



Curriculum Vitae Europass

Informații personale

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Naționalitate(-tăți)	Romana
Data nașterii	21/12/1968
Sex	Bărbătesc

Domeniu ocupațional

Academic

Experiența profesională

Perioada	01/09/1993 - 28/02/1999
Funcția sau postul ocupat	Cercetator stiintific
Activități și responsabilități principale	Cercetare-dezvoltare
Numele și adresa angajatorului	Institutul de Microtehnologie Erou Iancu Nicolae 32B, Bucuresti (România)
Tipul activității sau sectorul de activitate	Activități specializate, științifice și tehnice
Perioada	01/03/1999 - 01/08/2020
Funcția sau postul ocupat	Profesor dr. ing.
Activități și responsabilități principale	Asistent, sef lucrari, conferentiar universitar.
Numele și adresa angajatorului	Universitatea Politehnica București Splaiul Independentei 313, 060042 Bucuresti (România)
Tipul activității sau sectorul de activitate	Universitara - academica.

Educație și formare

Perioada	15/09/1988 - 15/07/1993
Calificarea/diploma obținută	Inginer
Disciplinele principale studiate/competențele profesionale dobândite	Electronica, specialitatea microelectronică, direcția Structuri Tehnologii Componente Microelectronice
Numele și tipul instituției de învățământ/furnizorului de formare	Facultatea de Electronică și Telecomunicații, Universitatea Politehnica București Splaiul Independentei 313, sect. 6, 060042 Bucuresti (România)

Perioada	01/10/1995 - 02/04/2001
Calificarea/diploma obținută	Doctor inginer



Disciplinele principale studiate/competențele profesionale dobândite

Numele și tipul instituției de învățământ/furnizorului de formare

Aptitudini și competențe personale

Limba maternă

Limbi străine cunoscute

Autoevaluare
Nivel european (*)

Engleză

Franceză

Informații suplimentare

Anexe

Inginerie electronica

Universitatea Politehnica Bucuresti (Facultatea de Electronica)
Splaiul Independentei 313, 060042 Bucuresti (România)

Română

Înțelegere				Vorbire				Scriere	
Ascultare		Citire		Participare la conversație		Discurs oral			
B1	Utilizator independent	B1	Utilizator independent	B1	Utilizator independent	B1	Utilizator independent	B2	Utilizator independent
A2	Utilizator elementar	A2	Utilizator elementar	B1	Utilizator independent	B1	Utilizator independent	A1	Utilizator elementar

(*) [Cadrului european comun de referință pentru limbi](#)

Cursuri predate la disciplinele:

Dispozitive și Circuite Electronice I și II – an III, ing. zi. Fac. FILS, UPB (2004-prezent)

Modele Spice, curs la an II, ing. zi, ETTI, UPB (2003-prezent)

Modelarea Componentelor Microelectronice Active - anV, ing. Seral, EIS (2004-2005)

Biodispozitive și Nano-Electronica Celulara, curs an VI, ETTI Master-Microsisteme (2006-prezent)

Lista de carti, lucrari publicate și proiecte derulate.

Anexa 1.

Carti publicate.

C1. Cristian Ravariu, Dan Cozma, *Dispositifs et circuits electroniques pour applications pratiques*, Editura Politehnica Press, Romania, Bucuresti, 2007, (100ex), (108 pag), ISBN 978-973-7838-34-6.

C2. Cristian Ravariu, Adrian Rusu, *Modele Spice ale Componentelor Electronice*, Editura Matrix, Bucuresti, Romania, 2006, (110 pag) (100 ex), ISBN 973-755-010-2.

C3. Cristian Ravariu, *Dispozitive electronice, curs pentru uzul studenților*, Editura Printech, ISBN 973-718-133-6, Bucuresti, pg. 1-326, 2004.

C4. Cristian Ravariu, *Modele pentru SPICE – Îndrumar de laborator*, Editura Printech, ISBN 973-652-443-4, București, pg.1-50, 2001.

C5. Cristian Ravariu, *Biodispozitive electronice: de la nanostructuri la aplicații medicale*, Editura POLITEHNICA PRESS, Bucuresti, 2010, 232 pagini ISBN 978-606-515-071-3.

C6. (Chapter in carte la editura Internationala InTech). Cristian Ravariu, Chapter Number 25, Learning in Bioelectronics, In-Tech book under the title "Advanced Learning", ISBN 978-953-307-010-0, In Tech Press, Edited by Raquel Hijon-Neira, Aleksandar Lazinica, access <http://intechweb.org/> IN-TECH 2010, Kirchengasse 43/3, A-1070 Vienna, Austria, pg. 381-396.



