

X. list of publications:

Citations Index (***h*- index: 11**), Number of Citations: **352**, (from 2005 to 2014).

1. Published books:

- [B.1] **F. Djeffal** and T. Bendib, Evolutionary and neural techniques: Application to Microelectronics circuits design, **French Edition**, ISBN: 978-9947-0-2486-7, 2008, Batna, Algeria. 138 pages.
- [B.2] F. Djeffal and M.A. Abdi, Courses and Exercises in Electronics, **Arabic Edition**, ISBN: 978-9961-9654-8-1, 2008, Batna, Algeria. 110 pages.
- [B.3] F. Djeffal, Predictive modeling of deep submicron MOSFET: Application to nanoscale devices design, **French Edition**, Publishing European University, ISBN: 978-613-1-52913-9, 2010, Sarrebruck, Germany. 164 pages (www.amazon.com).
- [B.4] F. Djeffal and T. Bendib, Nanoscale MOSFETs, **French Edition**, Publishing European University, ISBN: 978-6131552021, 2010, Sarrebruck, Germany. 88 pages (www.amazon.com).
- [B.5] F. Djeffal and N. Lakhdar, Modeling of Electron mobility in Semiconductor devices, **French Edition**, Publishing European university, ISBN: 978-6131551390, 2010, Sarrebruck, Germany. 100 pages (www.amazon.com).
- [B.6] M. Meguellati, F. Djeffal, Multigate FET-based sensors for Engineering applications, **English Edition**, LAP LAMBERT Academic Publishing - ISBN-13: 978-3-8465-4597-3, 2012, Germany. 101 pages (www.morebooks.de).
- [B.7] F. Djeffal and N. Lakhdar, Multigate (III-V) FET-based devices for high performance applications, **English Edition**, LAP LAMBERT Academic Publishing - ISBN-13: 978-3-659-33333-0, 2012, Germany. 132 pages (www.morebooks.de).

2. Published chapters-book

- [CB.1] **F.Djefal** and T. Bendib, Artificial-Neural-Networks-Based Approaches to study the Nanoscale CMOS Devices, Book title: Artificial Neural networks, Editor: Seoyun J. Kwon, Publisher: Nova Science Publishers, ISBN: 978-1-61761-553-5, 2010, New York, USA. (13 pages).
- [CB.2] T. Bentrucia and **F.Djefal**, Compact Modeling of Multi-Gate MOSFET including Hot-Carrier Effects, Book title: CMOS Technology, Editor: Minjun Kwon, Publisher: Nova Science Publishers, ISBN: 978-1-61761-325-8, 2010, New York, USA. (24 pages).
- [CB.3] **F. Djefal** and M. Meguellati, “multigate RADFET dosimeter For Radioactive Environment Monitoring Applications”, series title: lecture notes in electrical engineering, Editors names: Gi-Chul Yang, SIO-IONG AO. Len Gelman, Title

of Book: IAENG Transactions on Engineering Technologies, GPU/PS: 3/9059, SPIN: GT-C-CTP-09/2012, Springer (13 pages).

[CB.4] T. Bendib and **F. Djeffal**, “Multi-objective-based approach to optimize the Analog Electrical behavior of GSDG MOSFET: application to nanoscale circuit design”, series title: lecture notes in electrical engineering, Editors names: Gi-Chul Yang, SIO-IONG AO. Len Gelman, Title of Book: IAENG Transactions on Engineering Technologies, GPU/PS: 3/9059, SPIN: GT-C-CTP-09/2012, Springer (11 pages).

[CB.5] T. Bentrchia and **F. Djeffal**, “An ANFIS based approach for prediction of threshold voltage degradation in nanoscale DG MOSFET devices” Transactions on Engineering Technologies, ISBN: 978-94-017-8831-1, Springer, (16 pages).

[CB.6] T. Bendib and **F. Djeffal**, “ Fuzzy-Logic Based Computation for Parameters Identification of Solar Cell Models” Transactions on Engineering Technologies, ISBN: 978-94-017-8831-1, Springer, (12 pages).

3. Published papers in Referred Journals

[J.1] T. Bentrchia, **F. Djeffal**, Z. Dibi and D. Arar, Numerical Investigation of nanoscale SiGe DG MOSFET performance against the interfacial defects, accepted, Physica status solidi C, 2014.

