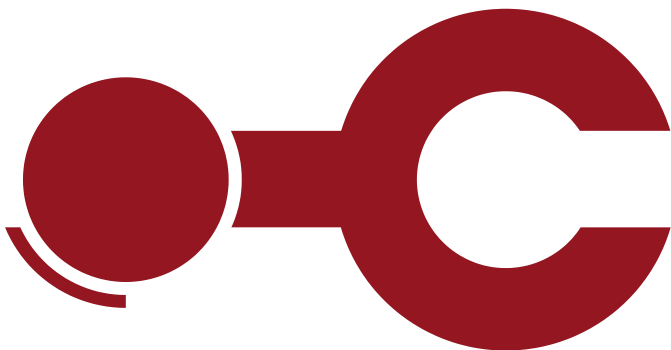


CENTRE NATIONAL DES ARTS
COLLOQUE
SEPTEMBER 22 | OTTAWA
SYMPOSIUM
NATIONAL ARTS CENTRE

20

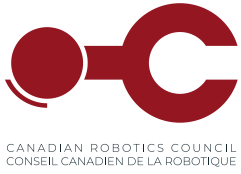
22



AGENDA AND
PARTICIPANTS LIST

ORDRE DU JOUR
ET LISTE DES
PARTICIPANTS

CANADIAN ROBOTICS COUNCIL
CONSEIL CANADIEN DE LA ROBOTIQUE



CANADIAN ROBOTICS COUNCIL 2022 SYMPOSIUM SCHEDULE

SEP 22 | NATIONAL ARTS CENTRE | OTTAWA

08:30 **Registration & Coffee**

09:00 **Opening Remarks & How We Got Here**
Hallie Siegel, University of Toronto Robotics Institute

09:15 **Canadian Robotics Council Mission & Purpose**
Ryan Gariepy, Clearpath & OTTO Motors

09:30 **Canadian Robotics Landscape and SWOT Analysis**
Kyle Van Hooren and Riley White, Avascent
Q&A Moderated by Charles Deguire, Kinova

10:15 **Coffee Break**

10:30 **Pan-European Robotics Networks: An Insider's Perspective**
Florian Krebs, German Aerospace Centre (DLR)
Q&A Moderated by Bruno Monsarrat, National Research Council

11:15 **How Open-Source Standards Grow Robotics Ecosystems**
Brian Gerkey, Open Robotics
Q&A Moderated by AJung Moon, McGill University

12:00 **Catered Lunch & Networking**

13:00 **Workshop Session #1**
What can robots do for Canada now? And why haven't we been more successful at helping Canadian industries adopt them?

14:30 **Coffee Break**

14:45 **Workshop Session #2**
How can we facilitate and support adoption of robotics to help make Canadian industries more globally competitive? How can we help each other collectively?

16:00 **Water Break**

16:15 **Workshop Session #3**
What small next actions can we take? Where do you have discretion and freedom to act now?

17:00 **Closing Remarks**

17:15 **Reception Dinner**

SPONSORED BY



Un message des coprésidents

Le Conseil canadien de la robotique a été créé avec une mission : aider les Canadiens à profiter des technologies robotiques qui ont le potentiel d'alimenter le développement économique, la compétitivité mondiale, la productivité et l'amélioration de la sécurité.

Des investissements précoces et soutenus en robotique, à partir de 1975 avec le bras spatial canadien, ont établi la réputation du Canada en tant qu'acteur international clé dans le domaine de la robotique. Plus récemment, des initiatives complémentaires telles que la Stratégie pancanadienne sur l'intelligence artificielle, l'Initiative des supergrappes (maintenant appelées grappes mondiales d'innovation du Canada) et le programme Canadarm3 visent à poursuivre cette lancée.

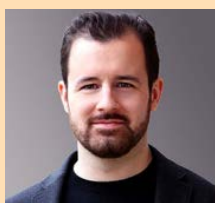
Mais la réalité est que le Canada n'adopte pas les technologies robotiques existantes et facilement disponibles qui pourraient aider les entreprises canadiennes à être plus productives et résilientes, et aider à assurer la sécurité des Canadiens et des Canadiennes. De plus, ce retard dans l'adoption des technologies de base nuit considérablement au développement et au déploiement des technologies robotiques de nouvelle génération.

Un dialogue national régulier et soutenu sur la robotique doit être établi entre l'industrie, les chercheurs, les décideurs et les investisseurs si les industries canadiennes veulent demeurer compétitives à l'échelle mondiale. Lors de notre premier symposium du Conseil canadien de la robotique, nous visons à répondre à trois questions simples :

1. Que peuvent faire les robots pour le Canada en ce moment ?
2. Pourquoi les industries canadiennes n'en utilisent-elles pas davantage ?
3. Quelles mesures pouvons-nous prendre collectivement, en tant que leaders technologiques de l'industrie, du gouvernement et de la recherche, pour aider les industries canadiennes à tirer le meilleur parti de la robotique

Nous attendons avec impatience votre contribution alors que nous définissons les priorités du Conseil pour les années à venir !

Sincèrement,



Ryan Gariepy
CLEARPATH &
OTTO MOTORS



Hallie Siegel
UNIVERSITY OF
TORONTO

A message from the Co-Chairs

The Canadian Robotics Council was formed with a mission: to help Canadians benefit from the robotics technologies that are poised to fuel economic development, global competitiveness, productivity, and improved safety.

Early and sustained investments in robotics, starting in 1975 with the Canada Space Arm, established Canada's reputation as a key international player in robotics. More recently, complementary initiatives such as the Pan-Canadian Artificial Intelligence Strategy, the Supercluster Initiative (now Canada's global innovation clusters), and the Canadarm3 program promise to continue this trend.

But the hard truth is that Canada is not adopting existing and readily available robotics technologies that could help Canadian businesses be more productive and resilient, and help Canadians be safer. Furthermore, this lack of basic adoption is hurting us when it comes to developing and deploying next-generation robotics technology.

A regular and sustained national dialogue on robotics must take place between industry, researchers, policy makers, and investors if Canadian industries are to remain globally competitive. In our inaugural Canadian Robotics Council Symposium, we aim to answer three simple questions:

- 1. What can robots do for Canada right now?*
- 2. Why aren't Canadian industries using more of them?*
- 3. What actions can we -- as technology leaders from industry, government, and research -- collectively take to help Canadian industries leverage robotics to their fullest?*

We look forward to your input as we shape the Council's priorities for the coming years!

Sincerely,



Ryan Gariepy
CLEARPATH &
OTTO MOTORS



Hallie Siegel
UNIVERSITY OF
TORONTO

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CANADIAN ROBOTICS COUNCIL
CONSEIL CANADIEN DE LA ROBOTIQUE

Morning Panel/Panel du Matin

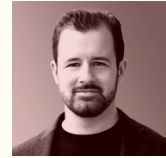
Opening Remarks

How did we get here? What is the Council's Mission, Vision and Purpose?

The Council's Executive Committee Co-Chairs will provide a brief history of Canadian robotics and set the stage for what's to come.



Hallie Siegel
UNIVERSITY OF
TORONTO



Ryan Gariepy
CLEARPATH &
OTTO MOTORS

Canadian Robotics Landscape and SWOT Analysis

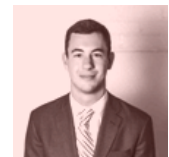
Avascent will present an overview of the robotics ecosystem in Canada based on a study commissioned by Innovation, Science and Economic Development Canada (ISED). The presentation will highlight key metrics unique to the Canadian robotics industry, including geography, size, sector and type. It will touch on some of the unique challenges and opportunities most relevant to senior decision-makers. An open Q&A with ISED and Avascent will follow.

Avascent présentera un aperçu de l'écosystème robotique au Canada basé sur une étude commandée par Innovation, Sciences et Développement économique Canada (ISDE). La présentation mettra en évidence les paramètres clés propres à l'industrie canadienne de la robotique, notamment la géographie, la taille, le secteur et le type. Il abordera certains des défis et opportunités uniques les plus pertinents pour les décideurs de haut niveau. Une séance de questions-réponses ouverte avec ISDE et Avascent suivra.