Anexa 2.
Articole publicate.

- R1. Cristian Ravariu, The implementation methodology of the real effects in a NOI nanostructure, aided by simulation and modelling, ISI Elsevier Journal of Simulation Modeling, Practice and Theory, depuis in Jul 2008, publicat in Oct 2010, available On-line at www.sciencedirect.com Science Direct, Vol. 18, Issue 9, Oct. 2010, ISSN 1569-190X, Simulation Modelling Practice and Theory 18 (2010) 1274–1285.
- R2. Cristian Ravariu, Ala Bondarciuc, Vladimir Nahaba, Vlad Bondarciuc, Constantin I. Tirgoviste, Florin Babarada, Oana Dumitrache. The laser biophotometry medical applications for the diabetes foot monitoring. ISI Elsevier Journal of Photodyagnosis and Photodynamic Therapy, vol. 7, suppl. 1, July 2010, ISSN 1572-1000, pp. 522-523.
- R3. C. Ravariu, A. Bondarciuc, V. Bondarciuc, F. Babarada, The Laser biophotometry - as a non-invasive medical technique - used in the post-operative monitoring for inflammatory processes. SMIT Journal of Minimally Invasive Therapy and Allied Technologies, vol. 19, suppl. 1, 2010, ISSN 1364-5706, pp. 72-73, indexare PubMed.
- R4. Adrian Rusu, Cristian Ravariu, Alexandru Rusu, Dragos Dobrescu, Dan Cozma, Macromodel Established by Simulations for the Analog Regime of the Avalanche Gate-Controlled Diode, *Proceedings of the 33-th IEEE International Conference of Semiconductors, CAS, Sinaia, Romania*, pp. 419-422, vol. 2, 11-13 Oct. 2010.
- R5. C. Ravariu, L. G. Alecu, A. Bondarciuc, F. Babarada, Advanced SOI semiconductor structures for micro-dose biological samples handling, ISI JOAM Journal of Optoelectronics and Advanced Materials - Rapid Communications - Revista JOAM RC, vol. 4, nr. 9, September, 2010, pp. 1375-1378, ISSN 1842-6573, cotata ISI cu 0.451 / 2009.
- R6. Cristian Ravariu, Ala Bondarciuc, Florina Ravariu, Elena Manea, Cecilia Podaru, A first experimental model for a characterisation biodevice with epinephrine solution, ISI ROMJIST ROMANIAN JOURNAL OF INFORMATION SCIENCE AND TECHNOLOGY, ROMJIST, Volume 12, Number 4, 2009, 504-513.
- R7. C. Ravariu, A. Bondarciuc and F. Ravariu, From Experimental Investigations with Laser Bio-Photometry to Statistical Models Applied for the Normal and Pathological Tissue, IFMBE- International Federation for Medical and Biological Engineering, Proceedings of WC 2009-World Congress on Medical Physics and Biomedical Engineering, Vol. 25/VII-2507, Munich, Germany, pp. 34-37, 7-12 Sept 2009.
- R8. Cristian Ravariu, *The Feed-Back from a Biodevices and Cellular Nano-Electronics Course Learned in an Electrical Engineering Faculty*, ISI – IEEE 8-th International Conference on Advanced Learning Technologies, Spain, Santander, ICALT 2008, 1-5 July 2008, Proceedings pp.882-884.
- R9. C. RAVARIU, F. RAVARIU, F. BABARADA, *Electrical characterization of the epinephrine solution on natural diamond with possible biomedical applications*, ISI DJNB digest journal of nanomaterials and biostructures, issn 1842-3582, publishers: institute of materials physics, BUCHAREST, ROMANIA, VOL.2, NR.1, MARCH, 2007, P.155-162.
- R10. Cristian Ravariu, Florina Ravariu, A test two-terminals biodevice with lipophylic and hidrophylic hormone solutions, ISI Journal of Optoelectronics and Advanced Materials, ISI JOAM, Bucharest, Romania, Vol.9, nr. 8, August 2007, pp. 2589-2592, ISSN 1454-4164, online 1481-7132, Impact Factor on 2006=1,109.
- R11. C. Ravariu, F. Babarada, A. Rusu, More accurate models of the interfaces oxide ultra-thin SOI films, AIP Conference Proceedings series in volume, 893, ISI electronic Journal, under the American Institute of Physics, AIP auspices, ISSN 0094-243X, on line ISSN 1551-7616, coden APCPCS, April, 10, vol. 893, pp.3-4, 2007.
- R12. C. Ravariu, F. Ravariu, Some optimization of Bio-FETs with electrical charged bioliquid, Romanian Reports in Physics, Vol.58, No.2, 2006, pag.189-194, (6 pg), Editura Academiei Romane Publishing House of the Romanian Academy, ISSN 1221-1451.
- R13. C. Ravariu, G. Alecu, F. Ravariu, The experimental estimation of the illumination generation rate in a nano-SOI film, Section4 Semiconductors, ISI JOAM Journal of Optoelectronics and Advanced Materials, vol.8, no.2, April., 2006, pp.593-596, ISSN: 1454-4164.
- R14. C. Ravariu, A. Rusu, F. Udrea, F. Ravariu, Simulation results of some Diamond On Insulator nano-MISFETs, ISI Diamond and Related Materials Elsevier Journal, ISSN 0925-9635, vol.15,nr.2,2006, pp.777-782, www.elsevier.com/locate/diamond.
- R15. C. Ravariu, A. Rusu, F. Ravariu, Interface electric charge modeling and characterization with δ -distribution generator strings in thin SOI films, ISI Microelectronics Elsevier Journal, vol.37, nr.3, 2006, pp.943-947, ISSN: 0026-2692, www.elsevier.com/locate/mejo

