Brief biographical note

Dr. Iulian Antoniac is a materials science engineer who obtained his Bachelors degree and Ph.D. from University Politehnica of Bucharest. After a brief period in the field of research and innovation at National Agency for Research AMCSIT with research and administrative activities, he return at the Biomaterials Group (BIOMAT) from Materials Science and Physical Metallurgy Department, Faculty Materials Science end Engineering, University Politehnica of Bucharest.
At BIOMAT, Dr. Antoniac has worked on metallic biomaterials used for different orthopedic and dental application like hip prosthesis, implants for trauma, dental prosthesis. Also, he works on the development of some research protocol used for retrieval implants characterization and for microscopically technique in the characterization of the interface biomaterials-tissue. Since 2005, Dr. Antoniac is also associated with the Biomaterials program in the Department of Biotechnology and Bioengineering. The research program focuses, apart from other issues, on the tissue engineering, scaffolds characterization, medical image processing, and developments of some new implants for medical applications.
His professional and scientific activity comprises: handbooks/textbooks (4); papers published in scientific journals (14); papers published in the proceedings of international or national conferences (101); inventions (4); participating in different international or national research projects (68); member of the scientific committee of different meetings (16); head of the organizing committee for different international conferences (4); member of the International Editorial Board of some journals; abstracts reviewer for different journals and biomaterials conferences; prizes for lectures at international conferences (4), awards at international halls for inventions (4); "Daniel Bunea" prize awarded in 2005 by Romanian Society for Biomaterials for the contribution to the field of biomaterials.

Name , salutation: Lecturer Iulian Antoniac
Current appointment:
Biomaterials Group,
Department of Materials Science and Physical Metallurgy,
Faculty Materials Science and Engineering,
University Politehnica of Bucharest, Romania

Educational Background:

- PhD in Materials Science, Faculty Materials Science and Engineering, University Politehnica of Bucharest, 2006.
- Master of Science, Department of Advanced Procedures for Developing Special Alloys, Faculty Materials Science and Engineering, University Politehnica of Bucharest, June 2000.
- Master of Science, Department of Fine Structure of Materials Research, Faculty Materials Science and Engineering, University Politehnica of Bucharest, June 1999.
- Materials Science Engineer, Faculty Materials Science and Engineering, University Politehnica of Bucharest, June 1998.

Experience:

- Member of Biomaterials Group, Department of Materials Science and Physical Metallurgy, Faculty of Materials Science and Engineering, University POLITEHNICA of Bucharest (1998-present)

- Head of the Interface Phenomenon Laboratory, Department of Materials Science and Physical Metallurgy, Faculty of Materials Science and Engineering, University POLITEHNICA of Bucharest (2008-present)
- Founded member of the Council of the Romanian Society for Biomaterials (SRB) since 2002 and elected as Vicepresident since 2006.
- Member of the Board of Directors of the Department of Bioengineering and Biotechnology from University POLITEHNICA of Bucharest (2005-present)
- Head of the Administrative Department, The Managerial Agency for Scientific Research, Innovation and Technological Transfer (AMCSIT) Politehnica (2000–2002)
- Training courses: "Project Management Research", AMCSIT-Politehnica Bucharest, Romania (2002); "Advanced Summer Course in Cell-Materials Interactions", Porto, Portugal (2006); "Intensive Course UWEB Biomaterials", Washington University, Seattle, USA (2007)
- Specialization "Metallurgical aspects on the metallic biomaterials", PX Tech, Chaux-du-Fonds, Switzerland (2004); "Methods of obtaining and characterization of dental alloys", PX Tech, Chaux-du-Fonds, Switzerland (2007)

Research/clinical interest

Research activity in the field of:

- Microscopy for materials characterization [optical microscopy, scanning electron microscopy, atomic force microscopy]
- Characterization of some porous scaffolds of various biomedical application
- Metallic biomaterials for orthopedic application
- Retrieval analysis of explants
- Bone regeneration – biomineralization induction, osteoconduction through interconnected porosity;
- Biocompatibility testing and evaluation using microscopically techniques
- Physical and chemical characterization of nano- and micro- particles for biomedical application;
- Biodegradable biomaterials; synthesis and stability testing;

Present Areas of Research

The ongoing research work is characterized by the following keywords: Metallic biomaterials, Polymer/ceramic composites, Scaffolds for medical applications, Interaction tissue-biomaterials, Retrieval analysis of explants, Regenerative medicine & tissue engineering, Bone regeneration, Magnetic nanoparticles, Surface modification.

Title of your BIOMMEDD 2010 lecture:

New trends in biomaterials for bioresorbable screw used in orthopaedics.