

EDUCATION activities at IMT-Bucharest (2007-2011)

New Master Courses

New Master (M. Sc. Courses) at the **Faculty for Electronics, Communications and Information Technology**, University “Politehnica” Bucharest starting October 2009 and held in IMT (with access to experimental facilities).

- **Microsystems:**
 - Intelligent sensors and microsystems;
 - Microphysical characterization of structures;
- **Micro- and Nanoelectronics:**
 - Advanced Technological Processes
- **Electronic Technology for Medical Applications:**
 - Micro- and Nanotechnologies for Medical Applications

Labs for students in cooperation with University “Politehnica” Bucharest

Postdoc program:

- Project Title: “**Human resources development through postdoctoral research in micro and nanotechnologies domain**”. Priority Axis 1: Education and training in support for growth and development of a knowledge based society. Intervention field: 1.5 “*Doctoral/Post-doctoral Programme for research support*”. Financing unit: Sector Operational Programme Human Resources Development 2007-2013 (SOP HRD). Timeframe: April 2010 – March 2013 (36 months); Grant: 10.072.499 RON. This project has the objective to provide financial support to 35 PhD researchers, through grants for scientific research in Romania, traineeships abroad, and attendance to scientific events, in a postdoctoral programme for the micro- and nanotechnologies domain. *Only 17 postdoctoral students are from IMT, the other are from universities and research institutes.* **www.mnt-postdoc.ro**
- A Postdoc program in the areas of RF MEMS and MOEMS financed by FP7 MIMOMEMS project (www.imt.ro/mimomems) was launched in 2009 in IMT. Three postdocs were employed in IMT up to now.

Other educational actions within different projects:

- **FP 6: ASSEMIC - Marie Curie Training Network** (2004-2007), Contract No. MRTN-CT-2003-504826, supervising the activity of PhD students and post doc.
- **2 Leonardo da Vinci -Life Long Learning** projects, where IMT was partner:
 - “Microteaching Project” (2004-2007), coordinated by RWTH Aachen University
 - “Development of competences of educational staff by integrating operational tasks into measures of vocational training and further education” ComEd, (2008-2010) coordinated by BWA W Thüringen GmbH, Germany
- Short courses regarding microtechnologies were developed and presented to SMEs.
- Internship (3 months in 2007) for a student from INSA-Toulouse, France

Eurotraining courses at IMT Bucharest

“Nanotechnology for electronics” 16-17-18 November 2009

„Microfabrication Processes” 11-12 November 2010

Lecturers: Prof. Göran Wendin, Department of Microtechnology and Nano-science, Chalmers University of Technology, Sweden; Dr. Harry Heinzelmann, Nanotechnology & Life Sciences, CSEM Centre Suisse d'Electronique et de Microtechnique SA, Switzerland; and for practical parts, Mr. Dirk Brüggemann, Raith GmbH, Germany, as well as researchers from IMT-Bucharest for laboratory demonstrations.

Prof Dr Ivo W. Rangelow, Technische Universität Ilmenau, Germany

Simulation, consulting and training services in micro and nano domains;

◇ **Computer Aided Design using dedicated software tools: COVENTOR and ANSYS**

- Mask Design, Process Editor, 3D building and mesh;
- Modeling for technological processes/optimizations;
- Special features: particularized use (macro or subroutine) creation; special geometrical modeling (AFM images reconstruction in CAD format, surfaces generated in accordance with mathematical expression, etc);

◇ **Computer Aided Engineering and Analysis (using FEM, FVM, BEM tools);**

- Microfluidics analysis (thermo)dynamics, electro-kinetics, diffusion, fluid mixing and separation in micro-components;