SPEAKERS

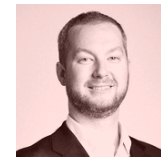


Kyle Van Hooren
SENIOR MANAGER,
AVASCENT



Riley White
SENIOR ANALYST,
AVASCNET

SESSION CHAIR



Charles Deguire
PRESIDENT & CEO,
KINOVA

Pan-European Robotics Networks: An Insider's Perspective

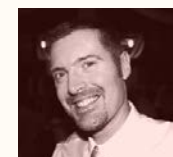
Florian Krebs, German Aerospace Centre (DLR)
Q&A Moderated by Bruno Monsarrat, National Research Council Canada

SPEAKER



Florian Krebs
GERMAN AERO-
SPACE CENTRE (DLR)

MODERATOR

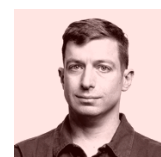


Bruno Monsarrat
TEAM LEADER,
NRC CANADA

How Open-Source Standards Grow Robotics Ecosystems

Brian Gerkey, Open Robotics
Q&A Moderated by AJung Moon, McGill University

SPEAKER



Brian Gerkey
OPEN ROBOTICS

MODERATOR



AJung Moon
MCGILL UNIVERSITY

Afternoon workshop

Atelier de l'après-midi

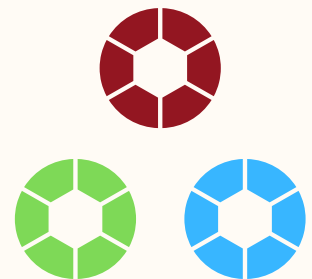
In this working session, you will strategize with members of the Canadian robotics ecosystem on how to best support and leverage Canada's growing robotics sector to ensure a bright future for Canadians in the new global economy.

Au cours de cette séance de travail, vous élaborerez des stratégies avec les membres de l'écosystème robotique canadien concernant la meilleure façon de soutenir et de tirer parti du secteur robotique en pleine croissance du Canada pour assurer un avenir prometteur aux Canadiens et aux Canadiennes dans la nouvelle économie mondiale.

Session #1

DISCUSS WITH AFFINITY GROUPS: Please sit with either Industry (red numbers), Government (blue numbers), or Research (green numbers).

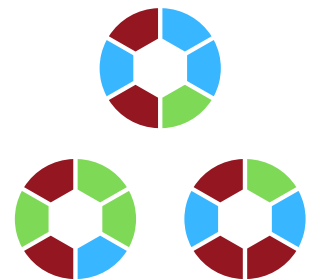
What can robots do for Canada now? And why haven't we been more successful at helping Canadian industries adopt them?



Session #2

DISCUSS WITH MIXED GROUPS: Each affinity group will count off to rotate into mixed groups.

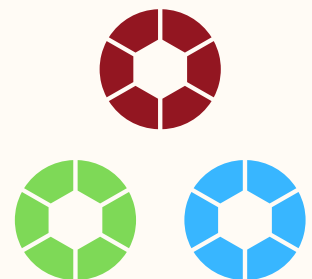
How can we facilitate and support adoption of robotics to help make Canadian industries more globally competitive? How can members of Canada's robotics ecosystem help each other collectively?



Session #3

RETURNING TO AFFINITY GROUPS

What small next actions can we take? Where do you have discretion and freedom to act now? What can you do without more resources or authority?



Participants

A&K ROBOTICS

www.AandKrobotics.com



Jessica Yip
COO AND CO-FOUNDER

Jessica Yip is COO & Cofounder of A&K Robotics, a self-driving technology company developing micromobility solutions to improve accessibility & customer experience in airports. Driven by a passion to make helpful robots for society, she oversees the company's robotic deployments, including customer training & support programs. With 10+ years in operations from high-tech, to real estate to hospitality, she ensures A&K is a capital-efficient company that stays on track to hit milestones & exceed customer expectations. Before A&K, she was Operations Manager for an asset portfolio worth \$250M and a team of leasing agents. She's also led social development initiatives focused on youth empowerment as a program facilitator in Vanuatu. Today she enjoys volunteering to promote STEM careers for girls.

Keywords:
MOBILITY,
START-UPS,
INDUSTRY,
OPERATIONS

Avidbots

www.avidbots.com



Pablo Molina
CTO, VP OF PRODUCT, CHAIRMAN

Since 2014, Avidbots has been designing, manufacturing, selling, servicing and supporting autonomous cleaning robots that expand human potential, achieving many industry firsts along the way. Our ground-breaking, fully autonomous floor scrubbing robot, Neo 2™, is widely deployed by the world's leading facilities, including airports, warehouses, manufacturing sites, malls, universities and other commercial spaces worldwide.

Keywords:
MOBILE ROBOTS,
INDOOR NAVIGATION,
PRODUCT MANAGEMENT

CALIAN

www.calian.com



Kevin Harper
BUSINESS DEVELOPMENT MANAGER

Calian delivers a wide range of services and solutions for the Aerospace and Defence industry as the largest industry segment we deliver solutions to.

We deliver complex Aerospace and Defence solutions around the globe including: Training for military around the world including NATO, ground communication installations for the SatCom industry, manufacturing and testing of components for military equipment, cyber security and digital solutions, professional services and engineering services for a wide range of aerospace and military job roles.

Keywords:
HARDWARE,
SOFTWARE,
ELECTRONICS,
ENGINEERING,
SATELLITE COMMS, RF
SYSTEMS, ANTENNAS,
CONTROL SYSTEMS

ANUBIS 3D

www.anubis3d.com



Tharwat Fouad
PRESIDENT

Founder and President of Anubis Corporation and Anubis 3D, Tharwat draws upon years of solid experience in Engineering Management with Procter & Gamble, Apotex Pharmaceutical and Anubis Corporation, where he managed a variety of functions including Project Management, Engineering and Operations. He established Anubis 3D with the objective of transforming the additive manufacturing from a prototyping industry to a viable production technology.

Keywords:
LIGHT WEIGHT 3D
PRINTED END OF ARM
TOOLING SUPPLIER

Tharwat is the inventor of the first optical solids flow meter - a breakthrough in solids flow measurement. He also holds several other patents in the powder handling industry. Tharwat has managed in the Billion dollars range in several manufacturing industries including Chemical Process Automation, Consumer Good, Food and Beverage, Automatic Packing lines, Logistics & Material Handling, Spray Drying Towers and Pharmaceutical

AVASCENT

www.avascent.com

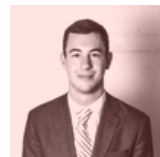


Kyle Van Hooren
SENIOR MANAGER

Kyle Van Hooren is a Senior Manager for Avascent's Ottawa office, where he provides advice to clients in government and industry on key challenges with innovative markets.

Keywords:
SPACE & ADVANCED
TECHNOLOGIES

In the past 18 months he has led and managed multiple engagements across the space, quantum, robotics, and cleantech value chains. Prior to joining Avascent Kyle graduated from the University of Toronto with a Masters of Global Affairs.



Riley White
SENIOR ANALYST

Riley White is a Senior Analyst out of Avascent's Ottawa office, and a leading member of Avascent Digital.

He provides clients with rigorous data analytics to help inform decision-makers in government and industry.

Keywords:
CONSULTING,
STRATEGY,
AEROSPACE,
DEFENCE, DIGITAL
TRANSFORMATION

Prior to joining Avascent, Riley graduated from Western University and the Ivey Business School with a dual degree in Civil Engineering and Business.



www.asc-csa.gc.ca



Frédéric Pilote CONSEILLER PRINCIPAL, POLITIQUES DE L'EXPLORATION

Frédéric Pilote has been working at the Canadian Space Agency for 15 years and is currently holding the position of Senior Advisor, Space Exploration policy with the Policy branch. Among his key files, Frédéric has been involved over the last few years on the Canadarm3 program, Canada's contribution to the NASA-led Lunar Gateway. His interest in robotics is related to R&D, technology transfers and commercialization opportunities stemming from space robotics programs.

Keywords:
POLICY, SPACE EXPLORATION, CANADARM3



Steeve Montminy SYSTEMS MANAGER

Steeve Montminy is Manager, Robotics and Systems in Space Exploration Development Directorate at the Canadian Space Agency. He has a Bachelor and a Master degree in Mechanical Engineering from École de technologie supérieure in Montréal. Before his position in Space Exploration, Steeve was Manager, Suborbital Demonstration, responsible for the demonstration of future space technologies in near-space environment. Steeve was also Program Manager of the CSA's stratospheric balloon program STRATOS in collaboration with the Centre national d'études spatiales (CNES) from 2014 to 2019.

