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ROXANA MARIANA BEIU

Curriculum Vitae

<http://www.researcherid.com/rid/H-4034-2016>

h-index = 2 (ISI Web of Science)



EDUCATION:

- **Ph.D.** in Industrial Engineering, (11.11.2007) with “Politehnica” Univ. of Bucharest (Romania). Thesis: *On Theoretical and Experimental Developments of a Novel Class of Sensors for Assessing Mechanical Deformations* (2000 -2007);
- **M.Sc. Mechanics** in Fine Mechanics & Optics. Major in Hydro-Pneumatic Equipment and Industrial Robots (30.07.1994) with “Politehnica” Univ. of Bucharest (Romania). GPA **9.00/10**, with 10/10 for the Diploma thesis: *Robotic Arm with Adaptive Grip Force* (1989-1994).

SOCIAL STATUS

- Born: November 10, 1968 Bucharest, Romania;
- Nationality: Romanian.
- Religion: Orthodox Christian;
- Married: since 2001, one child.

LANGUAGES

- **English:** fluent;
- **Romanian:** native; **French:** good; **Italian:** beginner.

TEACHING & RESEARCH: Mechanics of Materials, Fundamentals of Mechanics, Optical Fiber, Optical Systems for Non-Invasive Brain Measurements, OCT, Photonic Crystals Sensors.

POSITIONS

- **Researcher, Dec. 2015 – Present: 3 OM Group of Optomechatronics, Arad, Romania;**
- **Adjunct Professor, Oct. 2015 – Present: Aurel Vlaicu Univ. of Arad, Romania;**
- **PhD Candidate, 2000 – 2007,** with Politehnica University of Bucharest;
- **Research Assistant (Doctoral Researcher), Oct. 2003 – Feb. 2005:** Veterinary and Comparative Anatomy, Pharmacology and Philosophy (VCAPP), Washington State University, Pullman, WA, USA;
- **Teaching Assistant, Oct. 2003 – Feb. 2004:** School of Mechanical and Materials Engineering, Washington State University, Pullman, WA, USA;
- **Research Engineer, May 1995 – May 2001:** Institute of Advanced Technologies, Bucharest, Romania.

OTHER INFORMATIONS:

- **Specialization:** Mechanical Engineering / Fine Mechanics
- **Software Tools** Optiwave, OptiFDTD, EMExplorer
Matlab/Mathworks, AutoCAD
Excel, Word, PowerPoint
Corel (Draw, PhotoPaint), Adobe
- **GRE** 2002 Jan • 1690 (370 verbal + 540 analytical + 780 quantitative)
- **TOEFL** 2001 Oct • 227 (equivalent to 567 for the written test)
- **SPECIALIZATION** 1997 • Optical Correlation Applied to Pattern Recognition (“Politehnica” University of Bucharest)

SCIENTIFIC PAPERS (<http://www.researcherid.com/rid/H-4034-2016>):

14 published papers (11 as first author, 3 as co-author)

7 in peer-reviewed journals;

6 in ISI and International Data Bases proceedings;

7 in other conference proceedings.

CITATIONS (May. 2016): 8 times cited on ISI Web of Science; 17 on Google Scholar (excluding self-citations).

BOOKS & BOOKS CHAPTERS

Editor to *Proceedings of the Third Annual Mechanical Engineering Graduate Symposium*, School of Mechanical and Materials Engineering, Washington State University, Pullman, WA, USA, Apr. 2003).

RESEARCH GRANTS & CONTRACTS

1. *Researcher*, PARTNERSHIP Grant code PN-II-PT-PCCA-2011-3.2-1682, Romanian National Authority for Scientific Research, ANCS-UEFISCDI: *Optical Coherence Tomography (OCT) systems with handheld and endoscope probes for real-time investigations in material studies and for in vivo medical imaging* (950k€), 2012-2016;

2. *Researcher*, with Veterinary and Comparative Anatomy, Pharmacology and Philosophy (VCAPP) Washington State University, Pullman, WA, USA, in “David Rector’s Lab” on developing new noninvasive brain measurement techniques. I was involved in researching dedicated optical systems for measuring nerve bundles swelling triggered by action potential.

AFFILIATIONS:

- SPIE (International Society for Optical Engineering), <http://spie.org/profile/Roxana-Mariana.Beu-87094>

TEACHING ACTIVITY

- **Lectures:** Mechanical and Electrical Engineering Fundamentals (Fall 2015, Spring 2016) Control Systems - (Spring 2016) with “Aurel Vlaicu” University of Arad, Arad, Romania
- **Laboratories:** ME220 “Mechanics of Materials” (2003 - 2004) with Washington State University, Pullman, WA, USA

SYMPOSIA PARTICIPATION

International

- **Neuroscience’03**, New Orleans, LA, USA, 25-30 Oct. 2003
- **The Third Annual Mechanical Engineering Graduate Symposium**, Washington State University, Pullman, WA, USA, 5 Mar. 2003
- **Veterinary and Comparative Anatomy, Pharmacology and Philosophy (VCAPP) Retreat**, Coeur d’Alene, ID, USA, 19-20 May 2004
- **Veterinary and Comparative Anatomy, Pharmacology and Philosophy (VCAPP) Showcase**, Moscow, ID, USA, 12 Mar. 2005
- **MWSCAS’07, IEEE Intl. Midwest Symposium on Circuits and Systems**, Montréal, Canada, 5-8 Aug. 2007
- **ISOT’07, SPIE Intl. Symp. on Optomechatronic Technol.**, Lausanne, Switzerland, 8-10 Oct. 2007
- **IPGC’08, IEEE PhotonicsGlobal@Singapore**, Singapore, 08-11 Dec. 2008,
- **IEEE-NANO’07, IEEE Intl. Conf. on Nanotechnology**, Hong Kong, China, 2-5 Aug. 2007
- **IIT’08, IEEE Intl. Conf. on Innovations in Information Technology**, Al Ain, UAE

National (Romania):

- **Annual Session of Scientific Papers IMT Oradea 2006**, Felix Spa, Oradea, May 2006
- International Conference on Material Science and Engineering BraMat’07 BDI Braşov, Romania, 22-24 Feb. 2007
- **BraMat’07 Intl. Conf. on Material Science and Engineering** Braşov, Romania, 22-24 Feb. 2007.

