



**CIADI  
Summer  
School 2017**

## CIADI and The Research Centre on Advanced Manufacturing: Industry 4.0 Summer School 2017

Montreal is Canada's aerospace capital and the 3rd largest aerospace hub in the world. The Concordia Institute of Aerospace Design and Innovation (CIADI) is a key player in this dynamic sector, offering hands-on experience and vital networking opportunities.

This summer, CIADI and The Research Centre on Advanced Manufacturing welcomes students and industry professionals to the Industry 4.0 Summer School.

Industry 4.0 is the digitization of a company's physical assets and the company's integration into digital ecosystems with its value chain partners, from suppliers to customers. It uses smart technology and real-time data to increase flexibility, customization, efficiency and productivity, and to reduce time, costs and innovation cycles. Industry 4.0 will require innovation on two fronts: smart products and smart processes. It will also require substantial change to the workforce, which will need to be trained and skilled to work in an Industry 4.0 environment; this is one of the biggest challenges of the fourth industrial revolution.

The Summer School is an opportunity to advance your technical skills, network with colleagues and visit industry partners. In this three-day summer school, come learn about the challenges and solutions that will prepare industry and academia for the advent of Industry 4.0.

### **HIGHLIGHTS:**

- Renowned Speakers
- Full day hands-on workshop
- Lab Visits
- Networking cocktail and dinner

Participants who successfully complete the program will be granted a certificate attesting to the successful completion of the CIADI Summer School.

This program qualifies towards admissible OIQ credits subject to the attendees' verification.

**Schedule:** Monday June 19 –Wednesday June 21st 2017, 9 p.m. – 5 p.m.

**Admission:** The Aerospace Summer Program welcomes industry professionals, graduate students and prospective graduate students. Participants should have a relevant degree in engineering (e.g., aerospace, mechanical, electrical), or professional experience in the aerospace industry.

For more information, please visit: [concordia.ca/encs/academics/summer](http://concordia.ca/encs/academics/summer)

# EXPERIENCE SUMMER IN MONTREAL!



## Montreal International Jazz Festival

June 28 - July 8

[montrealjazzfest.com](http://montrealjazzfest.com)

### PROGRAM FEES:

Summer School program: \$1450 plus tax

Reduced rate for students: \$550 plus tax

One-day registration: \$550 plus tax

Reduced rate for graduate students: \$250 plus tax

### REGISTRATION AND PAYMENT:

To register for the event please visit: [genesis.concordia.ca/events/EI704001](http://genesis.concordia.ca/events/EI704001)

### LOCATION:

The program will be offered in the Engineering, Computer Science and Visual Arts Integrated Complex, at 1515 Ste. Catherine West in beautiful downtown Montreal.

### HOUSING

Optional housing is available in the Grey Nuns Residence, steps away from the Engineering, Computer Science and Visual Arts Integrated Complex.

[concordia.ca/students/housing/summer](http://concordia.ca/students/housing/summer)

### PROGRAM

Time	DAY 1 June 19	DAY 2 June 20	DAY 3 June 21
9:00	Industrial Resource Revolution: Canada's role in the International Market	Artificial Intelligence: A Pillar of Industry 4.0	FESTO Hands-on Workshop: Industry 4.0: From theory to practice
10:00	Keynote: Industrie 4.0: Getting Started	Design and Additive Manufacturing: from 3D to 4D Printing	
11:00	Coffee Break	Coffee Break	Coffee Break
11:15	A new of digital collaboration era with Industry 4.0: People + Assets + Data	Lab Visit: The Computer Security Laboratory	FESTO Hands-on Workshop: Industry 4.0: From theory to practice
12:30	Lunch	Lunch	Lunch
1:30	Green advanced manufacturing technologies	APN, A transformation to Industry 4.0	FESTO Hands-on Workshop: Industry 4.0: From theory to practice
2:45	Coffee Break	Coffee Break	Coffee Break
3:00	Lab Visit: Faculty Research Center on Advanced Manufacturing: Electrochemical Green Engineering Group	Qualification for Industry 4.0: FESTO	FESTO Hands-on Workshop: Industry 4.0: From theory to practice
5:00	Evening Cocktail	Free Evening	Closing Dinner

## SPEAKER BIOGRAPHIES:

**Alex Beliaev** has a strong operational background, with over 20 years of experience in clean tech, energy, transportation, manufacturing and aerospace industries. As the Director Global Trade and Investments at EDC, Alex is responsible for developing strategies and relationships to expand export opportunities for Canadian companies in foreign markets. He is also responsible for developing financing and investment solutions for large-scale infrastructure and power projects in international markets. Alex has a Bachelor of Mechanical Engineering from McGill University and an MBA from the John Molson School of Business.