[J.2] T. Bendib, **F. Djeffal** and M. Meguellati, An optimized junctionless GAA MOSFET design based on multi-objective computation for high-performance ultra-low power devices. J. Semicond, vol. 35, pp. 074002, 2014.

[J.3] K. Kacha, **F. Djeffal**, T. Bentrchia, A. Benhaya, M. Meguellati and M. Chahdi, “Numerical investigation of the SiGe/Si heterostructure including Interfacial defects for photovoltaic applications, Advanced Materials Research Journal, Vol. 856, pp 188-192, 2014.

[J.4] N. Abdelmalek, **F. Djeffal**, M. Meguellati and T. Bendib, “Numerical analysis of nanoscale junctionless MOSFET including effects of hot-carrier induced interface charges,” Advanced Materials Research Journal, Vol. 856, pp 137-141, 2014.

[J.5] D. Arar, **F. Djeffal**, T. Bentrchia and M. Chahdi, New junctionless RADFET dosimeter design for low-cost radiation monitoring applications, Physica status solidi C, Vol. 11, pp. 65-68, 2014.

[J.6] T. Bentrchia, **F. Djeffal**, D. Arar and Z. Dibi, Gate-engineering-based approach to improve the nanoscale DG MOSFET behavior against interfacial trap effects, Physica status solidi C, Vol. 11, pp. 77-80, 2014.

- [J.7] **F. Djeffal**, N. Lakhdar, An improved analog electrical performance of submicron Dual-Material gate (DM) GaAs-MESFETs using multi-objective computation, *Journal of Computational Electronics*, Vol. 12, pp 29-35, 2013.
- [J.8] T. Bentrchia, **F. Djeffal**, M. Chahdi, An analytical two dimensional subthreshold behavior model to study the nanoscale GCGS DG Si MOSFET including interfacial trap effects, *Microelectronics Reliability*, vol.53, pp. 520-527, 2013.
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- [J.10] T. Bendib, **F. Djeffal** and D. Arar, A compact charge-based model to study the nanoscale undoped double gate MOSFETs for nanoelectronic circuit design using genetic algorithms. *J. Semicond*, vol. 34, pp. 044003, 2013.
- [J.11] **F. Djeffal**, T. Bendib, D. Arar, Z. Dibi, An optimized metal grid design to improve the solar cell performance under solar concentration using multiobjective computation, *Materials Science and Engineering: B*, Vol. 178, pp. 574-579, 2013.
- [J.12] T. Bentrchia, **F. Djeffal**, Continuous analytic I-V model for GS DG MOSFETs including hot-carrier degradation effects, , *Journal of Semiconductors*, Vol. 33, pp. 014001.1-014001.6, 2012.
- [J.13] N. Lakhdar **F. Djeffal**, Z. Dibi, A new Dual-Material (DM) gate design to improve the subthreshold behavior of deep submicron GaN-MESFETs, *Physica status solidi C*, Vol. 09, pp. 1109-1113, 2012.
- [J.14] N. Lakhdar and **F. Djeffal**, New optimized Dual-Material (DM) gate design to improve the submicron GaN-MESFETs reliability in subthreshold regime, *Microelectronics Reliability*, vol.56, pp. 958–963, 2012.
- [J.15] M.A. Abdi, **F. Djeffal**, D. Arar, Compact Charge Model for Ultra-thin Nanoscale Double Gate MOSFETs, *ScienceJet C*, vol.1, pp.1-8, 2012.
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- [J.17] M. Meguellati, **F. Djeffal**, New Dual-Dielectric Gate All Around (DDGAA) RADFET dosimeter design to improve the radiation sensitivity, *Nuclear Instruments and Methods in Physics Research Section A*, Vol. 683, pp. 24–28, 2012.
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- [J.21] M. Meguellati, **F. Djeffal**, D. Arar, F. Douak and L. Khettache, New RADFET Dosimeter Design For Radioactive Environment Monitoring Applications. Engineering Letters, Vol. 20. (4), pp. EL 20-4-06, 2012.
- [J.22] Elasaad Chebaki, **F. Djeffal**, Toufik Bentrchia, Two-dimensional numerical analysis of nanoscale junctionless and conventional Double Gate MOSFETs including the effect of interfacial traps, Physica status solidi C, Vol 09, pp. 2041-2044, 2012.
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- [J.29] **F. Djeffal**, N. Lakhdar, A. Yousfi, An optimized design of 10-nm-scale dual-material surrounded gate MOSFETs for digital circuit applications, Physica E: Low-dimensional Systems and Nanostructures, Vol. 44, pp. 339-344, 2011.
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4. Published papers in Referred Conferences