- R16. C. Ravariu, A. Rusu, F. Ravariu, *Starting from a generalization of SOI concept toward solutions of SET's implementation*, Bucharest, UPB Scientific Bulletin, ISSN 1454-234X, Series C, vol. 67, no. 1, pg. 3-10, 2005.
- R17. C. Ravariu, A. Rusu, F. Ravariu, D. Dobrescu, L. Dobrescu, *From ψ -MOSFET with silicon on oxide to ψ -MOSFET with silicon carbide on nitride*, ISI Diamond Journal on the Science and Technology and Related Materials, Elsevier Science Society, ISSN 0925-9635, vol. 11, Issues 3-6, pp. 1268-1271, 2002.
- R18. C. Ravariu, F. Ravariu, *The influence of the piezoelectric layer on the pressure sensor sensitivity*, Romanian Reports in Physics Journal, ISSN 1221 – 1451, vol.53, no. 9-10, pg.601-608, 2001.
- R19. C. Ravariu, A. Rusu, C.Codreanu, F. Ravariu, *The flat-band and threshold voltage of a pseudo-MOS transistor made in SIMOX technology*, Revista Analele Științifice ale Universității Al. I. Cuza Iași, Tomul XLV-XLVI, s, Fizica Stării Condensate, pg. 119-125, 1999-2000.
- R20. C. Ravariu, A. Rusu, *The sensitivity evaluation of a pressure sensor based on piezoelectric layer onto SOI films*, Scientific Bulletin of Hyperion University Bucharest, series A Mathematics, Physics and Electrical Engineering, ISSN 1582-4330, vol.1A, nr.2, p.135-139, 2000.
- R21. C. Ravariu, A. Rusu, D. Dobrescu, *A starting point to multi-layer SOI devices: A ψ - MOSFET with two inversion channels*, Scientific Bulletin of Hyperion University Bucharest, ISSN 1582-4330, series A Mathematics, Physics and Electrical Engineering, vol.1A, no.1, p.41-54, 2000.
- R22. C. Ravariu, A. Rusu, *The pseudo-MOS transistor, a reference SOI device*, Revue Roumaine des Sciences and Techniques, serie electrotechnique et energetique, Editura Academiei Române, ISSN 0035-4066, București, Tome 45, No.2, p.311-321, 2000.
- R23. C. Ravariu, A. Rusu, *The Inversion Onset at the MOS/SOI Capacitor with Uniform and Non-uniform Impurities Distributions in the Film*, Romanian Journal of Information Science and Technology, Publishing House of the Romanian Academy, ISSN 1453-8245, Vol. 3, No. 2, p.143-156, 2000.
- R24. C. Ravariu, A. Rusu, M. Profirescu, F. Ravariu, *A Nano-Transistor with a Cavity*, IEEE 8-th International Conference Nanotech-MSM, 2005, Anaheim, SUA, vol.1, cap4, ISBN 0-9767985-2-2, p.111-114.
- R25. C. Ravariu, F. Ravariu, A. Rusu, D. Dobrescu, L. Dobrescu, C. Popa, I. Chiran, *A New Job for the Pseudo-MOS Transistor: Working in the Pressure Sensors Field*, IEEE 9th International Conference on Electronics, Circuits and Systems ICECS, September, pp. 215-218, Croatia, Dubrovnik, 2002.
- R26. C. Ravariu, A. Rusu, D. Dobrescu, L. Dobrescu, F. Ravariu, C. Codreanu, M. Avram, *A Mathematical Model for Threshold Voltage of a Partially and Fully Depleted MOS/SOI Structure with a Gaussian Distribution in the Film*, 3-rd Edition IEEE MSM Int. Conf., Modeling and Simulation of Microsystems MSM'2000, San Diego, USA, Proceedings pp. 404-407, 2000.
- R26. C. Ravariu, E. Manea, F. Babarada, *Masks and metallic electrodes compounds for silicon biosensor integration*, *Journal of Alloys and Compounds* (Q1-Elsevier Journal), vol. 697, pp. 72-79, March 2017, <http://dx.doi.org/10.1016/j.jallcom.2016.12.099>
- R.27. C. Ravariu, C. Pârvulescu, E. Manea, A. Dinescu, R. Gavrilă, M. Purica, Vijay Arora. *Manufacturing of a Nothing On Insulator Nano-Structure with two Cr/Au Nanowires Separated by 18 nm Air Gap*. *Nanotechnology*, (Q1-IOP Journal), vol. 31, no. 27, pp.1-9, 2020. <https://dx.doi.org/10.1088/1361-6528/ab7c45>
- R.28. C. Ravariu, D. Istrati, D. Mihaiescu, A. Morosan, B. Purcareanu, R. Cristescu, R. Trusca, B. Vasile. *Solution for green organic thin film transistors: Fe₃O₄ nano-core with PABA external shell as p-type film*. *Journal of Materials Science - Materials in Electronics* (Q2-Springer Journal), vol. 31, no.4, pp. 3063-3073, Jan 2020. <https://doi.org/10.1007/s10854-019-02851-3>
- R.29. C. Ravariu, Ala Bondarciuc. *The sensitivity in the IR spectrum of the intact and pathological tissues by laser bio-photometry*, *Laser in Medical Science*, (Q2-Springer Journal), March 2014, Vol 29, Issue 2, pp 581-588.
- R.30. C. Ravariu, *Vacuum nano-triode in Nothing-On-Insulator configuration working in Terahertz domain*, *IEEE Journal of the Electron Devices Society*, (Q2-IEEE Journal), vol. 6, no. 1, 2018, pp. 1115-1123, DOI 10.1109/JEDS.2018.2868465.
- R.31. C. Ravariu, *Gate Swing Improving for the Nothing On Insulator Transistor in Weak Tunneling*, *IEEE Transactions on Nanotechnology* (Q2-IEEE Journal), 2017, vol. 16, no. 6, pp. 1115 - 1121, DOI: 10.1109/TNANO.2017.2764802.
- R.32 C. Ravariu, *Deeper Insights of the Conduction Mechanisms in a Vacuum SOI Nanotransistor*, *IEEE Transactions on Electron Devices* (Q1-IEEE Journal), vol. 63, no. 8, 2016, pp. 3278 - 3283, DOI: 10.1109/TED.2016.2580180.



