

NSERC INDUSTRIAL RESEARCH CHAIR IN OPTICAL DESIGN

Our mission: the education and training of highly qualified personnel to support applied research in the optics and photonics industry.



Lens Design

Imaging systems, lighting devices, tolerancing, optomechanics



Metrology

MTF, distortion, lateral color, optical testing, alignment, profilometry, surface roughness



Fabrication

Diamond-turning and milling, polishing, thin film coating, freeform components, diffractive optics



Astronomical Instrumentation

Spectrographs, adaptive optics, wavefront sensors spatial instruments

Who we are

Optics and photonics play a key role in modern technologies and devices. The success of a new optical instrument relies mostly on the use of innovative optics concepts. Therefore, the Research Chair program focuses on modeling, design and analysis of optical systems. Our partners have benefited from several technology transfers in the past, and from the availability of a new generation of optical designers to improve their global competitiveness.

The Research Chair also supports a leading-edge infrastructure for education and training in optics. The involvement of industry contributes to the creation of this training environment that encourages innovation.



Prof. Simon Thibault, Eng.

Full-professor at Université Laval, Simon Thibault received his PhD in physics on optical design in 1998, within a collaborative project with INO. After 10 years in industry, he joined Université Laval in 2008. OSA Senior member and SPIE Fellow, he is

involved in several conferences and is associate editor for Optical Engineering and Optics Express. He is the author and co-author of 20 patents and of more than 200 technical communications and papers in well-known optics conferences and journals.

Equipments

- Optikos LensCheck VIS
- Trioptics OptiSpheric, OptiSurf and OptiCentric
- Point source microscope Optical Perspective Group
- Interferometer Zygo Mark GPI-XPS
- Interferometer Zygo Verifire HD
- Interferometer ESDI Intellium H2000
- Spectrometer Stellarnet inc green-wave model GW-Vis
- Spectrometer Agilent technologies model Cary 5000 UV-VIS-NIR
- Stylus contact profilometer - Dektak 150
- Inspection microscope Olympus STM6
- SEM/FIB microscope FEI model Quanta 3D FEG
- Veeco Dimension V Scanning Probe Microscope
- Thin film coating system Leybold SYRUS-PRO-710 Advanced Plasma System (APS)
- Thin film coating system Intlvac Nanochrome System (sputtering)
- Thermal deposition system
- Electron Beam Physical Vapor Deposition or EBPVD
- Metricon prism coupler mline model 2010/M
- Nanoform 250 Ultra Precision Machining System for diamond turning and milling
- Talysurf PGI Freeform Surface Profiler
- Zeeko IRP200 Ultra-Precision Polishing Machine

View complete list at <http://lrio.copl.ulaval.ca/images/Equipment-list.pdf>



Highly qualified personnel

Our team accounts for more than 70 years of experience, allowing us to carry out a wide variety of projects, and to train the next generation of scientists and engineers in the field.



Industrial internships

Our graduate students can participate in industrial internships in collaboration with our partners and improve their skills in an industrial research environment.



From design to achievement


With the team's expertise and the leading-edge infrastructure, we can undertake projects from design to fabrication, prototyping, and characterization.


Shaping light one ray at a time

Contact us to learn how to become a partner

Join Us

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