

Self-Starting ocean optics scientist with an entrepreneurial spirit

- Creative and independent researcher with 4 published scientific articles and 13 presentations
 - Passionate about innovating and problem-solving. Always seeking a challenge
 - Rigorous and efficient at producing high-quality data
 - Excellent at communicating with people from diverse backgrounds and teamwork-oriented
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Education

Ph.D. - Remote sensing, Physics of Remote Sensing, University of Sherbrooke, Qc, Canada (2013-2018)

M.Env. - Research, University of Sherbrooke, Qc, Canada (2009-2012)

B.Sc. - Ecology, Co-op, University of Sherbrooke, Qc, Canada (2004-2007)

Research and professional experience

| Scientific consultant/Founder

Photic Science | 2022-present

Helping scientists with communications and scientific projects. Writing and editing scientific articles. Offering grant proposal assistance, laboratory training, data processing and project management services.

| Postdoctoral fellow

Florida Atlantic University - Harbor Branch Oceanographic Institute | 2020-2022

Worked within a multidisciplinary team for the development of a bioluminescence sensor for the Office of Naval Research (part of the US Navy). Conducted literature review, experimental research and data analysis on the bioluminescence response and optical properties of plankton. Wrote reports for stakeholders. Mentored a Master's student.

| Postdoctoral research associate/Lab manager

University of Southern Mississippi - Stennis Space Center | 2019-2020

Found a new instrument in the field of ocean optics and created a method for it. Devised and conducted laboratory experiments. Established and maintained a new ocean optics laboratory. Analyzed data and organized laboratory for a NASA EXPORTS North Atlantic Cruise. Wrote scientific publications. Supervised a lab technician.

| Research assistant - Communications

University of Sherbrooke, Canada | Jan-May 2019

Helped researchers with their funding proposals, devised a plan to improve the social cohesion of the group, rebuilt the website and organized invited conferences. Used graphic design techniques and tools.

| Ph.D. - Remote Sensing

University of Sherbrooke, Canada | 2013-2018

Initiated the project idea. Designed and conducted laboratory experiments to study the optical properties of phytoplankton. Worked in a multidisciplinary team. Used the results of the experiments in optical models. Published two articles and presented 6 scientific posters and presentations at national and international conferences.

| Research assistant - Bioreactors

University of Sherbrooke and OSEMI Canada, Canada | 2013

Studied the growth of microalgae in bioreactors for biofuel production. Optimized cultivation conditions with engineers. Reported and communicated results to the team daily. Supervised an intern. Ordered equipment and maintained the laboratory. Occasional field sampling in a lake.

| M.Env. - Research

University of Sherbrooke, Canada | 2009-2013

Initiated the project idea. Designed and developed an automated culture chamber and a photosyntheson with engineers and researchers. Collaborated with external laboratories. Published a scientific article and presented 4 scientific posters and one presentation at national and international conferences.

Publications

[Most relevant scientific articles and presentations listed on Google Scholar](#)

Past Entrepreneurship

CEO and co-founder of Time Passport Inc. (2015-2019)

Manage a multidisciplinary team of 5 to 6 people (design, administration, history, augmented reality developers, 3D artists). Partner with Ancient History Encyclopedia for historical content.

Production of a demo application (Seven Wonders AR) that allowed users to walk and hunt treasures in a life-size replica of Babylon's hanging gardens as well as experience the seven wonders of the world in augmented reality.

Production of a functional prototype of a geolocated augmented reality mobile application with a historical scene in Quebec City.

One of 20 startups in the world selected for UNESCO's Heritage Lab 2018. Winner of multiple business pitching competitions.

Technical Skills

Data processing and communication

Programming: MATLAB, Python, optical modeling, data processing and visualisation, statistics

Basic satellite data processing (SeaDAS)

Image processing with Fiji

Languages: French and English

Public speaking, excellent oral and written communication skills

Team leading, teamwork, project management, problem-solving, entrepreneurship

Basic design (Photoshop, Gimp, Inkscape etc.), Web design, photography

Microsoft Office and iWork

Working in and managing phytoplankton optics and ecophysiology laboratories, including:

Optical Properties measurements, instrument calibrations, data processing and analysis, protocol redaction, refractive index imaging, light intensity measurements.

Phytoplankton cultures, fluorescence measurements, chlorophyll extractions, Coulter counter cell counts, Photosynthesis curves, microscopy and Imaging Flow Cytometry.

Volunteering and Outreach

- Writer and founder of bilingual outreach blog folledenature.com (2017-2019)
- Public outreach science conference: Coeur des Sciences, Montreal. Light pollution and ecology. (2018)
- Team member, eFish (third prize), Aquahacking Summit: United for the St. Lawrence, Montreal (2016)
- Cosponsor, Girls in Science event (Les filles et les sciences, un duo électrisant!) (2014)
- President and secretary, Remote Sensing Graduate Students Association, University of Sherbrooke (CEGGAT) (2010-14)
- Light pollution awareness volunteer, Mont-Mégantic Astrolab, ([TV interview \(FR\)](#)) (2006)
- Paid summer intern as a naturalist for Parks Canada (2005 and 2007)
- Student researcher, GRAPHYCS, CEGEP of Sherbrooke (2003-2004)
- Peer educator, English and French, CEGEP of Sherbrooke (2003)

Awards and Honors

- Business pitch competition prizes (Startupfest Sherbrooke, Katalysis) (2017 and 2018)
- One of five companies in the province selected in a pitching competition for SXSW Interactive booth (2017)
- IOCCG Summer Lecture Series, Villefranche-sur-Mer (2016)
- FRQNT Doctoral Research Scholarship (2013-2016), 3 years full doctoral scholarship
- Faculty scholarship for promotion of research (2013 and 2017)
- Centre d'applications et de recherches en télédétection (CARTEL) scholarship (2017)
- Admission Scholarship, University of Sherbrooke, Department of Biology (2004)
- Association for College Research prize (2004)