Keywords:
STRUCTURE, SPACE MECHANICS, TECHNOLOGY DEVELOPMENT, ROBOTICS, ENGINEERING, SUBORBITAL



www.edc.ca



Erik Brien-Wright INVESTMENTS MANAGER - ADVANCED MANUFACTURING

Private equity & wealth management professional with ~15 years of experience. Currently working at Export Development Canada as an Investments Manager, looking to invest in Canadian exporters within the advanced manufacturing, industrials and extractive space.

Keywords:
PRIVATE EQUITY INVESTMENTS, VENTURE CAPITAL, EXPORTS, FINANCING, ADVANCED MANUFACTURING

EDC Investments is an evergreen program with ~ \$3B in committed and invested capital. We invest independently or in partnership with other market participants under standard industry terms, conditions and return expectations.



Sean Edgcombe SENIOR ASSOCIATE, PRIVATE EQUITY INVESTMENTS

Sean is a Senior Associate with Export Development Canada's Investments group, a C\$3B evergreen private equity program investing in Canadian companies with a compelling export profile, including Clearpath Robotics and ATAbotics.

Keywords:
PRIVATE EQUITY, CAPITAL, FINANCING



Constance Griffin GROWTH SOLUTIONS DIRECTOR

Leading teams that help fast scaling mid-market companies by addressing gaps impeding (export) growth, period to joining EDC I spent over 20 years working with technology companies helping them bring new products to market across multiple market sectors

Keywords:
PRODUCT DESIGN & ENGINEERING, MANUFACTURING, PRODUCT COMMERCIALIZATION



www.createch.ca



Marie-Christine Lalonde SENIOR CONSULTANT

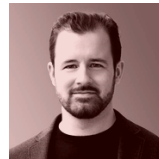
Over 20 years of professional experience in operational team management, manufacturing strategy, new technology introduction, lean improvement and change management primarily in the aeronautic industry.

Keywords:
4.0 AUDITS, OPERATIONAL STRATEGY, ERP GREENBELT CERT, PROJECT MANAGEMENT

Consulting experience through diagnostics, ERP implementation, transformation strategy and process improvements.



www.ottomotors.com



Ryan Gariepy CTO

Ryan Gariepy is co-founder and CTO of both Clearpath Robotics and OTTO Motors, where he leads Canada's largest and most experienced mobile robotics development team. He serves on the board of the NSERC Canadian Robotics Network, Open Robotics, is a co-founder of the Robot Operating System Developers' Conference, and recently co-founded the Canadian Robotics Council. He helped found the Next Generation Manufacturing Canada initiative and was an inaugural faculty member of Singularity University Canada. Ryan completed both a B.A.Sc. degree in Mechatronics Engineering and a M.A.Sc. degree in Mechanical Engineering at the University of Waterloo. He is a senior member of the IEEE and has over sixty pending patents.

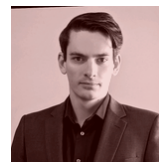
Keywords:
AUTONOMOUS ROBOTS, PRODUCT MANAGEMENT, STARTUPS & SCALEUPS, ENGINEERING MANAGEMENT, COMMERCIALIZATION



Jay Judkowitz VP, PRODUCT

Jay is the VP of Product at OTTO Motors where he is responsible for OTTO's Product Management, Program Management, User Experience, Documentation, Product Marketing, and Technical Marketing. Jay has been managing products for the last 18 years and has been at OTTO for the last two and a half years. Before that, Jay had long tenures with leading technology companies like Intel, VMware, and Google Cloud. After 21 years in Silicon Valley, he immigrated to Canada and now resides in Kitchener, Ontario where OTTO is headquartered. Jay has always been excited about technology, but is more motivated by product impact than the technology itself.

Keywords:
PRODUCT MANAGEMENT, ROBOTICS, CLOUD, DATA, ANALYTICS, ROBOTICS, MATERIAL HANDLING



James Servos DIRECTOR, PERCEPTION

James currently works at Clearpath as the Director of Perception, overseeing all perception technology and software development for the OTTO Motors division and external research initiatives and partnerships. James received his B.A.Sc in Mechatronics Engineering from the University of Waterloo and his M.A.Sc with the Waterloo Autonomous Vehicles Lab. He has 10+ years of experience developing perception technologies for self-driving vehicles and has authored over a dozen publications including academic papers and patents. James currently serves on the Steering and Scientific Review Committee for the NSERC Canadian Robotics Network and recently joined the Research Committee for the Canadian Robotics Council.

Keywords:
PERCEPTION, SLAM, MAPPING, LOCALIZATION, SENSOR FUSION, SENSORS, MACHINE LEARNING, MOBILE ROBOTICS.



Paul Mitten

VICE-PRESIDENT

Paul Mitten is Vice-President and Co-owner of Compusult Limited, a multi-national IT/Electronics/Robotics firm, headquartered in Mount Pearl, NL, that's been in operation for 37 years, primarily serving clients in aerospace, defence, government, and education sectors. Mr. Mitten has been active in the IT industry for 43 years, managing projects for a diverse array of customers worldwide. Mr. Mitten leads most of Compusult's R&D projects and international marketing and business development. He also directs design and development of software for Compusult and its clients, electronics products, robotics systems, item tracking solutions, and Assistive Technology products for persons with disabilities.

Keywords:
PROJECT
MANAGEMENT,
SYSTEM DESIGN,
INTEGRATION, UGVs,
PARTNERING



Federal Economic Development
Agency for Southern Ontario

Agence fédérale de développement
économique pour le Sud de l'Ontario



Ken McConnell

MANAGER, INDUSTRIAL & TECHNOLOGICAL
BENEFITS

Manager of FedDev Ontario's aerospace and defence unit working to support economic growth in southern Ontario from large defence procurements and other business opportunities. A professional with 28 years of experience including the provision of strategic advice which reflects an outstanding knowledge of governmental policy and operations, political dynamics and processes, and of private sector priorities and economic drivers.

Keywords:
AEROSPACE DEFENCE
DEFENCE
PROCUREMENT
POLICY STRATEGY

GENERAL DYNAMICS

Land Systems–Canada



Richard Lee

SENIOR ENGINEER INNOVATION CELL

Richard Lee is a licensed Professional Engineer (P. Eng) and Senior Engineer in the Innovation Cell at General Dynamic Land Systems of Canada with 20 years of experience in Gasdynamics, Finite Element Analysis (FEA), Computational Fluid Dynamics (CFD), mobile robotics, deep learning, augmented reality application and survivability armor vehicle design.

He is the inventor of the patented W-shaped hull concept, which has been adopted by the Canadian Armed Forces, U.S. Army, and other international military forces as their mine blast survivability solution for light armor vehicles (LAV).

Richard now leads a multi-disciplinary team in the Innovation Cell focusing on disruptive technology development, academic collaboration, and concept generation. He has a Bachelor of Applied Science (B.A.Sc) degree in Mechanical Engineering from the University of Waterloo, and a Master of Applied Science (M.A.Sc.) degree from the University of Toronto Institute for Aerospace Studies (UTIAS).

Keywords:
ROBOTICS, AUTONOMY,
ARTIFICIAL
INTELLIGENCE, AI,
CONTROL, DEFENSE,
OFF-ROAD

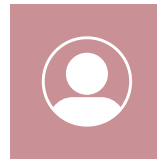


Jean-Luc Bedwani

CHERCHEUR

During my studies in computer engineering from Sherbrooke University, I've been introduced to the research domain when working at Défense Research Establishment Ottawa. I pursued in the research and development of embedded systems in an industrial context to create innovative Video over IP and digital X-ray systems. In 2009, while working at the Canadian Space Agency, I've obtained my Master degree in a joint study at François Michaud's Lab. I then started to work at IREQ as a computer vision researcher within Hydro-Québec's robotic department. My current research interests are on AI technologies applied to mobile robotics.

Keywords:
COMPUTER VISION,
3D, LIDAR, POINT
CLOUD, AI, MOBILE
ROBOT



Ramzi Asfour

ASSOCIATE DIRECTOR (ADMINISTRATION)

The Ingenuity Labs Research Institute at Queen's University is an interdisciplinary initiative at Queen's University focused on combining Artificial Intelligence, Robotics, and Human Machine Interaction to create future intelligent systems and robotic machines that enhance human productivity, safety, performance, and quality of life. Dr. Joshua Marshall (Director), Dr. Amy Wu (Robotics Lead), and Ramzi Asfour (Associate Director) will be in attendance.

