | | 0 |
| 28 | 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 |
| 29 | Modeling and simulation of a Lab-On-Chip for micropollutants detection. , 2014, , . | | 4 |
| 30 | A general framework improving teaching ligand binding to a macromolecule. Biochimica Et Biophysica Acta - Molecular Cell Research, 2014, 1843, 2348-2355. | 4.1 | 12 |
| 31 | Fuzzy logic, an intermediate description level for design and simulation in synthetic biology. , 2013, , . | | 4 |
| 32 | A Common Core Model for Junctionless Nanowires and Symmetric Double-Gate FETs. IEEE Transactions on Electron Devices, 2013, 60, 4277-4280. | 3.0 | 46 |
| 33 | EDA inspired open-source framework for synthetic biology. , 2013, , . | | 4 |
| 34 | An improved compact model of the electrical behaviour of the 5-contact vertical hall-effect device. , 2013, , . | | 2 |
| 35 | Compact modeling of vertical hall-effect devices: electrical behavior. Analog Integrated Circuits and Signal Processing, 2013, 77, 183-195. | 1.4 | 7 |
| 36 | Gate-level modeling for CMOS circuit simulation with ultimate FinFETs. , 2012, , . | | 0 |

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| 37 | A game-of-life like simulator for design-oriented modeling of BioBricks in synthetic biology. , 2012, 2012, 5462-5. | | 5 |
| 38 | 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 |
| 39 | Compact modeling of vertical hall-effect devices: Electrical behavior. , 2012, , . | | 2 |
| 40 | 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 |
| 41 | Computer-aided design in synthetic biology. , 2011, , . | | 2 |
| 42 | An accurate compact model for CMOS cross-shaped Hall effect sensors. Sensors and Actuators A: Physical, 2011, 171, 69-78. | 4.1 | 12 |
| 43 | Charge-Based Modeling of Junctionless Double-Gate Field-Effect Transistors. IEEE Transactions on Electron Devices, 2011, 58, 2628-2637. | 3.0 | 218 |
| 44 | Synthetic biology methodology and model refinement based on microelectronic modeling tools and languages. Biotechnology Journal, 2011, 6, 796-806. | 3.5 | 19 |
| 45 | Physics-based compact model for ultra-scaled FinFETs. Solid-State Electronics, 2011, 62, 165-173. | 1.4 | 33 |
| 46 | Theoretical characterization of the topology of connected carbon nanotubes in random networks. Nanotechnology, 2011, 22, 345703. | 2.6 | 21 |
| 47 | Analysis of the efficiency of spinning-current techniques thru compact modeling. , 2011, , . | | 7 |
| 48 | The Equivalent-Thickness Concept for Doped Symmetric DG MOSFETs. IEEE Transactions on Electron Devices, 2010, 57, 2917-2924. | 3.0 | 24 |
| 49 | Multi-abstraction modeling in synthetic biology. , 2010, , . | | 5 |
| 50 | Is SystemC-AMS an appropriate &amp;#x0022;promoter&amp;#x0022; for the modeling and simulation of bio-compatible systems?. , 2010, , . | | 6 |
| 51 | Explicit Compact Model for Ultranarrow Body FinFETs. IEEE Transactions on Electron Devices, 2009, 56, 1543-1547. | 3.0 | 28 |
| 52 | Quantum compact model for ultra-narrow body FinFET. , 2009, , . | | 3 |
| 53 | Compact modeling of both n- and p-type ultrashort FinFETs. , 2009, , . | | 0 |
| 54 | Synthetic biology and microelectronics: A similar design flow. , 2009, , . | | 5 |

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| 55 | Explicit compact model for symmetric double-gate MOSFETs including solutions for small-geometry effects. Solid-State Electronics, 2008, 52, 99-106. | 1.4 | 48 |
| 56 | Compact modeling of magnetic tunnel junction. , 2008, , . | | 16 |
| 57 | CNTFET Modeling and Reconfigurable Logic-Circuit Design. IEEE Transactions on Circuits and Systems I: Regular Papers, 2007, 54, 2365-2379. | 5.4 | 144 |
| 58 | Compact Modeling and Applications of CNTFETs for Analog and Digital Circuit Design. , 2006, , . | | 15 |
| 59 | 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 |
| 60 | 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 |
| 61 | Fourth generation MOSFET model and its VHDL-AMS implementation. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2005, 18, 39-48. | 1.9 | 2 |
| 62 | 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 |
| 63 | 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 |
| 64 | A MOS Transistor Model for Mixed Analog-digital Circuit Design and Simulation. , 2004, , 49-95. | | 2 |
| 65 | 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 |
| 66 | A simple efficient model of parasitic capacitances of deep-submicron LDD MOSFETs. Solid-State Electronics, 2002, 46, 2191-2198. | 1.4 | 54 |
| 67 | Improved analytical modeling of polysilicon depletion in MOSFETs for circuit simulation. Solid-State Electronics, 2000, 44, 905-912. | 1.4 | 30 |
| 68 | Modelling and characterization of non-uniform substrate doping. Solid-State Electronics, 1997, 41, 1857-1861. | 1.4 | 22 |
| 69 | 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 |