List of Publications

<http://www.researcherid.com/rid/H-4034-2016>

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Theses

T2. R.M. Beiu *On Theoretical and Experimental Developments of a Novel Class of Sensors for Assessing Mechanical Deformations* **Ph.D. Thesis**, "Politehnica" Univ. of Bucharest (Romania), Nov **2007**;

T1. R.M. Beiu *Robotic Arm with Adaptive Grip Force* **Diploma Thesis**, "Politehnica" Univ. of Bucharest (Romania), 1994.

Book Contributions:

M.D. Pirzada, and **R.M. Beiu** (eds.), *Proceedings of the Third Annual Mechanical Engineering Graduate Symposium School of Mechanical and Materials Engineering*, Washington State University Pullman, WA, USA, Apr. 2003

Paper in Journals indexed in Web of Science:

A.J. Foust, **R.M. Beiu**, and D.M. Rector *Optimized Birefringence Changes During Isolated Nerve Activation* Applied Optics, vol. 44, no. 11, pp. 2008-2012, Apr 2005 <http://dx.doi.org/10.1364/AO.44.002008>

Conference Papers - indexed in ISI Web of Science:

ISI.C5 R.M. Beiu, C.D. Stănescu, and V. Beiu, *Highly Sensitive Nano-Photonic Embedded Sensor* IEEE International Conference on Nanotechnology IEEE-NANO'07, Hong Kong, China, 2-5 Aug. **2007**, pp. 737-741, <http://dx.doi.org/10.1109/NANO.2007.4601293>

ISI.C4 R.M. Beiu, C.D. Stănescu, and V. Beiu, *Unique In-Fiber Photonic Crystal Sensor*, IEEE International Midwest Symposium on Circuits and Systems MWSCAS'07, Montréal, Canada, 5-8 Aug. **2007**, pp. 116-119 <http://dx.doi.org/10.1109/MWSCAS.2007.4488550>

ISI.C3 R.M. Beiu, C.D. Stănescu and V. Beiu, *A Novel Microstructured Fiber Optic Sensor for Small Deformations*, SPIE International Symposium on Optomechatronic Technology ISOT'07 ISI Lausanne, Switzerland, 8-10 Oct. 2007, art. 6716OD (8 pp.), <http://dx.doi.org/10.1117/12.754190>

ISI.C2 R.M. Beiu, and V. Beiu, *Fiber Optic Mechanical Sensor Based on a Triangular-lattice Photonic Crystal*, IEEE PhotonicsGlobal@Singapore IPGC'08 ISI Singapore, 08-11 Dec. 2008, p. 183-186, <http://dx.doi.org/10.1109/IPGC.2008.4781347>

ISI.C1 R.M. Beiu, and V. Beiu, *Pico Sensors for All Seasons - When Light Performs its Marvels*, IEEE International Conference on Innovations in Information Technology IIT'08 ISI Al Ain, UAE, 16-18 Dec. 2008, pp. 116-120, <http://dx.doi.org/10.1109/INNOVATIONS.2008.4781727>

Papers in Peer-reviewed Journals (not indexed in Web of Science)

BDI.J5. C.D. Stănescu, and **R.M. Beiu**, *Connecting Optical Fibers*, Annals of the University of Oradea, Fascicle of Management and Technological Engineering, vol. 15, no. 5, pp. 621-624, 2006

BDI.J4. **R.M. Beiu**, and C.D. Stănescu, *On Optical Power Budgets for Fiber Optics*, Annals of the University of Oradea, Fascicle of Management and Technological Engineering, vol. 15, no. 5, pp. 723-728, 2006

BDI. J3. **R.M. Beiu**, and C.D. Stănescu, *Mathematical and Technological Approaches for Designing On-Chip Interconnect Concave Micromirrors*, UPB Scientific Bulletin, Series C, vol. 69, no. 1, pp. 11-22, Jan. 2007

BDI.J2. **R.M. Beiu**, and C.D. Stănescu, *Optical Fiber Photonic Embedded Sensor*, Annals of the University of Oradea, Fascicle of Management and Technological Engineering, vol. 16, no. 6, pp. 1089-1095, 2006

BDI.J1. **R.M. Beiu**, C.D. Stănescu, and A. Cârstoiu, *On 3D Photonic Crystal: A Brief Evaluation of Their Main Characteristics for Various Topologies*, UPB Scientific Bulletin, Series C, vol. 70, no. 2, pp. 41-52, 2008

Other Conferences

R.M. R.M. Beiu, *High-Resolution Curved Micromirrors for On-Chip Interconnects*, The Third Annual Mechanical Engineering Graduate Symposium Washington State University, Pullman, WA, USA, 5 Mar. 2003

R.M. Beiu, C.D. Richards, R.F. Richards, M.D. Fueller, D.F. Bahr, and D.M. Rector, *A Flexible 64 Channel Electrode Array for Chronic Local Field Potential Recording and Mapping*, Neuroscience'03, New Orleans, LA, USA, 25-30 Oct. 2003