Keywords:
FIELD AND SERVICE
ROBOTICS, MOBILE
ROBOTICS, BIO-
INSPIRED ROBOTICS, AI,
RESEARCH



Sabrina Jocelyn

RESEARCHER

Sabrina Jocelyn has worked at the IRSST since 2008, where she began as a research assistant. She has worked there as a researcher since 2017. She holds degrees in electrical engineering (B.Eng.) and industrial engineering (M.App.Sc. and Ph.D.) from Polytechnique Montréal. She is an adjunct professor at Université Laval and École de technologie supérieure (ETS). She conducts and co-conducts research studies and knowledge transfer activities in the field of machine safety. Her research interests are the safety aspects associated with collaborative robotics, the use of machine learning algorithms for purposes of accident prevention, quantitative risk assessment, validation of the reliability of safety-related control circuits, risk management related to machines in general. She is an expert member on different ISO committees associated with industrial safety in robotics as well as safety of machinery in general.

Keywords:
MACHINERY SAFETY,
COLLABORATIVE
ROBOTICS,
FUNCTIONAL SAFETY,
RISK MANAGEMENT,
MACHINE LEARNING,
ACCIDENT
PREVENTION



Mel Chaar
SENIOR INNOVATION ADVISOR

With nearly three decades in the field and experience working with start-ups and businesses around the world, Mel started his career as a hardware designer at Bell-Northern Research and gained experience from conceptual design realization to manufacturing, Mel pursued his passion for innovation and entrepreneurship by joining several start-ups, and taking on business and market development advisory roles in Europe, the Middle East, Africa, and Asia, where he consulted on the optimal and ethical use of technology in business. Currently, Mel works closely with industry partners in Canada and abroad to increase competitiveness through the investment in Canadian innovation and research.

Keywords:
INNOVATION, RESEARCH, GLOBAL, BUSINESS, COMPETITIVENESS, AGILITY



MEDETECH



Geneviève Lavertu
DIRECTORS, GOVERNMENT AFFAIRS & POLICY

Geneviève Lavertu, LLB, BCL, MSC, is the Director, Government Affairs and Policy at Johnson & Johnson Medical Technology (JJMT) in Canada. She has been active in the Canadian Life Sciences innovation ecosystem - mainly medical technology - in leadership and advisory roles in industry, consulting and medtech accelerator and incubator organizations (OBI, MEDTEQ+, NRC, CQDM)

Keywords:
MEDICAL TECHNOLOGY, DIGITAL HEALTH, STRATEGIC INVESTORS, START-UPS AND SCALE-UPS



Robotics & Automation made simple



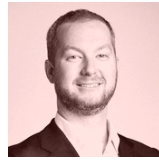
Sougata Pahari
FOUNDER & CEO

Sougata is the Founder and CEO of Korechi Innovations Inc., a company specializing in design of robots for the agriculture and golf industries since 2016.

Sougata has degrees in Mechanical and Materials Engineering with over 6 years of experience in designing, testing and manufacturing electronic hardware for transportation industry in Italy and USA before moving to Canada in 2016.

Sougata has been building robots since 2005 and is well-versed in knowledge and the requirements of the farming community through his interactions with hundreds of farmers.

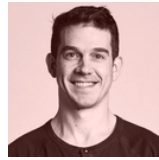
Keywords:
AGRICULTURE ROBOTICS, AGRICULTURE AUTOMATION, OUTDOOR ROBOTS, GOLF ROBOTICS, CONSTRUCTION ROBOTICS



Charles Deguire
PRESIDENT AND CEO

"Charles Deguire is the passionate visionary behind Kinova, a leader of the modern robotics revolution. The organization is experiencing systematic growth by driving robotic adoption in multiple end markets, such as medical, industrial, and academics while making sure to keep a human-first approach. His mission is clear: empower individuals and organizations with better tools, robotic tools, to serve humanity's most pressing needs. From people with disabilities to surgeons, and machinists to factory workers, Charles and his team help them to accomplish more by using robotic solutions.

Keywords:
INNOVATION MANAGEMENT, ELECTRICAL ENGINEERING, HEALTH TECHNOLOGIES, ROBOTICS



Jonathan Lussier
DIRECTOR OF INTEGRATED SOLUTION & IP

After graduating in 2006 from Concordia University in Montreal, I started my career in technology with 10 years in the aerospace industry. Witnessing the rapid rate of innovation in robotics, I transitioned 6 years ago by joining Kinova. Since then, I've held different positions, notably in Advanced Research, as Product Owner, Program Director, Director of Innovation and IP and now much closer to our clients as the director of Integrated Solutions. This transition allows me to follow the adoption of automation and robotics in industry and to open up partnerships that can accelerate this adoption in Canada.

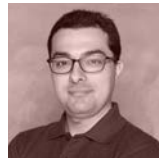
Keywords:
AEROSPACE INDUSTRY, ADVANCED RESEARCH, INNOVATION & IP, INTEGRATED SOLUTIONS



David McFarlane
SENIOR ADVISOR

David has over 20 years of professional experience in business, economic and corporate development, in politics and policy; and a strong track-record of originating and closing investment projects. He has successfully developed and negotiated multi-stakeholder partnerships with institutions, governments, and corporations from across Canada, the United-States, and Europe. Throughout, he's developed relationships of trust, respect, and even friendship with leaders from around the world.

Keywords:
INNOVATION INDUSTRIAL POLICY BUSINESS DEVELOPMENT



Asad Norouzi
TEAM LEAD / PROFESSOR

I am a Robotics & Deep Learning scientist specialized in Autonomous Driving, Autonomous Mobile Robotics, AI, and Computer Vision. I have also been a long time educator. Currently, I am the Algo Team Lead of LeddarTech Toronto Perception Team. I am also a part-time professor at Seneca College.

Keywords:
ROBOTICS, SELF-DRIVING CARS, AI, DEEP LEARNING, COMPUTER VISION



Calum Cawley
ENGINEERING MANAGER - AUTONOMOUS VEHICLE SYSTEMS

Calum is the Product Engineering Manager for the Autonomous Vehicle Systems group at MacLean Engineering. He holds a B.Eng(Honours) in Mechatronics from IT Sligo, Ireland and has spent 10 years working on autonomous vehicle development. His experience spans across multiple sectors including automotive, defence and heavy off-highway vehicles having worked in roles from software development up to commercial and technical leadership. In his current role, Calum leads a focused engineering team developing automated and autonomous features on MacLean's range of underground mining machinery.

Keywords:
MOBILE ROBOTICS, OFF-HIGHWAY AUTONOMY, SYSTEMS ENGINEERING, UNMANNED GROUND VEHICLES



David Jacques
VICE PRESIDENT ENGINEERING

Executive member of North America's largest OEM for underground mining equipment, which serves both domestic and international markets.

Responsible for the full engineering development of over 50 different products including new technology that provides digitization and automation of traditional equipment.

Keywords:
MECHANICAL ENGINEERING, MOBILE EQUIPMENT, PRODUCT DESIGN & DEVELOPMENT



Patrice Corneau
HEAD OF ADVANCE VEHICLE TECHNOLOGIES

Automation in mining.

Keywords:
PROXIMITY, MINING



Parag Patre
MANAGER - ADVANCED ROBOTICS

Dr. Parag Patre is an Engineering Manager for Advanced Robotics group in the corporate research, development and engineering department at Magna, which is a mobility technology company and one of the world's largest automotive suppliers.

Keywords:
ROBOTICS, AI, COMPU-TER VISION, MOTION PLANNING, DIGITAL TWIN, SOFTWARE

He is passionate about robotics and has been developing and applying his expertise in the field to solve real world challenging problems at various agencies and corporations such as NASA, Siemens, TE Connectivity and Magna.



David Meger
ASSOCIATE PROFESSOR

Co-director of McGill's Mobile Robotics Lab, Prof Meger's research focus is in developing novel ML approaches for robotic perception and control. His accomplishments include TD3, one of the world's most widely used deep reinforcement learning methods, state of the art 3D perception methods, innovations in active tactile exploration, and the first continuous time distributional RL formulation.