**Michael Gardiner** is the Director of Industry Strategy for Siemens Canada. In his current role, he provides guidance on Industry 4.0 and digitalization to a broad range of companies. For over 19 years, Michael has helped manufacturing firms add advanced capabilities that enhance designs, optimize production and extend services in the global automotive, high tech, machinery, aerospace, defense and energy industries. Michael earned a Bachelor of Applied Science (Honours) in Mechanical Engineering from Queen's University and a Kellogg-Schulich Executive MBA.

**Dr. Tsz Ho Kwok** is an Assistant Professor in the Department of Mechanical and Industrial Engineering at Concordia University, Montreal, Canada. Before joining Concordia, he was a Postdoctoral Research Associate in the Epstein Department of Industrial and Systems Engineering at the University of Southern California. He received his Ph.D. in Mechanical and Automation Engineering from the Chinese University of Hong Kong. His research interests include computer-aided design and manufacturing, geometric and solid modeling, medical devices, robotics and advanced manufacturing. Dr. Kwok has received several awards including the 13th International Conference on CAD/CG Best Paper Honorable Mention, the 8th Chinese Youth Science and Technology Innovation Prize, the Microsoft Research Fellowship Nomination Award and the CUHK Postgraduate Research Output Award.

**Turki Fares** joined Festo Didactic after graduating in Industrial Engineering in France in 2014, where he has been leveraging his international background into developing the Industry 4.0 innovation cell by engaging with major actors across the world and building the necessary tools to further the understanding of Industry 4.0 in Quebec.

**Marie-Pier Gregoire** joined Festo Didactic Canada in September 2015 and is responsible for the development and communication of the collaboration platform – an online community of teachers in technical education. Before that, she obtained her Master's degree in Business Administration (MBA) in Marketing at Laval University (Quebec, Canada) and worked as a Marketing Coordinator for a Quebec-based construction company.

**Yannick Larrivée** has 18 years of experience in industrial software architecture and design with bachelor's degrees in computer science and chemistry. He has a proven track record of successful international industrial IT projects, for industries such as pulp and paper, ferrous and non-ferrous metals, energy, petrochemicals and industrial gases providing innovative and successful industrial IT solutions. He is recognized by peers and clients to be an excellent communicator and problem solver.

**Michel Lessard** joined Festo Didactic Canada in January 1982 and acted as a Project Engineer, as Director of Engineering, Director of Manufacturing, and Vice President of Operations. He now manages the development of the collaboration platform, T.EACH. As director of manufacturing and interested in process optimization before the advent of Industry 4.0, Michel and his colleagues implemented a homemade MRP called Synchro at the Festo Didactic Canada plant. This software is still running and will soon be connected with SAP as the main manufacturing module for this business unit.



**Dr. Homayoun Najjaran** is a Professor in the School of Engineering, the University of British Columbia (UBC). He received his Ph.D. in Mechanical and Industrial Engineering from the University of Toronto in 2002. He worked as a Research Officer at the National Research Council Canada where his research focused on the development of sensor and robotic systems. He joined UBC and founded the UBC Advanced Control and Intelligent Systems (ACIS) Laboratory in 2006. His research focuses on the analysis and design of mechatronics and control systems with broad applications including unmanned ground and aerial vehicles, industrial automation and microelectromechanical systems. Over the past decade, he and his students have contributed to multiple aspects of safe and reliable operation of robots through computer vision, artificial intelligence and machine learning techniques. Dr. Najjaran is a professional engineer, Fellow of CSME and President of Advanced Engineering Solutions Inc., which provides design and technical consultation services to the automation industry.

**Mr. Yves Proteau** worked for four years as a consultant for DMR Group after he got a Bachelor's and a Master's degree in Business Administration (MBA). He then started a fourteen-year career at Julien Inc. He began his tenure as Head of ERP Implementation. He became the VP of Production and co-owner of the Company. When he left Julien Inc., he returned to the consultation business for a year before joining his brother, Jean Proteau, in the manufacturing industry in 2004. He became the co-owner of APN in 2005. He is now Co-President of APN.

**Dr. Rolf Wuthrich** has been an Associate Professor in the Department of Mechanical and Industrial Engineering at Concordia University, Montreal since 2006. He is leading a research laboratory on advanced manufacturing with a special focus on electrochemical technologies to meet the demands of Industry 4.0. Together with Posalux SA, his group developed a novel glass micromachining technology allowing for the lean production of ultra-customized glass parts. He is also active in 3D printing where he develops post-processing technologies able to handle complex shapes including narrow inner surfaces. He recently founded the research Center for Advanced Manufacturing (CAM). CAM's mission is to integrate the advanced manufacturing specializations into a world class "Industry 4.0 smart factory" environment.

