

Organisation: *National Institute for Research and Development in Microtechnology (IMT-Bucharest)*

Web Page: *www.imt.ro*

Country: *Romania*

Main Activity: *Research*

Department/Laboratory/Group: *Simulation, Modelling and Computer Aided Design Laboratory*

Contact Person: *Gabriel MOAGAR-POLADIAN*

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Other Contact Data:

Profile:

- Research activities in the fields of modeling, simulation and computer aided design for microsystems, microfluidic devices and bio-MEMS

Participation to European Projects:

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ICT-2007.3.5: Photonic components and subsystems

competence / resources

I have experience, covered among other by published papers in mainstream international journals and by granted patents, in devices for optical computing, optical data storage and novel methods for optical communications (successful preliminary test). I provide competence from conceiving novel devices or novel working principles, to modelling and simulation as well as, where technology affords that, to the realization of prototypes. As examples I mention the conceiving and experimental realization and evaluation of an original optical neuron as well as the current work for developing an analog optical unit for processing of image type information based on original algorithms. The demonstration of the Esaki tunnel diode as an optoelectronic / photonic device (published) or the use of some sort of Schottky diode as ultrafast electro-optic modulators (patent granted) can be mentioned also.

proposal / interest

- Research in the field of optoelectronics, optical computing and optical data storage.
- Research in the field of optical communications (especially atmospheric).
- Research in novel / improved microsystems for optical sensing applications.
- Development of novel CDs and DVDs of universal type (i.e. able to support digital, multivalued logic, analog formats as well as holographic type storage according to the user choice).

ICT-2007.3.6: Micro/nanosystems

competence / resources

I have experience in developing novel technologies that are applicable to a broad class of elastomer materials in order to obtain microsystems with improved performance based on these materials, to conceive novel types of sensors of better performance in optical and infrared sensing, developing materials with specific characteristics starting from known technologies.

proposal / interest

- Research in novel materials for microsystems.
- Research in the field of rapid prototyping techniques for micro and nanotechnology.