- R.33. C. Ravariu, Compact NOI Nano-Device Simulation. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems (Q2-IEEE Journal)*, vol. 22, issue 8, Aug 2014, pp. 1841 - 1844, DOI:10.1109/TVLSI.2013.2278474
- R.34. C. Ravariu, E. Manea, A. Popescu, C. Podaru, C. Parvulescu, Micro-Technological Steps During the Fabrication of an AcHE Biosensor Designated to the Environment Monitoring, *American Journal of Bioscience and Bioengineering*, vol. 3, issue 3-1, pp. 1-6, 2015, DOI: 10.11648/j.bio.s.2015030301.11.
- R.35. C. Ravariu, A. Rusu, F. Udrea, F. Ravariu. Simulation results of some Diamond On Insulator nano-MISFETs, *Diamond and Related Materials (Q2-Elsevier Journal)*, vol.15, nr.2, pp.777-782, 2006, DOI: 10.1016/j.diamond.2005.11.050.
- R.36. Ravariu C., Manea E., Babarada F., Ursutiu D., Mihaiescu D., Popescu A., "Organic Compounds Integrated on Nanostructured Materials for Biomedical Applications", Chapter 2 at section Biomedical Engineering in the book: Smart Industry & Smart Education. Editors: Auer M., Langmann R., Series - Lecture Notes in Networks and Systems, vol 47. Springer, Cham, 2019, pp 489-497.
https://link.springer.com/chapter/10.1007/978-3-319-95678-7_55.
- R.37. Ravariu C., et al. (2020) PV Microgrids Efficiency: From Nanomaterials and Semiconductor Polymer Technologies for PV Cells to Global MPPT Control for PV Arrays. Chapter In: Mahdavi Tabatabaei N., Kabalci E., Bizon N. (eds) Microgrid Architectures, Control and Protection Methods. Power Systems. Springer, Cham. Available at: <https://link.springer.com/book/10.1007%2F978-3-030-23723-3>
- R.38. C. Ravariu, Dan Eduard Mihaiescu, Green Electronics starting from Nanotechnologies and Organic semiconductors, Chapter 1 in Book: Green Electronics, In-Tech Publisher House, with Editors: Cristian Ravariu & Dan E. Mihaiescu, Published June 20, 2018, ISBN: 978-1-78923-304-9, pp. 3-13, DOI: 10.5772/intechopen.71456.
- R.39. A. Topor, C. Ravariu, F. Babarada, A. Salageanu, I. Caras, B. Patrichi, Mobile Electronic Device And Integrated Software For Citokines Fluorescence Detection, Chapter 6-th in Book: New trends on monitoring and diagnosis for health sciences, Editors Mihaela Badea, Laura Floroian, published by LAMBERT Academic Publishing, trademark of OmniScriptum GmbH & Co. KG, Germany, ISBN 978-3-659-77699-1, pp. 95-112, 2015.
- R.40. C. Ravariu, D. Mihaiescu, *Static and dynamic aspects of different tunneling NOI nanotransistors with oxide and vacuum*, in Proceedings of IEEE European Conference on Electrical Engineering and Computer Science, Bern, Switzerland, 17-19 Nov. 2017, pp. pp. 441-444. WOS:000455867600079. DOI: [10.1109/EECS.2017.87](https://doi.org/10.1109/EECS.2017.87)

