

Master's degree Project on High Resolution Optical Spectral Analysis

Industrial Research at EXFO

Working on a master's degree with EXFO, you will join a team of seasoned professional researchers in EXFO labs. EXFO Research team mission is to develop and validate new measurement techniques and master new optical technologies. Our role is to allow EXFO to remain at the leading edge of optical technologies and master new concepts that will be at the core of the next generation of Test and Measurement equipments.

Project Description

Develop a high-resolution optical spectral analysis solution using a sweep laser as a local oscillator (heterodyne detection). Develop a theoretical model correlating the spectral measurement performances with the characteristics of the local oscillator. Validate the model with experimental measurements. Apply this measurement method to characterize telecom signals under complex modulation format, with an emphasis on OSNR measurements.

Project Context

The experimental activities will be done at EXFO labs in Québec City. The project will be done in collaboration with Researchers from our Québec office as well as from our office in Lannion, France. The project will be under the academic supervision of Professor Sophie LaRochelle, from Centre d'Optique Photonique et Laser (COPL) at Laval University.

Target start date: **January 2021 or May 2021**

Your Profile

You hold a bachelor's degree in physics, engineering physics or electrical engineering and you wish to continue to gain expertise in a high-tech environment. You want to innovate and to find solutions to complex problems. You want to make a difference and see the result of your work eventually making its way into a commercial product? Join our team.

About EXFO

EXFO develops smarter network test, monitoring and analytics solutions for the world's leading telecommunications service providers, network equipment manufacturers and webscale companies—and we love what we do! With nearly 1,900 employees in more than 25 countries, EXFO is no. 1 worldwide in fiber optic test solutions and has the largest active assurance deployment. Our broad portfolio of intelligent hardware and software solutions enable our customer's network transformations related to fiber, 5G, virtualization and big data analytics. We're always looking for top talent to help us lead the way in a growing industry.

To apply or to get more information, please contact Professor Sophie LaRochelle at sophie.larochelle@gel.ulaval.ca or Michel Leblanc, Research Manager at EXFO, at michel.leblanc@exfo.com.