

PERSONAL INFORMATION Prof. Florin MICULESCU (Dr. Habil. Eng. BSc.)


313 Splaiul Independenței, Building J, Office JK011, District 6, Bucharest, Romania
f_miculescu@yahoo.com, florin.miculescu@gmail.com, florin.miculescu@upb.ro

www.florinmiculescu.ro, +40.21.316.95.63

ORCID ID: 0000-0001-6757-5616;

Researcher ID: A-4524-2011

Brainmap ID: U-1700-039K-8235

Sex: Male

Nationality: Romanian

OCUPATIONAL FIELD Higher Education – Scientific Research
WORK EXPERIENCE

| Period | | |
|----------------|---------------------|--|
| 2015 - present | Professor | |
| 2013 - 2015 | Associate Professor | |
| 2009 - 2013 | Lecturer | |
| 2006 - 2009 | Assistant Professor | |

Materials Engineering

University Politehnica of Bucharest, 313 Splaiul Independenței, District 6, Bucharest, Romania

- Teaching courses: Materials Science, Materials Testing Methods, Electron Microscopy Materials Testing, Techniques for Biomaterials Analysis and Control, Biomaterials Testing and Investigation
- Research in the field of materials, biomaterials and nanomaterials synthesis, processing and characterization
- Head of: Electron Microscopy and Microanalysis Laboratory (since 2001); Methods for Materials Analysis and Characterization Laboratory (since 2012); Biomaterials and Nanomaterials Synthesis and Processing (since 2017); Transmission Electron Microscopy (since 2017)

Business or sector: Higher Education – Scientific Research

EDUCATION AND TRAINING
2014 Habilitation title – PhD. Students coordinator in Materials Engineering field

University Politehnica of Bucharest, 313 Splaiul Independenței, District 6, Bucharest, Romania

Habilitation Thesis: "Materials for bones reconstruction and thin layers analysis by computer simulation and microanalytical experiment"

2010-2013 Post-doctoral degree

University Politehnica of Bucharest, 313 Splaiul Independenței, District 6, Bucharest, Romania

Materials Science and Engineering field on "Nanosized thin layers with multiple applications" in the Sectorial Operational Program Human Resources Development 2007 - 2013, POSDRU/89/1.5/S/54785

2007 Post-doctoral training

Kavli Institute of Nanoscience, Technical University of Delft, Holland

3 months in Electron Microscopy and Nanotechnology - Intensive Program for Transfer of Knowledge to Eastern Europe Reference Pole for Micro- and Nanotechnologies (NANOTEC-EST), FP6-Marie Curie Actions-ToK, Contract no. 014059/2005

Qualification awarded / main themes

- "Analytical Transmission Electron Microscopy in Nanomaterials Science", "Techniques in Structural Nanomaterials Investigation: practical applications", "Nano Membrane Materials", "Nanomaterials for Advanced Magnetic Separation", "Chemical Nanosystems", "Clean and Green Technologies", "Biomaterials, Nanotechnology and Biocompatibility", "Nanosize Effect and Critical Dimension in Bioapplications", "Composition-Structure-Microstructure-Properties Correlations in Oxide Nanomaterials", "Methods of Synthesis of Nanostructured Materials", "Micro and Mesoporous Materials. Synthesis Techniques and Applications", "Hybrid and Composite Materials. Properties and Applications", "Bioanalysis with Trends and Requirements in the Field of Nanotechnology", "Biosensing and Biosensors with Nanomaterials", "Validation and Standardization of (Bio)analytical Methods"
- Communication skills using advanced techniques
- Research and teaching on materials synthesis, processing and characterization

- 2006 **Doctoral degree in Materials Engineering**
 University Politehnica of Bucharest, 313 Splaiul Independenței, District 6, Bucharest, Romania
 Thesis entitled "Experimental research on the interactions that occur at biomaterial-tissue interface"
 ▪ Materials science, Electron Microscopy and Microanalysis, Materials Analysis Techniques
 ▪ Skills on materials synthesis and precessing, materials and nanomaterials investigation techniques, implantology and biomaterials - tissue interactions

- 1996-2001 **Engineer - Valedictorian**
 University Politehnica of Bucharest, 313 Splaiul Independenței, District 6, Bucharest, Romania
 ▪ Material Science, Chemistry, Materials Analysis Techniques, Materials Structural Theory, Surface Engineering, Materials Thermal Processing
 ▪ Skills on materials synthesis, processing and characterization

