



## **Ph.D. Positions in AI applications for predictive maintenance**

Start date: January/May/September 2019  
Funding: 4-year PhD scholarship/fellowship

Working at [the University of British Columbia](http://www.ubc.ca) means being part of a prestigious school that consistently ranks among the top 30 universities worldwide. We boast one of the most dynamic university campuses in North America. The campus is set at the edge of the Pacific Ocean in the view of the Coastal Mountains. (Vancouver has been continuously chosen as the world's most livable city! No other place in the world can compete with its setting on the Pacific Ocean, its sandy beaches, lush forests, beautiful parks and towering snow-capped mountains.) At UBC, we foster a culture of respect and inclusion in the workplace. We promote a healthy work-life balance through flexible working hours and on-campus sports facilities and daycare. UBC's entrepreneurial perspective encourages students, staff and faculty to challenge convention, lead discovery and explore new ways of learning.

Multiple Ph.D. positions are available for graduate students to pursue research at the University of British Columbia, Faculty of Applied Science in the areas of (1) machine learning applications for predictive maintenance, (2) Industrial Internet of Things (IIOT), (3) embedded sensors for process monitoring under extreme environments, (4) high-performance computing (CUDA, MIC), (5) application of VR/AR in process industry, (6) cloud computing for big data analytics for industrial process automation and control, (7) advanced manufacturing (3D prototyping, flexible circuits) starting from January 2019.

Digitalization of industrial assets is enabling the capture and the real-time transmission of information about the system condition. The collected data is typically of varied nature, collected from an array of disparate sensors, and include images (2D & 3D), video streams, and high-resolution state data that are increasingly massive, offering an opportunity for real-time system condition monitoring and health diagnostics. Yet, the traditional model- and knowledge-based approaches are particularly difficult to implement as a result of a sheer amount of data that are too demanding in resource usage. The projects will tackle the challenge of effectively using the diverse, high-dimensional, high-frequency condition monitoring data of industrial assets to improve availability and resilience of the assets.

We are looking for enthusiastic, hard-working, and self-motivated candidates holding a M.S. degree in engineering, computer science, applied mathematics, physics, or related fields. The successful candidate should have strong analytical skills, and be proactive with strong problem solving abilities and out-of-the-box thinking. Experience in at least one of the following is desirable but not necessary: Python, MATLAB, and C++ programming, predictive maintenance, machine and deep learning, cloud computing, OpenMP/MPI, electronics, or distributed sensor networks. Interested candidates should send their CV (clearly indicating their academic ranking and experience), academic transcripts, English test scores, and names of three references to the email address indicated below.

Positions include competitive scholarship and fellowship packages that will be awarded based on merit (starting scholarship package is around \$30,000/year). Industrial AI is one of the fastest growing engineering disciplines with exciting employment prospects in both academia and industry. UBC promotes innovative technology commercialization, invented by university researchers, and encourages scientists to promote their researches and expand them towards industrial and implementational initiatives.

Professor Name: Dr. Sanja Miskovic  
Email: [sanja.miskovic@ubc.ca](mailto:sanja.miskovic@ubc.ca)  
Phone: (604) 827-0326  
Laboratory: Laboratory for Process Intensification in Mineral Engineering