A detailed list of Projects is available at: https://www.researchgate.net/profile/Cristian_Ravariu

Anexa 3. Proiecte de cercetare.

- I1. Contract. UEFISCDI. Nano-transistors with thin films implemented through nanotechnologies and organic technologies at room temperature, (TFTNANOEL) PROGRAM PNIII: P4 - Fundamental and Frontier Research, UEFISCDI fund unit, 2017-2019.
- I2. Contract nr 12-095/ 01.10.2008, (*BioFET*), nr. int. UPB EL070816, Director Proiect: conf. Cristian Ravariu.
- I3. Contract nr. 62-063/ 01.10.2008, (*ElectroCel*), nr. int. UPB EL070819, Director Proiect: conf. Cristian Ravariu.
- I4. Demonstrator realization in planar transistor technology with tunneling of ultra-thin insulators - as promoter of a series of nano-devices in industry, (DEMOTUN) PROGRAM PNIII: P2 - Increasing the competitiveness of the Romanian economy through research, development and innovation, PROJECT TYPE: Experimental-Demonstrative Project, UEFISCDI fund unit, 2017-2018, 2 Romanian Partners.

Anexa 4. Brevete.

B1. Tranzistor cu efect de câmp de tip cavitare pe izolator și procedeul de realizare al acestuia, inventator: ing. Cristian Ravariu, solicitant: UPB, Romanian Patent Number: RO126811-A0, OSIM Romanian agency, awarded in Aug. 2013.



B2. Process for manufacturing, on silicon, the devices for detecting and characterizing the electrically charged biological molecules, Inventori: Florin Babarada, Elena Manea, Cristian Ravariu. Patent Number(s): RO126615-A2 ; RO126615-B1, OSIM Romanian agency, awarded in Nov 2015.

B3. Transistors with p/n overlap films for biomimetic and industrial applications, Inventator C. Ravariu, Registered at OSIM Romanian Agency no. A/00021 / 12.01.2016, pass to decision stage in 2020.

A detailed list of Patents is available at: https://www.researchgate.net/profile/Cristian_Ravariu

01.08.2020

Prof. dr. ing. Cristian Ravariu