Keywords:
LEARNING, MARINE ROBOTS, 3D GEOMETRY, SEMANTIC MAPPING, TRANSFER LEARNING

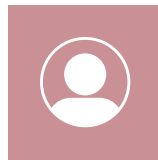
Prof Meger is a member of McGill's Centre for Intelligent Machines, Associate member of Mila, the Quebec AI Institute and incoming general chair of the Conference on Robots and Vision.



AJung Moon
ASSISTANT PROFESSOR

AJung Moon is an experimental roboticist. She investigates how robots and AI systems influence the way people move, behave, and make decisions in order to inform how we can design and deploy such autonomous intelligent systems more responsibly. At McGill University, she is the Director of the McGill Responsible Autonomy & Intelligent System Ethics (RAISE) lab. The RAISE lab investigates the social and ethical implications of robots and AI systems and explores what it means for engineers to be designing and deploying such systems responsibly for a better, technological future. Within the Canadian Robotics Council, she is the Chair of the Research Committee.

Keywords:
HUMAN-ROBOT INTERACTION, ROBOT ETHICS, COLLABORATIVE ROBOTICS, SOCIAL ROBOTICS, AI ETHICS



Inna Sharf
PROFESSOR

Dr. Inna Sharf is a professor in the Department of Mechanical Engineering at McGill University, Montreal, Canada. She is currently also a lead researcher at FPIInnovations. Her general interests are robotics and autonomous systems, with applications to articulated machines for forestry applications, drones and space systems. Sharf has published nearly 200 conference and journal papers on her academic research. She is an associate fellow of AIAA and a member of IEEE.

Keywords:
MANIPULATORS, MOBILE ROBOTS, UAVS, SPACE SYSTEMS, DYNAMICS, CONTROL, MOTION PLANNING



Todd Deaville
VP ENGINEERING AND R&D

Todd has worked for Magna in the automotive industry for 25 years starting with engineering solutions for tool and die and manufacturing production systems. This was followed by various engineering, customer liaison and product development roles in plastics/composites and paint, automotive interiors, lighting, and solar power systems. Todd currently holds the role of VP Factory of the Future, Magna R&D. He received his Masters of Mechanical Engineering Degree from the University of Toronto in 2010.

Keywords:
FACTORY OF FUTURE, AUTOMOTIVE, MOBILITY



Victoria Hodgins
OFFSETS MANAGER, STRATEGY & DEVELOPMENT

Victoria is a contracts specialist with experience supporting procurement activities for the Canadian Government, United States Government, and customers in South America and Europe. As a strategic business partner, she supports complex commercial activities in collaboration with internal and external stakeholders.

Keywords:
CANADA'S INDUSTRIAL AND TECHNOLOGICAL BENEFITS (ITB) POLICY



Tim Reedman
DIRECTOR, INDUSTRIAL SYSTEMS

Tim Reedman is the Director, Industrial Systems at MDA Robotics and Space Operations. He currently leads MDA's portfolio of work in the medical and nuclear sectors, and is a senior advisor on MDA's space programs. Tim has over 35 years' experience in technology projects for space, medical, nuclear, entertainment and other sectors. His expertise includes systems engineering, and the planning, management and direction of multi-disciplinary teams for research and development projects, engineering development programs, operations management, and business development.

Keywords:
SYSTEMS ENGINEERING, R&D, ENGINEERING MANAGEMENT



Stephane St-Andre
PROGRAM MANAGER

For the last 15 years, Stephane is working at MDA Corporation (Montreal Office). He started at MDA as a mechanism engineer prior to switch to management as Subcontract Manager and, then, as a Program Manager. Stephane is managing multiple high technology space programs where the high volume production can leverage robotic technologies.

Keywords:
SPACE, MECHANISM, PROGRAM MANAGEMENT, R&D, ENGINEERING



Joshua Marshall
PROFESSOR

Joshua Marshall, PhD, PEng, is an engineering scientist, educator, and consultant with expertise in systems control, mobile robotics, vehicle navigation and mapping. He has a special interest in and experience with heavy vehicle automation, particularly in mining, space, and defence, as well as in other harsh-environment applications. Dr. Marshall is a Professor in the Mechatronics & Robotics Engineering program at Queen's University and Director of the Ingenuity Labs Research Institute, which is an interdisciplinary initiative focused on combining AI, robotics, and HMI to create future intelligent systems and robotic machines that enhance human productivity, safety, performance, and quality of life.

Keywords:
MOBILE ROBOTICS, SYSTEMS CONTROL ENGINEERING, VEHICLE NAVIGATION AND MAPPING, FIELD ROBOTICS, MINING ROBOTICS



Michele Faragalli
CHIEF TECHNOLOGY OFFICER

Dr. Michele Faragalli is the Chief Technology Officer at Mission Control and concurrently holds an Adjunct Research Professor position in the Department of Mechanical & Aerospace Engineering at Carleton University. Dr. Faragalli leads all product and technology development activities and R&D initiatives at Mission Control, a world leader in space robotics and artificial intelligence. Dr. Faragalli has over 40 academic publications in the fields of mobile robotics, terramechanics, artificial intelligence, planetary exploration and structural and multidisciplinary design optimization. Dr. Faragalli has worked in academia and industry on planetary rover related projects since 2006 with JAXA, the CSA, the ESA and NASA.

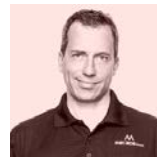
Keywords:
SPACE ROBOTICS, ARTIFICIAL INTELLIGENCE, PLANETARY ROVERS, COMPUTER VISION, MACHINE LEARNING, SPACE EXPLORATION



Emille Rodrigues
BUSINESS DEVELOPMENT SPECIALIST

I am a Business Development Specialist working actively to build partnerships between the industrial and the academic sector, aiming to help businesses to solve innovation challenges in the Ottawa region. Let's connect during the Symposium to discuss funding opportunities that Mitacs can offer to your innovative projects!

Keywords:
BUSINESS DEVELOPMENT, PARTNERSHIPS, FUNDING, INNOVATION, COLLABORATION



Ilian Bonev
CO-FOUNDER AND CO-OWNER

Ilian Bonev has been a professor at the ÉTS since 2004. He teaches industrial robotics, was a holder of the Canada Research Chair in Precision Robotics for ten years, and currently works primarily on the improvement of commercially-available industrial robots. In 2013, he cofounded Mecademic with Jonathan Coulombe, one of his students. Mecademic, based in Montreal, manufactures the smallest, most compact and most precise industrial robot arms.

Keywords:
INDUSTRIAL ROBOTS, COLLABORATIVE ROBOTS, ROBOT CALIBRATION, ROBOT DESIGN



Philippe Beaulieu
EVP - CHIEF COMMERCIAL OFFICER

Philippe Beaulieu is responsible for all product management, marketing, sales and support fonctions at Mecademic Robotics, offering the world's smallest, most compact, and most precise industrial robot arms. The industrial robot arms from Mecademic are automation components that integrate with any PC or PLC and don't require a proprietary programming language. They are used by the world's largest manufacturers in electronics, medical devices, pharmaceutical and many other industries.

Keywords:
ROBOTICS, INDUSTRIAL AUTOMATION, PRODUCT MANAGEMENT, COMMERCIALIZATION, PARTNERSHIPS



Jasper Arthur
RESEARCH ASSOCIATE

Jasper Arthur is a Research Associate with the National Research Council of Canada at the Brookside advanced manufacturing research facility. His background is in mechanical engineering, with a Master's in optimizing robotic commands to reduce the number of individual joint reversals during a drilling motion. His current research explores the applications of FFF 3D printing with robotic arms including conformal printing, support free printing, and hybrid additive/subtractive manufacturing.

Keywords:
ROBOTIC MACHINING, ADDITIVE MANUFACTURING, KINEMATIC REDUNDANCY, PROCESS OPTIMIZATION



Mélissa Després
PROGRAM LEADER

As a manager in technological innovation experienced in the establishment of strategic industrial collaborations and research and development in metallurgical materials and processes, Mélissa has 20 years of experience in the aeronautics, automotive and surface transportation and health technology sectors. She sponsors two large Industrial R&D Groups: METALtec and SURFTEC helping the Canadian manufacturing and their value chain in the transportation sector.