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)

| | UNDERSTANDING | | SPEAKING | | WRITING |
|---------|---------------|---------|--------------------|-------------------|---------|
| | Listening | Reading | Spoken interaction | Spoken production | |
| English | C2 | C2 | C2 | C2 | C2 |
| French | A2 | A2 | A2 | A2 | A2 |

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
 Common European Framework of Reference for Languages

- Communication skills** ▪ Good communication and integration skills gained through teaching and research experience
- Organisational - Managerial skills** ▪ Very good organizational skills demonstrated by team working in teaching activities and coordinating research activities in laboratory (as head of laboratory), project manager for teams involving bachelor students, master students, PhD students and teaching fellows
 ▪ Leadership
- Job-related skills** ▪ Exceptional technical skills, confirmed and shown in the statement of activities: design, implementation, analysis, characterisation and demonstration on the properties and characteristics of materials, nanomaterials, biomaterials and devices
- Computer skills** ▪ Specialized on electron microscopy and microanalysis software
 ▪ Good command of simulation software for accelerated particle beams interaction with solid state and molecular dynamics modelling
 ▪ Good command of image analysis software
 ▪ Good command of micro&nano-CT software
 ▪ Good command of Microsoft Office™ tools
- Driving licence** Category: B

ADDITIONAL INFORMATION

Managed grants and resulting publications

- "New technology for the synthesis and manufacturing of biomimetic implants derived from biogenic resources used for bone reconstruction surgery", Grant PN-III-P2-2.1-PED-2016-0892, BioImMS (2 years) - Project Manager; Publications: WOS:000416184600078, WOS:000425731200016, WOS:000425731200017
- "Integrated technology for custom-made biomimetic implants development used for major bone defects reconstruction" Grant PN-II-RU-TE-2014-4-0590, BioMimBone (2 years) - Project Manager; Publications: WOS: 000374585600001, WOS: 000405772200015, WOS:000412382700002, WOS:000416184600080, WOS:000425731200017
- "Combined methods for evaluation of the heavy metals contamination of human beings correlated with human hard tissues metabolism" Contract TE Nr.144/2010. (3 years) - Project Director; Publications: WOS: 000289716200028, WOS: 000297986100026, WOS: 000308047400007, WOS:000308313002379, WOS:000312710300032, WOS: 000315547300022, WOS:000323397900019, WOS:000336552600022
- "Advanced research for producing combinatorial coatings of interest for fusion", Contract CNMP Nr. 72-223/2008, CAPACIF (3 years). Publications: WOS: 000286575200010
- "Spin valves: from combinatorial methods of processing to performance properties", Contract CNMP Nr. 71-032/2007, VALS (3 years). Publications: WOS: 000278579400006, WOS: 000286575200010
- "Production and study the behavior of coatings of carbon, tungsten and beryllium used in the first wall of thermonuclear fusion facilities", Contract CEEX nr. 10-89/2006,

FUSITERMAT (2 years)

- “Depth analysis on the structural implications resulting from the use of alternative fuels in cement”, Contract CEEX nr.121/10.10.2005, IARIS (3 years)
- “New methods for investigating the mechanisms involved in the tissue-biomaterial interaction”, Grant CNCSIS Theme 11, Cod 190/2002 (3 years) - Project Manager.
Publications: WOS: 000251435200002; WOS: 000275165700018

