

National MATNANTECH projects (title - coordinator from IMT-Bucharest)

- Bionanotechnology network (BIONANONET) - Biol Roxana Vasילו (roxanav@imt.ro)
- Services Centre for Training, Consultance and Assistance in Microengineering (CESME) - Mat. Oana Nedelcu (oanan@imt.ro)
- Characterization of Materials and Structures for Micro and Nanotechnology - Dr. Raluca Muller (ralucam@imt.ro)
- Network of Research Laboratories in Nanotechnologies - Dr. Marius Bazu (mbazu@imt.ro)
- Consulting Centre in Nanomaterials, Nanostructured and Nanotechnology - Dr. Irina Kleps (irinak@imt.ro)
- Nanostructured silicon matrix for applications in biology and controlled drugs supply - Eng. Anca Angelescu (ancaa@imt.ro)
- Microelectronics manufacturing techniques for detectors used for the continuous monitoring of radioactive contamination of the natural environment - Dr. Ileana Cernica (ileanac@imt.ro)
- Technologies for manufacturing integrated microphotonic

- subsystems for optical interconnecting and optical information processing - Phys. Elena Budianu (elenab@imt.ro)
- Environment for testing and developing control systems and intelligent interfaces for autonomous robots - Eng. Eduard Franti
- Selective acceleration, at structural defects, of semiconductor devices ageing - Dr. Lucian Galateanu (luciang@imt.ro)
- Integrated electronic blocs manufactured on silicon carbide - Eng. Marioara Avram (marioara@imt.ro)
- Noise measurements in nanomaterials: a new investigation method - Dr. Mihai Mihaila (mihaim@imt.ro)
- Manufacturing and experimental evaluation of an optical neuron - Dr. Gabriel Moagar (gabim@imt.ro)
- Integrated chemical microsensors for environment monitoring and food quality control - Eng. Carmen Moldovan (cmoldovan@imt.ro)
- Technologies for manufacturing microsystems for communications, based on AIIIIV compounds and new polyimide materials - Dr. Alexandru Muller (alexm@imt.ro)
- Technology for manufacturing micro-interferometers Fabry-Perot integrated on a silicon substrate - Dr. Raluca Muller (ralucam@imt.ro)

Educational activities: Courses organized by IMT-Bucharest in the frame of national MATNANTECH infrastructure projects (3N, BIONANONET, CESME, MINAMATNET and NANOTECHNET)

Study of the electron emission from semiconductors using high electric field
 Porous silicon, preparation, properties and applications
 Experimental methods to realise silicon nanostructures through etching processes
 Modern methods of analysing thin films and interfaces (XPS(ESCA)-AUGER)

The Summer School "Bioactive and Biocompatible Thin Layers"

The topics of the School referred to:
 Ceramics used for biomedical applications -

Pulsed Laser Deposition: a novel method to obtain bioactive and biocompatible thin layers

Hydrothermal Synthesis of Biocompatible Ceramic Films

Microelectronics Technology Compatibilization for Biomedical Applications

Natural Polymers for Biotechnology and Biomedicine Applications

Magnetron Spray (HA) and Glow-discharge (DLC) Thin Layer Deposition

Synthetic Hydro gels for Medicine and Pharmacy

C and Fe Nanostructures Obtained by Laser Pyrolysis

The Autumn School "Nanophysics and nanotechnology for applications in biology and medicine

Fundamentals of microengineering

Design and simulation of MEMS and microfluidic structures with CAD Techniques: Layout and process design, mechanical simulations

Design of MEMS and microfluidic structures with CAD Techniques: 3D Design with CoventorWare

Training in microsensors and MEMS

New microelectronic architectures: signal processing devices

Design of MEMS and microfluidic structures with CAD Techniques:

Training course in micromachining

Design of MEMS and microfluidic structures with CAD Techniques: Design of micro-components for biomedical applications

Fundamentals of microrobotics

New microelectronic architectures: integrated analogic circuits

Quality assurance in microengineering

Microphysical Characterization

X-Ray Diffraction, Atomic Force

Microscopy (AFM), XPS analysis

Modeling the hydrothermal synthesis of nanocomposite materials with applica-

tions in the medical field



REASON PROJECT IN FP 5 Research and Training Actions for System on Chip Design

The project consists of 13 workpackages, covering all important areas of microelectronic design and microsystems.

ROMANIAN PARTICIPANTS

- "Politehnica" University of Bucharest - contractor (www.pub.ro);

- IMT-Bucharest - subcontractor (www.imt.ro);

- ICIA, Romanian Academy - subcontractor (www.academiaromana.ro).

2-8 October 2003 Fall School "New system architecture", organized by University "Politehnica" of Bucharest and

IMT-Bucharest, in the frame of the European REASON project - IST 2000-30193 (System on a chip - training by research)

**Project coordinator: Prof. W. Kuzmicz (Poland)
 Coordinator of the Romanian Consortium: Prof. Dan Dascalu**

Invited speakers

W. Kuzmicz – "Hardware implementations of fuzzy logic controllers"

Radu Dogaru – "Computational emergence in cellular computing systems"

Valentin Cristea – "Autonomous Agent Algorithms in Distributed Environments"

Monica Dascalu, Hasci Zoltan – "Algorithms and hardware implementation for Cellular Automata"

The main objective is to provide a scientific educational environment, to increase the interest of young educated people in the field of self-organizing systems in order to increase the professional competitiveness. The course is recommended to all persons having the area of interest in self-organizing systems (algorithms and hardware implementation).