Keywords:
INDUSTRIAL R&D, CANADIAN MANUFACTURING, VALUE CHAIN, TRANSPORTATION



Hari Krishna Kandasamy
RESEARCH COUNCIL OFFICER

An Advanced Automation and Robotics engineer currently with Gov. of Canada's National Research Council - helping Small and Medium scale enterprises and manufacturers in adoption of technical advancements relevant to specific business needs. Always on the look-out for promising technologies to be put to good use in a local manufacturing ecosystem.

Keywords:
AUTOMATION, INTEGRATED MANUFACTURING, WORK-FORCE DEVELOPMENT



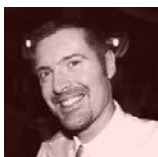
David Prud'homme
BUSINESS DEVELOPMENT OFFICER

Lead the development of strategic relationships with key stakeholders



Deepak Sabharwal
BUSINESS DEVELOPMENT OFFICER

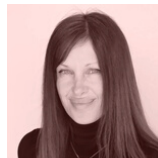
Lead the development of strategic relationships with key stakeholders



Bruno Monsarrat
TEAM LEADER, AUTOMATION, ROBOTICS & IMS

Bruno Monsarrat is currently managing the Automation, Robotics & Intelligent Manufacturing Systems Group at the National Research Council of Canada (NRC), a research unit located in Montreal gathering 20 people conducting R & D activities in the field of robotized manufacturing of lightweight structures as well as UAV-based robotics. Bruno is also serving as Technical Leader for robotics within NRC's Advanced Manufacturing Flagship Program, federating a collaborative network of multi-disciplinary teams from NRC operating in several Canadian provinces. Bruno serves as a member of the Executive Committee of the Canadian Aeronautics and Space Institute (CASI) and Canadian Robotics Council (CRC).

Keywords:
ROBOTIZED MANUFACTURING, AERONAUTICS, PROCESS, COLLABORATIVE & AERIAL ROBOTICS, DIGITAL TWINNING, ROBOT CALIBRATION, & ACCURACY, DEEP LEARNING



Petra Prazakova
PRINCIPAL

As Principal of Robotics Talent Lab®, I contribute to the innovation, productivity, and growth of Canada's robotics ecosystem by providing targeted hiring solutions for those organizations and professionals whose intellectual capital is driving its growth. I also support the career progression of PhD or master's degree specialists with expertise in robotics, autonomous systems, or drone technologies - those who bring key academic credentials, industry-specific experience, hard-to-find skills, and a track record of measurable achievements. Over the past 15 years, I have supported regional and global organizations in key industries including those in ocean technology, life sciences, energy, and renewables sectors.

Keywords:
PHD, MASTER'S DEGREE, TALENT ACQUISITION, ROBOTICS, AUTONOMOUS SYSTEMS, DRONES, ENGINEERING, SCIENCE

Synaptive



Josh Richmond
VP, R&D SURGICAL SYSTEMS

Josh brings 22 years of product development experience to Synaptive Medical where he leads a team of over 20 engineers and has overseen the development and launch over ten products. Prior to joining Synaptive, Josh was director of engineering for Hologic's MR division (formerly Sentinel Medical Inc.); there, he charted the product roadmap for MR coils used for breast and prostate cancer imaging and brought nine products to market. Outside the medical device space, Josh spent six years at MDA as a software and systems engineer on autonomous satellite servicing programs. Josh is a licensed professional engineer.

Keywords:
MEDICAL DEVICES, SURGERY, PRODUCT DEVELOPMENT, R&D, SYSTEMS ENGINEERING



Ramy Meziane
RESEARCH OFFICER

Experienced developer and researcher focusing on create and integrate custom software solutions and algorithms for robotic and automation systems

Keywords:
MOTION PLANNING; MODELLING AND CONTROL; TOOLPATH GENERATION; OPTIMIZATION; PROCESS AUTOMATION; COBOT; CABLE DRIVEN PARALLEL ROBOT.



Amir Zargar
RESEARCH OFFICER

Amir Hajzargarbashi is a researcher at Aerospace Manufacturing Technologies Centre of the NRC since 2019.

His research focuses on collaborative robotic applications related to manufacturing process, dynamic and static modeling of robots.

Keywords:
ROBOTICS, COLLABORATIVE ROBOTS, MANUFACTURING PROCESS, DYNAMICS, AIRCRAFT ASSEMBLY

Amir completed his Ph.D. at Ecole Polytechnique of Montreal in 2008, following a post-doc at McGill University. He worked 8 years at Bombardier Aerospace on many robotic assembly and manufacturing applications.



Dan Mashatan
MANAGER, AUTONOMY & AI

Engineering leader with 14 years progressive career experience working in robotics and Autonomy/AI industry.

Keywords:
AUTONOMY, AI,
MOBILE ROBOTICS,
UAVS



Reza Faieghi
PROFESSOR

I am an assistant professor in the department of aerospace engineering at Toronto Metropolitan University (formerly named Ryerson University).

My research group focuses on perception, motion planning, and motion control of robotic systems with a special interest in autonomous vehicles.

Keywords:
MOTION PLANNING,
ADAPTIVE CONTROL,
MODEL PREDICTIVE
CONTROL, SLAM,
MACHINE LEARNING,
DEEP LEARNING, GPU
COMPUTING



Wael Suleiman
ASSOCIATE PROFESSOR

Wael Suleiman received the Master's and Ph.D. degrees in automatic control from Paul Sabatier University, Toulouse, France in 2004 and 2008, respectively. He has been Postdoctoral researcher at AIST, Tsukuba, Japan from 2008 to 2010, and at Heidelberg University, Germany from 2010 to 2011. He joined University of Sherbrooke, Quebec, Canada, in 2011, and is currently Associate Professor at Electrical and Computer Engineering Department.

His research interests include collaborative and humanoid robots, motion planning, nonlinear system identification and control and numerical optimization.

Keywords:
HUMANOID ROBOTS,
COLLABORATIVE
ROBOTS, NON-LINEAR
CONTROL, HUMAN-
ROBOT INTERACTION,
MOTION PLANNING,
LEGGED ROBOTS



Christopher Yee Wong
POSTDOCTORAL FELLOW

A postdoctoral fellow interested in the application of humanoid robots as robotic assistants for safe, comfortable, and intuitive autonomous physical human-robot interactions in the areas of home care, manufacturing, or healthcare. Also passionate about teaching, mentoring, and helping people become better versions of themselves.

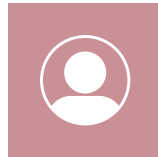
Keywords:
HUMANOID ROBOTS,
PHYSICAL INTERACTION,
PERCEPTION, COMPLIANT
CONTROL, INTENTION
DETECTION, TACTILE
SENSING



Mohamed Helwa
PRINCIPAL RESEARCHER

Mohamed is a principal researcher for safe autonomous systems in Thales, Canada. He has 15 years of research and industrial experience with focus on designing advanced control, estimation and machine learning algorithms for safety-critical autonomous systems. He has successful record of applying those algorithms to autonomous trains, self-driving cars, micro unmanned aerial vehicles (UAVs) and mobile robotic manipulators for advanced manufacturing. The developed algorithms allow those systems to independently and safely complete high-performance tasks in confined, uncertain, and changing environments. Mohamed also has 30+ journal, conference and patent contributions.

Keywords:
SAFE AUTONOMOUS
SYSTEMS,
AUTONOMOUS
TRAINS, SAFE
NAVIGATION,
CONTROL SYSTEMS,
SAFE MACHINE
LEARNING,
PERCEPTION



Parth Panchal
SERVER PROGRAMMER

I am a software engineer working with one of the leading game industry (Ubisoft). I am fascinated with automation technology especially integration of AI with underlying mechanics, that can bring a change about in the solutions for various fields such as manufacturing, space technologies automation and of course in mundane tasks. My goal is to explore what robotics engineering in particular facilitate better to the society.

Keywords:
SOFTWARE
ENGINEER,
SOFTWARE
SOLUTIONS, EXCITING
FEATURES, VIDEO
GAMES, DATA
ENGINEER, SECURITY

As a software engineer, I am mostly responsible for devising software solutions for exciting features of game(s). I'm also an occasional data engineer and participant in upbrining security related solutions to the company with fail safe ideas. I like physics programming as a hobby.



