

## Research

Currently GIF works on optical fibre sensors, on devices for optical communication systems, on the generation of optical radiations by optical fibres, instrumentation development, detection techniques, metrology, process monitoring, thermographyâ€¦ GIF melts photonic technologies with the information technology for research and development.

Temperature, displacement, vibration, acceleration, humidity and toxic gas detectors have been successfully demonstrated. Civil structures, such as steel rods and nuclear vases, have been monitored, as well as welding processes by laser and TIG. Traffic car flux, speed and car type detection have been performed, defect detection during production has been also carried out by photonic techniques.

This work has been developed or is on process funded by public institutions and private companies from a regional to an European framework.

To achieve its goals GIF operates on a 450 m2 state-of-the-art equipped facility that includes 11 specific areas such as optics, optoelectronics, electronics, optical visualisation, climate characterization, thermographic and mechanics among others. We are particularly proud of our UV laser facility for material processing and of our characterization facilities. they are particularly suitable for optical fibre grating fabrication and characterization in fibre devices.