

Optical circuits for spectroscopy in industrial applications

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Co-supervised by Sarspec (industrial company)

Internship's main tasks

Within the collaboration of GoLP with the company Sarspec in project (LIBScan) for the development of Laser Induced Breakdown Spectroscopy instrument this internship will have the following tasks:

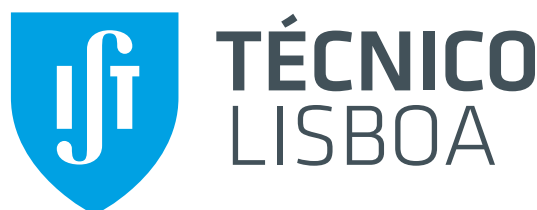
- Optical design for circuits that optimize the spectrometer performance for different bandwidths (from UV -> Visible -> Near IR) as well as laser beam to the sample and efficient optical signal collection (using optical models and ray-tracing simulation).
- Participation on construction of a laboratory testbed and experimental testing of the projected optical circuits.

Required/desired skills/profile

- Strong motivation to carry out design and construction work on optical instrumentation with industrial application.
- Highly recommended to have completed all subjects of the previous course years (inclusive) specially "Óptica Aplicada" course.
- Good theoretical/experimental training in optics, computing and data processing is recommended.

Topic can be extended as

- PIC 1
- PIC 2



Contact

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General info

For general information regarding the Internship program please see:
<http://golph.ist.utl.pt/wp/opportunities/>