- [C.1] **F. Djefal**, K. Tamersit, and M. Meguellati, Analytical Analysis of a New Graphene-based Sensor for High-performance Biomolecule Sensing Applications, *Proceedings of The World Congress on Engineering 2014, WCE 2014, July 2 -4, 2014, London, U.K.*
- [C.2] T. Bendib, L. Pancheri, **F. Djefal**, and G.-F. Dalla Betta, Impact of Temperature and Doping Concentration on Avalanche Photodiode Characteristics, *Proceedings of The World Congress on Engineering 2014, WCE 2014, July 2 -4, 2014, London, U.K.*

- [C.3] K. Kacha, **F. Djeffal**, T. Bentrchia, M. Meguellati, and M. Chahdi, Improving the Efficiency of Thin-film SiGe Solar Cells Through the Optimization of Intrinsic Layer Parameters, Proceedings of The World Congress on Engineering 2014, WCE 2014, July 2 -4, 2014, London, U.K.
- [C.4] F.Srairi, M. Meguellati, **F. Djeffal** and L. Saidi, Control and Analytical Modeling of New Swimming Microrobot Design Using Flatness-ANFIS Based Control, International Parallel Conferences on Researches in Industrial & Applied Sciences, April 25-26, 2014, Dubai, UAE.
- [C.5] T. Bentrchia, **F. Djeffal**, M. Meguellati and D. Arar, Numerical Investigation of Nanoscale SiGe DG MOSFET Scalability Including Interfacial Trap Effects, International Parallel Conferences on Researches in Industrial & Applied Sciences, April 25-26, 2014, Dubai, UAE.
- [C.6] N. Lakhdar, **F. Djeffal**, Z. Dibi and M. Meguellati, Improvement of the Short-channel-Effects of the Submicron GaAs- MESFET using Gate- Engineering-based-Approach, International Parallel Conferences on Researches in Industrial & Applied Sciences, April 25-26, 2014, Dubai, UAE.
- [C.7] K. Kacha, **F. Djeffal**, T. Bentrchia, D. Arar , M. Meguellati and M. Chahdi, “Numerical investigation of the SiGe/Si heterostructure including Interfacial defects for photovoltaic applications”, The 2013 2nd International Conference on Nano and Materials Science (ICNMS 2013), November 15-16, 2013, Abu Dhabi, UAE.
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- [C.10] T. Bentrchia, **F. Djeffal** and M. Meguellati, New submicron GAA RADFET design with Vacuum Kernel for high-performance radiation sensor applications, 14th international conference on Sciences and Techniques of Automatic control and computer engineering STA'2013, December 20-22, 2013, Sousse–Tunisia.
- [C.11] F. Sriari, M. Meguellati, S. Lamir and **F. Djeffal**, Analytical modeling and optimization of new swimming microrobot design using genetic algorithm computations, 14th international conference on Sciences and Techniques of Automatic control and computer engineering STA'2013, December 20-22, 2013, Sousse–Tunisia.

- [C.12] D. Arar, **F. Djeffal**, M. Meguellati and M. Chahdi, An optimized GSDG MOSFET design for nanoscale circuit applications, 5th International Conference on Modeling, Simulation and Applied Optimization (ICMSAO'13), April 28-30, 2013, Hammamet, Tunisia.
- [C.13] N. Lakhdar, **F. Djeffal**, D. Arar, M. Meguellati, T. Bendib, An optimised submicron Dual-Material gate (DM) GaAs-MESFETs design to improve the analog performance using multi-objective computation , 5th International Conference on Modeling, Simulation and Applied Optimization (ICMSAO'13), April 28-30, 2013, Hammamet, Tunisia.
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