

Microelectromechanical Systems - MEMS Group

Most of the activity of the group is oriented to the development of micromachined gas sensors for electronic noses and to the development of MEMS sensors in connection with the Argentinean space program.

Since 2003, activities were done in the framework of two contracts:

- One of them with a private company, JPA SA, and with the Agencia Nacional de Promoción de Ciencia y Tecnología (ANPCyT). The PID 131-2001 contract involves as technological targets the development of micro-machined gas sensors with SnO₂ thin films and the development of an electronic nose for environmental and food applications.
- The other contract with the Comisión Nacional de Actividades Espaciales (CoNAE) for the development of a phase modulator on LiNbO₃ part of a MIOC (Multi Integrated Optical Circuit) for IFOG (Interferometric Fiber Optics Gyroscope) applications. A second device under development is a platinum microresistor with integrated electronics for satellite temperature measurements. This agreement with CoNAE also includes other inertial and RF MEMS devices for the near future.

Furthermore, the group contributes to develop human resources at the Institute of Technology of the Universidad de San Martín, by directing graduates and undergraduates' thesis work and by teaching a Specialization Course on "Fundamentals of Microfabrication".