

## IMT-Bucharest as a "technological pole" of regional interest

**IMT-Bucharest (founded in 1993) is a Romanian National Institute for R&D working in micro and nanotechnologies. The thematic areas of research are (www.imt.ro):**

- 1. Nanostructured materials, nanotechnologies and nanostructures:** carbon nanotubes, carbide and diamond like carbon, silicon nanoelectrode arrays, field emission nanostructures, porous silicon layers.
- 2. Microstructures and micro-nanosystems for sensing applications:** chemical, mechanical, chemo-optical sensors, micro fluidics.
- 3. Micro/nanostructures for biomedical applications:** biomedical applications of nanostructures, biosensors.
- 4. Microstructures and MEMS and MOEMS for communications:** development of new materials, technologies and components for RF and Optical MEMS. **MEMS = Micro - Electro - Mechanical - Systems; MOEMS = Micro - Opto - Electro - Mechanical - Systems; RF = Radio Frequency.**

The above **multidisciplinary research** may explain the success of IMT in both priority 2 (IST) and priority 3 (NMP) of the present Framework Programme of UE (FP6). Indeed, the institute is involved in **8 research projects** from FP6 (PATENT, AMICOM, 4M, NANOFUN-POLY, Nano2Life (associate partner), ASSEMIC, WAPITI, MI-lab on chip), with a total number of 118 different partners from almost European countries.

IMT is also involved in other four support projects which are **devoted to micro & nanotechnologies in Eastern Europe (New Member States and Associate and Candidate Countries)**. The institute is coordinating, for example the specific support action (SSA) called **MINAEAST-NET: "Micro and Nanotechnologies going East through networking"** ([www.minaeast.net](http://www.minaeast.net)). IMT also has special responsibilities for Eastern Europe in two networks of excellence (PATENT and 4M) from priorities 2 and 3, respectively. IMT started, however, by cooperating at the national level. The institute is involved in a large number of common R&D projects with 65 different partners (Romanian research centres, universities and companies), and is also **coordinating a number of infrastructures** (research networks, networks of service providers, virtual centres of excellence) financed from the national RTDI programme "New materials, micro- and nanotechnologies" MATNANTECH. One interesting example is the NANOMATFAB national network, designed as a virtual (or distributed) centre of excellence in nanostructured materials and new production processes). On turn, the NANOMATFAB partners are all members of NoEs and IPs in FP6, IST and NMP priorities, which makes this project an **exceptional platform for exchanging and promoting European cooperation**. Coming back to support actions, IMT is the coordinator of a SSA devoted to Romania (ROMNET-ERA, coordinated by IMT), a project which provides the reinforcement of the Romanian network of networks in micro and nanotechnology (2004-2006).

IMT is also a **"technological pole"**, with a Micro-Nanofabrication Facility (the only "clean-room" available in Romania for research and education), a mask shop, laboratories for computed-aided simulation and design in microsystems and microelectronics, characterization equipment, a centre for education and training (see **photo**) and a technology transfer centre in micro-engineering (CTT-Baneasa). This is a "pole", because it is integrating research in various disciplines, as well as various activities: research, education and training, innovation and technology transfer. Moreover, IMT and University "Politehnica" of Bucharest, together with the private company ROMES SA are developing **MINATECH-RO, a scientific and technological park in micro- and nanotechnologies**, the first of this kind in Eastern Europe.

**IMT technological pole will be attractive for partners from Eastern Europe and especially for the other two ACC (Bulgaria and Turkey).** The micro-nanofabrication facility and other laboratories are accessible to researchers, Ph.D. students and companies for activities as research, education and training by research, development of demonstrators and prototypes.

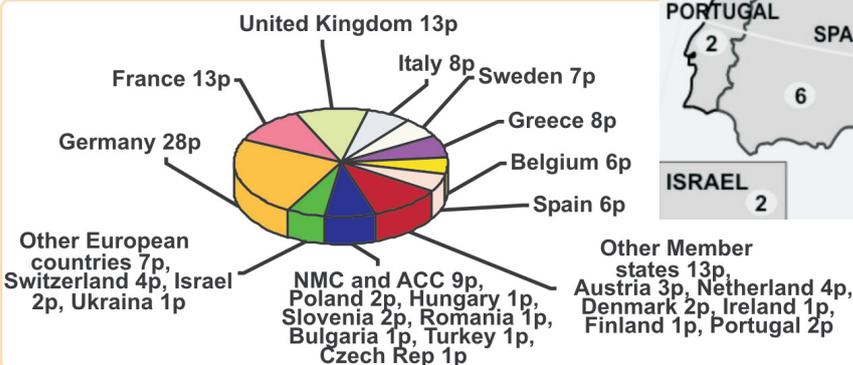
For general information about a possible partnership with IMT, contact **Prof. Dan Dascalu**, [dascalu@imt.ro](mailto:dascalu@imt.ro), (CEO and President of the Board), Tel.+40-21-490.85.83, +40-21-490.84.12, Fax.+40-21-490.82.38



Mr. **Philippe Busquin** (EU Commissioner for Research) and **H. E. Jonathan Scheele**, the Ambassador of EU in Romania visiting the emerging International Centre for Education and Training in Micro and Nanotechnology (**ICET-MNT**), 6th of February 2004.



**Distributions per number and country of Partners in the 8 FP 6 projects presented bellow, where IMT is a partner**



**Map of IMT Partners in the 8 FP 6 projects**  
**118 Partners - IMT Partners from european projects:**  
**AMICOM, ASSEMIC, 4M, PATENT, NANOFUN-POLY, NANO2LIFE, MI-LAB-ON-CHIP, WAPITI**