François Pomerleau
PROFESSOR

François Pomerleau made his debut in research by interacting with the Canadian Space Agency and the European Space Agency during his studies in computer engineering at Sherbrooke University. He got his Master's degree (François Michaud's Lab) from this university in 2009 after a one-year stay at EPFL (Roland Siegwart Lab - Switzerland) where he worked on an autonomous car prototype. He completed his Ph.D. at ETH Zurich (Roland Siegwart's Lab - Switzerland) in 2013 during which he participated in several robotic deployments in uncontrolled environments, including work with European fire brigades and in alpine lakes. After technology transfer activities at Alstom Inspection Robotics and a stay at Laval University (Philippe Giguère's Lab), he received a postdoctoral fellowships from the Natural Sciences and Engineering Research Council of Canada to continue his research at the University of Toronto in Mobile Robotics (Tim Barfoot's Lab). He continued his technological transfer activities as a postdoctoral researcher at Laval University in the Robotics Laboratory (Clément Gosselin's lab) and worked, in collaboration with the Robotiq company, to develop the Industry 4.0. Since September 2017, he is a professor in the Computer Science and Software Engineering Department at Laval University.

Keywords:
3D RECONSTRUCTION
OF ENVIRONMENTS
USING LASER DATA,
AUTONOMOUS
NAVIGATION, SEARCH
AND RESCUE
ACTIVITIES,
ENVIRONMENTAL
MONITORING,
TRAJECTORY
PLANNING, AND
SCIENTIFIC
METHODOLOGY
APPLIED TO ROBOTICS


Marie Charbonneau
 ASSISTANT PROFESSOR

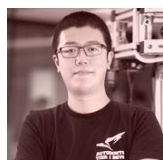
Dr. Charbonneau is an Assistant Professor in the Department of Mechanical and Manufacturing Engineering of the Schulich School of Engineering at the University of Calgary. Robot control and contact-based human-robot interaction are central themes of Dr. Charbonneau's research, who aims to develop collaborative robots that are specifically adapted to physically interact with and work alongside humans. Dr. Charbonneau received a Ph.D. in Advanced and Humanoid Robotics from the University of Genoa in collaboration with the Istituto Italiano di Tecnologia, before undertaking a postdoctoral fellowship at the University of Waterloo. There, Dr. Charbonneau's research has been centred on compliant whole-body control of humanoid robots for safe physical human-robot interaction.

Keywords:
 HUMANOID ROBOTS,
 WHOLE-BODY
 CONTROL, PHYSICAL
 HUMAN-ROBOT
 INTERACTION,
 COMPLIANT
 CONTROL,
 COLLABORATIVE
 ROBOTS


Roland Bouffanais
 ASSOCIATE PROFESSOR

Roland Bouffanais is Associate Professor of Engineering at the University of Ottawa. His research focuses on interdisciplinary applications at the intersections of complexity, network science, control theory, machine learning, and multi-agent systems. He has published over 120 peer-reviewed papers in leading scientific journals and conference proceedings. He authored Design and Control of Swarm Dynamics (2016)—the only full-length book on the subject—in Springer's Complexity Series. He received his Ph.D. from EPFL (Lausanne, Switzerland) in computational science for which he was awarded the prestigious IBM Research Prize in Computational Sciences (2008), and the ERCOFTAC Da Vinci Award Silver Medal (2007). He was a postdoctoral fellow and associate at the Massachusetts Institute of Technology (MIT) and remains a research associate with the Department of Mechanical Engineering at MIT.

Keywords:
 MULTI-ROBOT
 SYSTEMS, SWARM
 ROBOTICS, COMPLEX
 SYSTEMS,
 NETWORKED
 ROBOTICS


Chude Qian
 MASTERS STUDENT

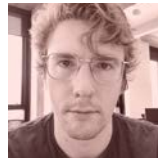
Frank is a second-year MASc student at UoFT UTIAS TRAIL Lab with Dr. Steve Waslander, focusing on autonomous vehicles system design. He received his bachelor's degree in Electrical Engineering focusing on robotics with a minor in CS, Systems, and AI at Case Western Reserve University. Frank was the Team Principal for the University of Toronto autonomous vehicle competition team at Round II Year 1 competition, leading the team to a 5th time first place winning in the competition series

Keywords:
 AUTONOMOUS VEHICLE
 SYSTEM


Timothy Barfoot
 PROFESSOR

Prof. Timothy Barfoot (UTIAS) works in the area of autonomy for mobile robots targeting a variety of applications. He is interested in developing methods (localization, mapping, planning, control) to allow robots to operate over long periods of time in large-scale, unstructured, three-dimensional environments, using rich onboard sensing (e.g., cameras and laser rangefinders) and computation. Timothy holds a BAsC (9T6+PEY, Aerospace Option) from the UoFT Engineering Science program and a PhD from UTIAS in robotics.

Keywords:
 MOBILE ROBOT
 AUTONOMY, STATE
 ESTIMATION, FIELD
 ROBOTICS


Connor Holmes
 PHD STUDENT

Connor Holmes is currently a PhD student studying robotics at the University of Toronto Institute for Aerospace Studies (UTIAS). In particular, Connor studies ways to certify robotics perception algorithms using theory from the optimization literature. He is also participating in the Robotics Leadership Program (RLP), whose goal is to build ambassadors for the public understanding of robotics. Prior to starting his PhD, Connor worked for 5 years in the Guidance, Navigation and Control Dept. of MDA after completing a Masters degree at the University of Toronto in Controls and Systems Engineering

Keywords:
 SLAM, PERCEPTION,
 OPTIMIZATION,
 CONTROL SYSTEMS


Jonathan Kelly
 ASSOCIATE PROFESSOR

Prof. Jonathan Kelly leads the Space & Terrestrial Autonomous Robotic Systems (STARS) Laboratory at the University of Toronto Institute for Aerospace Studies, where his group carries out research at the nexus of sensing, planning, and control. He holds a Canada Research Chair (Tier II) in Collaborative Robotics. Prior to joining the University of Toronto, he was a postdoctoral fellow in the Computer Science and Artificial Intelligence Laboratory at MIT. Prof. Kelly received his PhD degree in 2011 from the University of Southern California.

Keywords:
 ROBOT VISION,
 CALIBRATION, MOBILE
 MANIPULATION,
 SENSOR FUSION


Hallie Siegel
 MANAGING DIRECTOR, STRATEGY & PARTNERSHIPS

Hallie Siegel is Managing Director of Strategy and Partnerships at the University of Toronto Robotics Institute, where she guides the largest and most diverse robotics research portfolio in Canada. Since joining UoFT in 2019 she has helped to elevate robotics as a strategic priority initiative for the university. She got her start in robotics in 2007 at the D'Andrea Lab at ETH Zurich, and has since helped shape the strategic communications of robotics research labs, universities, publications, and startups in North America, Europe and Asia.

Keywords:
 STRATEGY, PARTNER-
 SHIPS, KNOWLEDGE
 TRANSLATION,
 COMMUNICATIONS

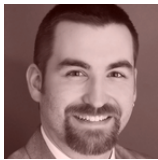

Florian Shkurti
 PROFESSOR

Florian Shkurti is a professor in the Department of Computer Science at the University of Toronto. His research spans robotics, computer vision, and machine learning.


Steven Waslander
 PROFESSOR

Steven Waslander is a Professor in the Institute for Aerospace Studies at the University of Toronto. He is an active member of the NSERC Canadian Robotics Network, and the PI on the WinTOR all-weather autonomous driving research program. His research focuses on perception, localization and mapping for autonomous driving.

Keywords:
 AUTONOMOUS DRIVING,
 OBJECT DETECTION, TRA-
 CKING, SEGMENTATION,
 BAYESIAN INFERENCE



Keywords:
HUMANOID
ROBOTICS, BIPEDAL
LOCOMOTION, SCREW
THEORY, MULTI-BODY
DYNAMICS, CONTROL
SYSTEMS

Brandon J. DeHart

ROBOHUB MANAGER AND ADJUNCT ASSISTANT
PROFESSOR

Brandon J. DeHart is the Manager of the Waterloo RoboHub, a robotics testing, training, and research group at the University of Waterloo with a state-of-the-art facility and a globally unique fleet of robots. He is also an Adjunct Assistant Professor in Electrical and Computer Engineering at the University of Waterloo, the same department where he completed his MASc and PhD degrees.

His teaching portfolio includes courses on robotics, controls, and technology-enabled art, while his research interests span a wide range of topics connected to robotics, from tensegrity structures and bioinspired design to interactive architecture and morphological computation.



