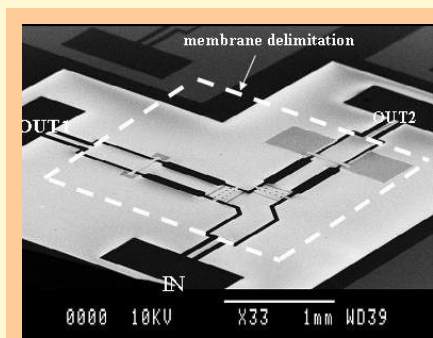


**Staff:** 90 researchers, professors, lecturers, engineers and technicians  
153 PhD students, post-docs and temporary staff

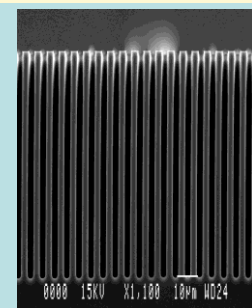
**Research fields:** Technologies, conception and modeling of micro nano systems for communications, information, electrical power management, chemical and life sciences

## Research topics in Micro and NanoSystems

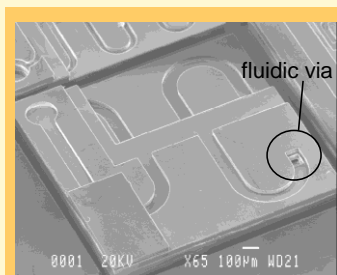
- Sensors & Detection Systems
- Microsystems Integration
- Integrated Systems for power management
- Photonics
- Microwave and opto Microwaves for Telecommunication and wireless systems
- Nanobiosystems and microfluidics
- MEMS, MOEMS, RF MEMS, Sensors (Bio, Chemical, Physical), Atomic scale modeling



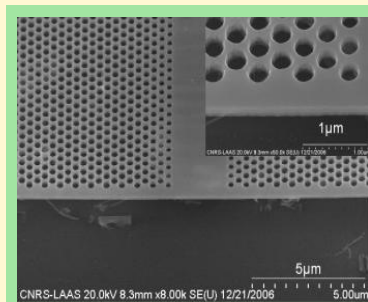
RF MEMS circuit on membrane



High density capacitor



Multi level microfluidic system



Photonic crystal membrane on GaAs

## Technology

- 1500 m<sup>2</sup> clean rooms class 10000 & 100
- UV, e-beam lithography & Direct Writing Laser
- Si, AsGa, Polymers, TCO's, electroplating
- Si, SOI & SU8 Surface and Bulk Micromachining
- DRIE, plasma etching (Si based, III-V, polyimide..)
- III-V compounds & Si based material (MBE, LPCVD, PECVD), Thin Film Metallization
- implantation, CMP, grinding, polishing, multi-WB ..
- flip chip, lamination, screen printing and inkjet

## Design, simulation & characterization tools

- ANSYS, COMSOL, Cadence, Coventor, VHDL, Athena, Gaussian, VASP, Amber ...
- SEM, AFM, SSRM, SCCM, Fluorescent Microcopy
- Mechanical & Optical 2D Profilometers and Vibrometer
- IR thermography, Spectroscopic Ellipsometry
- ESD (TLP, EMMI), LF & HF measurements, Hall Effect Magnetometer, DLTS, µ-PCD
- photoluminescent Exposure meter

## Laboratoire d'Analyse et d'Architecture des Systèmes

7 avenue du colonel Roche

Adress 2

31077 Toulouse cedex 4, France

<http://www.laas.fr>

NAMIS contact: Gué Anne-Marie

Tel: (+33) (0)5 61 33 64 65, e-mail: [gue@laas.fr](mailto:gue@laas.fr)

**LAAS-CNRS**

