

## About Gastops

At Gastops we are passionate about supporting equipment that help aircraft fly, ships move, trains roll, generators generate, and turbines turn. Starting in 1979, Gastops has built a robust business that is recognized worldwide for its innovative contributions to the maintenance, productivity, and safety of critical equipment used in aviation, energy, marine, rail, and mining industries.

Gastops' products and services add value throughout the life cycle of complex critical equipment from the design stage through to in-service operations and support. We design, manufacture and support advanced equipment sensing and analysis products, including on-line oil debris sensors, torque measurement sensors, turbine blade health sensors, and at-line oil analysis systems. Based on our core competencies of machinery analysis, modeling and simulation, software engineering, condition monitoring and repair and overhaul, the company also provides a range of specialized technical and engineering services to assist in the design, development and in-service support of machinery control, monitoring and maintenance systems.

Gastops corporate head office is located in Ottawa, Canada and has additional Canadian branch offices in Halifax and St. John's. Gastops has a global network of strategic partnerships in the United States, Europe, China, Middle East, Malaysia, and Japan. Gastops USA is an affiliated company to Gastops Ltd. with its own facility located in Huntsville Alabama.

Visit our website at [www.gastops.com](http://www.gastops.com).



We have an opening for the following contract position, working at the National Research Council Canada's Nanotechnology Research Centre in Edmonton with potential limited travel to our head office in Ottawa.

## **Microfluidics Researcher (Contract position)**

Gastops has built core competencies in photonics and spectroscopy, with a team of expert scientists and engineers, state-of-the-art lab facilities and the recent successful launch of a product that uses laser-induced breakdown spectroscopy. We are looking to expand our scientific capabilities into the field of microfluidics through collaborative research with the National Research Council (NRC) in Edmonton, and are looking to hire a full-time researcher on a contract basis to support this collaboration.

Based on company objectives and priorities, the Microfluidics Researcher may also support and contribute to a number of other research thrusts across the R&D group during the duration of the project. The contract is for 6 months corresponding to the timeline of Phase 1 of the collaborative research project between NRC and Gastops (starting Aug/Sept 2018). There is potential for extension of this contract for continuing work and Phase 2 of the collaboration. There is also potential to transition to a permanent position at Gastops at the end of the collaboration with NRC.

This position offers the opportunity to be part of a dynamic team working on cutting-edge research, developing technologies and products that are critical to the growth of the company. The Microfluidics Researcher shall report to the Manager of Research, and shall work under the guidance and supervision of the NRC project leader and research officers, on the premises of and using the equipment belonging to the Nanotechnology Research Centre of the National Research Council. The Gastops research team in Ottawa will provide advisory support to the project and perform additional testing.

Responsibilities include:

- Develop concepts through literature reviews and research investigations of materials and microfabrication techniques
- Design concepts, experimental setups and prototypes
- Ensure that designs meet the requirements for testing or production such as reliability, manufacturability, ease of use, maintenance and cost
- Numerically model concepts and conduct analyses to evaluate designs
- Select and source components
- Build, operate, test and optimize experimental platforms and prototypes
- Develop test plans and procedures
- Conduct experimental investigations to characterize the performance of the prototypes, collect and analyze data using various statistical techniques
- Optimize microfabrication processes
- Prepare technical reports and papers

*Please note that this job description is not meant to be an all-inclusive statement of every duty and responsibility that will ever be required of an employee in the job.*

**Requirements:**

- Bachelor's/Master's/PhD Degree in Engineering or Applied Sciences with academic coursework and research work related to micro- and nanoscale fabrication and characterization
- 3+ years of relevant experience in academic or industrial research and development

**Skills and Attributes:**

- Innovative problem-solver and keen learner
- Highly motivated and result oriented
- Strong design and analytical skills
- Detail oriented
- Experience with finite-element modeling
- Experience with Comsol, SimScale, Elmer or other numerical modeling tools
- Experience with micro- and/or nanoscale systems fabrication
- Experience with design, fabrication, and testing of microfluidic devices
- Experience with particle-laden flows in microfluidic devices would be highly desired

Please submit applications for this position by email to [psuresh@gastops.com](mailto:psuresh@gastops.com)