Honours and awards

- Special Honour of Invention from TISIAS Toronto International Society of Innovation & Advanced Skills, for the Patent “Method for obtaining scaffolds with predetermined physico-chemical characteristics for major bone reconstruction”, at the Hrvatski Salon Inovacija S Medunarodnim Sudjelovanjem - INOVA, 13-16th November 2019, Zagreb, Croatia.
- Special Award by Norton University for the Patent “Method for obtaining scaffolds with predetermined physico-chemical characteristics for major bone reconstruction”, at the Hrvatski Salon Inovacija S Medunarodnim Sudjelovanjem - INOVA, 13-16th November 2019, Zagreb, Croatia.
- Gold Medal for the Patent “Method for obtaining scaffolds with predetermined physico-chemical characteristics for major bone reconstruction”, at the Hrvatski Salon Inovacija S Medunarodnim Sudjelovanjem - INOVA, 13-16th November 2019, Zagreb, Croatia.
- Certificate of Excellence for the Patent “Mechano – electric laundry dryer”, from the “Iustin Capră” Association of Inventors, 2019
- Gold Medal for the Patent “Method for obtaining scaffolds with predetermined physico-chemical characteristics for major bone reconstruction”, at the XIIIth International Warsaw Invention Show “IWIS”, 16th October 2019, Warsaw, Poland
- Special Award from the Chinese Innovation & Invention Society (Taiwan) for the Patent “Method for obtaining scaffolds with predetermined physico-chemical characteristics for major bone reconstruction”, at the XIIIth International Warsaw Invention Show “IWIS”, 16th October 2019, Warsaw, Poland
- Diploma of Excellence and Inventory Medal 2019, for the invention "Mechano - electric laundry dryer", at the 22nd International Salon of Inventory and Exhibition 2019, June 26-28, Iasi, Romania
- Special Award of the UMFT "Victor Babes" from Timisoara, for the patent application "Method for obtaining scaffolds with predetermined physico-chemical characteristics for major bone reconstruction", at the "Traian Vuia '19" Salon 5th edition, June 12-14, 2019, Timisoara, Romania
- Diploma of Excellence "King Michael the 1st of Romania" of USAMVB from Timisoara, for the patent application "Method for obtaining scaffolds with predetermined physico-chemical characteristics for major bone reconstruction", at the "Traian Vuia '19" Salon 5th edition, June 12-14, 2019, Timisoara, Romania
- Certificate of Excellence, for the invention "Mechano - electric laundry dryer", at the at the "Traian Vuia '19" Salon 5th edition, June 12-14, 2019, Timisoara, Romania
- Diploma of Excellence and Gold Medal, for the patent application "Method for obtaining scaffolds with predetermined physico - chemical characteristics for major bone reconstruction", at the "Traian Vuia '19" Salon 5th edition, June 12-14, 2019, Timisoara, Romania
- Diploma of Excellence and Gold Medal, for the patent application "Method for obtaining scaffolds with predetermined physico-chemical characteristics for major bone reconstruction", at the International Exhibition of Scientific Research, Innovation and Inventions Pro Invent, 16th edition, March 21-23, 2018, Cluj-Napoca, Romania
- SRB Excellence Award, for the contribution in the biomaterials field in 2018.
- Gold Medal and 4th place, for the patent "Method for obtaining scaffolds with predetermined physico-chemical characteristics for major bone reconstruction", at the International Warsaw Invention Show IWIS 2017, Poland
- Excellence Diploma and Gold Medal, for the patent application "Method for obtaining scaffolds with predetermined physico-chemical characteristics for major bone reconstruction", at the International Fair of Inventions and Practical Ideas Invent Invest 2017, 12-15 November 2017, Ungheni, Republica Moldova
- Excellence Diploma, from the Technical University of Moldova, for the invention "Mechano - electric laundry dryer"
- Gold Medal, for the invention "Mechano - electric laundry dryer" at the European Exhibition of Creativity and Innovation Euroinvent 2017, 25-27 May 2017, Iasi, Romania
- Gold Medal, for the invention "Method for obtaining scaffolds with predetermined physico-chemical characteristics for major bone reconstruction", at the European Exhibition of Creativity and Innovation Euroinvent 2017, 25-27 May 2017, Iasi, Romania
- Prize of the Romanian Inventors Forum, at the European Exhibition of Creativity and Innovation Euroinvent 2017, 25-27 May 2017, Iasi, Romania
- Excellence Diploma and Special Prize (Trophy), for valuable inventions (RO001/2017), at the “Traian Vuia” Inventions and Innovations International Salon, 3rd edition, 7-9 June 2017, Timisoara, Romania

