

## About

*MathIndustry* (Math to power industry) is a professional development school for graduate students and postdoctoral fellows in the mathematical sciences. The students in *MathIndustry* already have extremely valuable technical skills. At *MathIndustry*, we equip them with the professional skills they need to excel in non-academic environments. Teams of students are matched with industry partners to exercise their skills using tried-and-true work integrated learning techniques which have worked for more than 20 years. So, while students learn how to be a better job candidate, our industry partners have the opportunity to experience the benefits of utilizing mathematical science in decision making, product development and other aspects of their business.

## Canada Benefits

Canadian universities train thousands of graduate students in the mathematical sciences each year. These students are a national resource that must not be underutilized. Ideas from the mathematical sciences are vital to Canada's industry sectors. Predictive models, data analysis, optimization, computation and other mathematical insights can be used in making business decisions accurately and effectively.

At *MathIndustry*, we have developed a cohort-based job training and placement program to help ensure that highly skilled personnel will be ready and able to advance Canada's economy. Studies by Deloitte have demonstrated the enormous impact that the mathematical sciences have on the UK and Dutch economies. For Canada, this is more important now than ever. The economic ramifications of the pandemic are likely to significantly reduce opportunities in academic career pathways for a generation of young researchers. Our goal is to redirect the talent pool towards activities that will drive Canada's economic recovery.

## The Win-Win-Win of MathIndustry

*MathIndustry* provides an enriched opportunity for students, industry partners, and academic mentors alike. Check out the industry problems that were submitted and the solutions our participants obtained in 2020.



**Participants receive hands-on experience, showcase skills, connections to jobs or internships.**



**Industry can recruit talent, connect to Mitacs programs, obtain fast solutions to business problems. This can equate to a cost savings of \$10K.**



**Mentors get exposure to new ideas, access to data or other scientific resources, networking, potential for long-term collaboration.**

## The Program

The *MathIndustry* program is offered each summer over the course of 4 weeks. The program combines a two-week training bootcamp in programming and business skills with a two-week intensive team-based project. Interdisciplinary teams, anchored with academic and industrial mentors, will be convened to focus on industrial problems. Teams are supported with resources to facilitate effective collaboration. The bootcamp and team project together give students the experience of integrating classroom learning with work experience, making graduates of our program uniquely qualified. The MathIndustry program builds on more than 20 year of PIMS experience offering other industrial training opportunities, such as Industrial Problem Solving Workshops (IPSW):

*The IPSW provides an opportunity for industry professionals to pose difficult real-world research problems to highly-qualified graduate students in a focused collaborative environment and see quality results in a short period of time, while making connections that often lead to valuable recruitment opportunities.*

**Matt McDonald, Office of the CTO, Fotech Solutions**

Starting in 2020, our program is convened virtually. This has the benefit of allowing us to easily recruit students from a broad geographic region, with preference given to students enrolled in PIMS member universities.

## Become Part of the Team!

You could be part of the next MathIndustry workshop! The next workshop is coming soon. We are seeking problems for our teams, and sponsors. Contact us!

Kristine Bauer  
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Chair, PIMS Industry Committee

## 2020 Industry Partners

- Aerium Analytics Inc. • ATCO Ltd. • BC Financial Services Authority • Cenovus Energy Inc.
- The Divi Project • Environmental Instruments Canada Inc. • Fotech Solutions
- IOTO International Inc. • McMillan-McGee Corporation • Ovintiv Inc.