Keywords:
HUMAN-ROBOT
INTERACTION,
COLLABORATIVE
ROBOTS,
OPTIMIZATION AND
OPTIMAL CONTROL,
ROBOT CONTROL,
HUMANOID ROBOTS,
HUMAN-CENTERED
ROBOTICS

Yue Hu

ASSISTANT PROFESSOR

Yue Hu is the head of the Active & Interactive Robotics Lab at the University of Waterloo since 2021. She obtained her PhD from Heidelberg University, Germany. She was postdoc at the Italian Institute of Technology (IIT), and at the National Institute of Advanced Industrial Science and Technologies (AIST, Japan).

In 2020, she was an Assistant Professor at the Tokyo University of Agriculture and Technology. Yue is one of the co-chairs of the IEEE-RAS Technical Committee on Model-based Optimization for Robotics.

Her research interests include physical human-robot interaction, collaborative robots, humanoid robots, and optimal control.



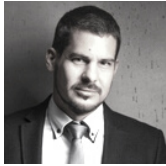
Keywords:
LONG-DURATION
ROBOT AUTONOMY,
ENVIRONMENTAL
MONITORING, CLIMATE
CHANGE ECOLOGY,
ROBOT CONTROL,
MULTI-ROBOT
SYSTEMS, SAFE
HUMAN-ROBOT
INTERACTION

Gennaro Notomista

ASSISTANT PROFESSOR

Gennaro Notomista is an assistant professor in the Department of Electrical and Computer Engineering at the University of Waterloo (Waterloo, ON, Canada). Prior to joining University of Waterloo, he was a post-doctoral researcher at the CNRS/Inria/IRISA, Rennes, France.

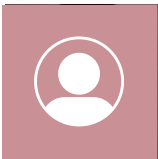
He received the Ph.D. degree in robotics from the Georgia Institute of Technology (Atlanta, GA, USA) in 2020. Dr. Notomista is a Fulbright Scholar and was the recipient of the Alumni Small Grant (2020) and the IEEE ARSO Best Paper Award (2022). His main research interests lie at the intersection of design and control of robotic systems for long-duration autonomy with applications to environmental monitoring.



Tamas Haidegger
EKIK DIRECTOR

Tamás Haidegger received his MSc degrees from the Budapest University of Technology and Economics (BME) in Electrical Engineering and Biomedical Engineering, then PhD in medical robotics. His main field of research is on medical technologies, control/teleoperation of surgical robots, image-guided therapy and digital health technologies. Currently, he is associate professor at Óbuda University, serving as the director of the University Research and Innovation Center (EKIK), and as the technical lead of medical robotics research at the Antal Bejczy Center for Intelligent Robotics. Besides, he is a research area manager at the Austrian Center of Medical Innovation and Technology (ACMIT), working on minimally invasive surgical simulation and training, medical robotics and usability/workflow assessment through ontologies.

Keywords:
SURGICAL ROBOTICS,
ROBOT
STANDARDIZATION,
ROBOT AUTONOMY



Sam Gerges
BUSINESS DEVELOPMENT MANAGER

For over 20 years, Sam has been promoting and advocating for more robotics for Canada's manufacturing. After his studies in Mechanical Technology, and in Automated Manufacturing at Montreal's ETS Engineering school, Sam learned the challenges of robotic system implementation and operation through his vast experience with system builders and operators. From his first job in robotic systems engineering, to his current journey in robotic technology sales, Sam had the privilege to work with hundreds of customers, from Aerospace to product packaging.

Keywords:
INDUSTRIAL ROBOTS,
INTEGRATION,
FABRICATION,
MANUFACTURING,
AUTOMATED
PACKAGING



Michael Bird
CUSTOMER SUCCESS ENGINEER

InOrbit is a Robot Operations (RobOps) platform with a mission is to maximize the potential of every robot. Mike has spent years as a Software Developer and works with technical teams to get their robots InOrbit.

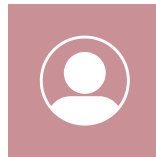
Keywords:
ROBOPS, INTEGRATION,
CLOUD,
INTEROPERABILITY,
VDA5050, ROS



Frank Defalco
DIRECTOR MEMBER RELATIONS

Frank Defalco is based in Ottawa and has extensive experience in both the public and private sectors. He is currently Director, Members Relations with Next Generation Manufacturing Canada (NGen) and leads NGen's Technical advisory boards for Additive Manufacturing, Automation & Robotics and Machine learning. Frank is on the Boards of Canada Makes, AI for Manufacturing Canada and the Alberta Additive Manufacturing Network (AAMN).

Keywords:
ADDITIVE
MANUFACTURING, AI
FOR MANUFACTURING
AND AUTOMATION AND
ROBOTICS



Arthur Kong
DIRECTOR OF PROJECT DEVELOPMENT

Arthur is the Director of Project Development at Next Generation Manufacturing Canada (NGen), where he works with companies and government partners to develop collaborative R&D funding challenges and projects for advanced manufacturing technologies. Prior to joining NGen, Arthur was the Head of Science, Innovation, and Policy with the British Consulate General Toronto. He also brings years of experience in industrial policy at the Government of Ontario. He is a licensed Professional Engineer and graduated from the London School of Economics and Political Science (LSE) with a Master of Public Administration (MPA), and a Bachelor of Applied Science in Systems Design Engineering from the University of Waterloo.

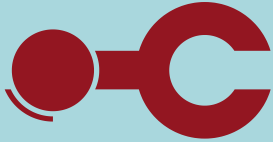
Keywords:
FUNDING, R&D,
ADVANCED
MANUFACTURING,
INDUSTRY 4.0,
ARTIFICIAL
INTELLIGENCE,
ECOSYSTEM



Robbie MacLeod
DIRECTOR, STRATEGIC COMMUNICATIONS

Robbie is a communications specialist with experience in strategic innovation policy. At NGen, Robbie works as the primary liaison to government, media and external stakeholders, and works to raise the profile of NGen's diverse membership of manufacturers and technology providers.

Keywords:
STRATEGY, POLICY,
INNOVATION,
ECONOMIC
DEVELOPMENT,
COMMUNICATIONS, PR,
GR



CANADIAN ROBOTICS COUNCIL
CONSEIL CANADIEN DE LA ROBOTIQUE

About the Council

We envision a near future where Canadians can leverage robotics to enhance their productivity, safety, global competitiveness and quality of work. We complement and connect existing initiatives by collecting, organizing and disseminating the information and insights we all need to succeed:

- Ecosystem metrics
- Use cases and application studies
- Insights on the relative strengths and weaknesses of the Canadian robotics sectors compared to the rest of the world

In so doing, we are becoming the collective national voice and point of contact for robotics in Canada, connecting robotics and its adjacent sectors into a true ecosystem that encourages mutual collaboration, research, and product development.

Our team represents industry, government, and academic excellence collaborating to ensure pan-Canadian representation. We are actively recruiting committee members who have the drive and resources to contribute. Become a member to join our effort.

roboticscouncil.ca
@roboticscouncil

À propos du conseil

Nous envisageons un avenir proche où les Canadiens pourront tirer parti de la robotique pour améliorer leur productivité, leur sécurité, leur compétitivité et la qualité de leur travail. Nous complétons et relient les initiatives existantes en regroupant, organisant et diffusant les informations et les idées dont nous avons tous besoin pour réussir:

- Données de l'écosystème robotique
- Exemples d'utilisation et études d'applications
- Analyse des forces et des faiblesses relatives des secteurs canadiens de la robotique par rapport au reste du monde

Ce faisant, nous devenons la voix nationale collective et le point de contact pour la robotique au Canada. Nous développons un véritable écosystème de la robotique et de ses domaines connexes qui encourage la collaboration, la recherche et le développement de produits.

Notre équipe représente l'industrie, le gouvernement et l'excellence universitaire, collaborant afin d'assurer une représentation pancanadienne. Inscrivez-vous et devenez membre de notre équipe en pleine croissance.

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Hallie Siegel, University of Toronto Robotics Institute

Organizing Committee / Comité d'organisation

Kimberly Colburn, University of Toronto Robotics Institute

Charles Deguire, Kinova

Clément Gosselin, Université Laval

Eric Jackson, Cellula Robotics

David MacFarlane, Kinova

Bruno Monsarrat, National Research Council Canada

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