- Gold Medal, for the invention "Mechano - electric laundry dryer", at the "Traian Vuia" Inventions and Innovations International Salon 3rd edition, 7-9 June 2017, Timisoara, Romania
- Gold Medal, for the invention "Method for obtaining scaffolds with predetermined physico-chemical characteristics for major bone reconstruction", at the "Traian Vuia" Inventions and Innovations International Salon 3rd edition, 7-9 June 2017, Timisoara, Romania.
- Excellence Diploma and Gold Medal for the invention "Mechano - electric laundry dryer", at the International Salon of Research Innovation and Inventics RolInvent, 15th edition, 2017, Cluj-Napoca, Romania
- Gold Medal Inventica 2017, for the invention "Method for obtaining scaffolds with predetermined physico-chemical characteristics for major bone reconstruction", at the 22nd International Salon of Research, Innovation and Technological Transfer Inventica 2017, 28-30 June, Iasi, Romania
- Gold Medal Inventica 2017, for the invention "Mechano - electric laundry dryer", at the 22nd International Salon of Research, Innovation and Technological Transfer Inventica 2017, 28-30 June, Iasi, Romania
- Grand Prize and Cup, in recognition of high scientific contribution and loyalty to the 22nd International Salon of Research, Innovation and Technological Transfer Inventica 2017, 28-30 June, Iasi, Romania
- SRB Excellence Award, for the contribution in the biomaterials field in 2016
- 4th place, at the 13th Edition of the National Contest for Scientific-Technic Creations, awarded by the Romanian Society of Metallurgy (SRM)
- SRB Scholarship prize 2007, awarded by the Romanian Society for Biomaterials
- SRB Prize 2005, Poster Session at the 5th at the International Conference Bioremed, Iasi, Romania
- 2nd place, at the International Conference Journées Scientifiques du CFBD, 2003, Neuchâtel, Espace Perrier de Marin-Epagnier, Suisse
- >20 CNCSIS - prizes - Awarding of the research results

Representative publications

- 5 books
- 8 book chapters in international publishing houses
- >90 Web of Science quoted papers (116 indexed papers), 21 in Q1 and 18 in Q2 category
- >150 SCOPUS indexed papers
- Web of Science cumulative impact factor, as principal author >82
- >800 Web of Science citations, excluding self-citations
- >800 SCOPUS citations, excluding self-citations
- Web of Science h index = 19
- SCOPUS h index = 18
- scholar.google h index = 20
- >140 conference presentations
- Editorial Board Member at Journal of Functional Biomaterials
- Topic Editor at Metals journal
- Guest Editor at: Materials journal, The Synthesis and Characterization of Biocompatible Materials, MDPI, 2019-2020; Materials journal, Biomaterials and Implant Biocompatibility, MDPI, 2018-2019; Journal of Nanomaterials, Graphene Based Composites: From Theories to Advanced Applications, Hindawi Publishing Corporation, 2016-2017.

Memberships

- Member of the Materials Engineering - National Council for the Attestation of Titles, Diplomas and Academic Certificates (**CNATDCU**) Comitee (2016-2020)
- Member of the Board of Doctoral School of Materials Science and Engineering Faculty (2016-2020)
- Treasurer of the Romanian Society for Biomaterials SRB (2012-2014; 2017-2019)
- President of the Romanian Society for Biomaterials SRB (2014-2017)
- Founding Member of the Romanian Society of Electron Microscopy (2013)
- Evaluation Expert in the UEFISCDI Materials Science Comitee (2016 - present)
- Member of the TERMIS International Society (2012 - present)
- Reviewer for: Materials Letters, Intermetallics, Materials&Design, Nanomaterials, Applied Surface Science, Helyion, PLOS ONE, Materials, Journal of Materials Science in Semiconductor Processing, Corrosion Reviews, Multidiscipline Modeling in Materials and Structures, Optics & Laser Technology, Additive Manufacturing, Engineering Science and Technology, Polymers, Metals, Coatings, Journal of Adhesion Science and Technology, Journal of Optoelectronics and Advanced Materials, University Politehnica of Bucharest Scientific Bulletin Series B-Chemistry and Materials Science, Key Engineering Materials, Advanced Materials Research
- Member of the research team in 5 international and over 50 national projects

Reference collaborations

Manager in third party projects (>60): Henkel, Honeywell, Lindab, Mechel, Lukoil, Scandia, LAREX, ALSTOM, Steinel, Afriso, ALRO, IcemEnerg, Kvaerner, ISPAT SIDEX, IMNR, UMF, INEC, INFLPR, ICAA, ICEM

References

Prof. C. James Kirkpatrick, Prof. Viorel-Aurel Șerban, Prof. Horia Iovu, Prof. Iulian Riposan, Prof. Horia Țierean, Prof. Corneliu Munteanu, Prof. José Miguel Martín-Martínez, Prof. Marioara Abrudeanu, CS I Cristian Lungu, CS I Victor Kuncser

Date:
28.05.2020

Signature:
Prof. Florin Miculescu