

#UC2OREMOTE

Unmanned Systems  
Systems Telecommanders  
CANADA

UNMANNED CANADA.20  
PROGRAM

NOVEMBER 3 - 6, 2020

All times Central Standard Time Zone (UTC - 6)

**November 3 - The Next 5 Years in RPAS - Day 1**

8:30 AM	<b>Visit Tradeshow</b>		
9:00 AM	<p><b>Session Location: Track 1</b></p>	<p><b>Conference Opening</b> Conference Chair - Jordan Cicoria, Treasurer, USC-STC Michael H. Cohen, Chairman, USC-STC</p>	
9:30 AM		<p><b>Conference Opening Keynote</b> Michael Huerta, Former Administrator Federal Aviation Administration</p>	
10:00 AM		<p><b>Keynote: NRC's Role in Developing the Autonomous Systems Sector</b> Dr. Roger Scott-Douglas, President National Research Council</p>	
10:30 AM		<p><b>Drone Delivery and Disaster Response – Connecting the Disconnected for Social Good</b> Panel Moderator: Harrison Wolf, Lead Aerospace and Drones, World Economic Forum Edward Anderson, Science Technology and Development, World Bank Denise Williams, CEO First Nations Technology Council Conor French, General Counsel, Zipline Faine Greenwood, Drone Consultant to WEF and WB</p>	
12:00 PM		<p><b>Blue Ribbon Panel - The Next Big Things in RPAS</b> Moderator: Michael Cohen, Chairman Unmanned Systems Canada Cameron Chell, CEO Draganfly and Business Instincts Group Michael Huerta, Former Administrator, Federal Aviation Administration Walter Di Bartolomeo, Pratt and Whitney Canada, Vice President - New Products and Services Arun Thangaraj, Transport Canada, Associate Deputy Minister, Transport Canada</p>	
1:30 PM	<b>Visit Tradeshow</b>		
2:00 PM	<b>Session Location: Track 1</b>	<b>Session Location: Track 2</b>	<b>Session Location: Track 3</b>
2:30 PM	<p><b>Peraton / SkySensus Showcase</b></p> <p>Join the members of Project SkySensus highlighting the objectives and showcasing their advancements in Big Data, Analytics, DAA and Airworthiness.</p> <p>The team will provide valuable insights, tackle your questions and present opinions on the future of BVLOS operations in Canada.</p> <p>Moderator: Peraton - Denean Tomlin Canadian UAVS – John Molberg AERIUM Analytics – Jordan Cicoria UXS Consulting– Chris Brosinsky Foremost Test Range– Doug Hanna Peraton – Blair Boyd</p>	<p><b>Advanced Air Mobility</b></p> <p><b>Overview of the Integrated Aerial Mobility (IAM) Program</b> Charles Vidal National Research Council</p>	<p><b>Public Safety and Security</b></p> <p><b>Opportunity in the Arctic Begins with Building Strong, Sustainable and Secure Communities</b> Brad Robson WaVv</p>
		<p><b>Drones are Good Enough, Why Retailers and Last Mile Delivery Matter Most</b> Nathan Davidson-Pilon Coulson Aviation</p>	<p><b>Launching the First Nations Technology Council's Drone Stewardship Program: Fostering Indigenous Innovation in Aerial Territories</b> Pano Skrivanos - First Nations Technology Council Jasmin Winter - First Nations Technology Council Robyn Grebiunas - Inlailawatash Limited Partnership</p>
		<p><b>Multi Agent UAS Onboard Coordination and Flight Formation Planning</b> James Sease University of Victoria Centre for Aerospace Research</p>	<p><b>The State of Public Safety Drones</b> Charles Werner Droneresponders</p>
3:30 PM	<p><b>Panel: Emerging Aviation Technologies for Smart Cities</b> Moderator: Diana Cooper, Head US Policy, Hyundai UAM JR Hammond, CEO, CAAM (Canadian Advanced Air Mobility Consortium) Niklas Kviselius, Manager New Mobility, Translink Danny Sitnam, President and CEO, Helijet International</p>		
5:00 PM	<b>Visit Tradeshow</b>		

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November 4 - Safety and Integration - Day 2

8:30 AM	<b>Visit Tradeshow</b>		
9:00 AM	<b>Keynote: The Honorable Marc Garneau, Minister of Transport</b>		
9:30 AM	<b>Keynote: Global Path for UAS: Leslie Cary, Chief, RPAS, ICAO</b>		
10:00 AM	<b>Session Location: Track 1</b>	<b>Transport Canada RPAS Task Force Regulatory Update</b> Moderator: Felix Meunier, Head RPAS Task Force, Transport Canada Felix Meunier, Head RPAS Task Force Ryan Coates, Head RPAS Policy Ryan Johnson, Program Manager RPAS Operational Flight Standards Mark West, Program Manager Flight Standards	
11:30 AM		<b>RPAS Traffic Management NAVCanada and Transport Canada</b> Moderator: Alan Chapman, Director RTM NAVCanada Josue Morissette, ANS Inspector Transport Canada Ryan Johnson, Program Manager RPAS Operational Flight Standards Sylvie Lemay, NAVCanada Alex Campbell, NavCanada Amit Nandi, NavCanada	
1:00 PM	<b>Session Location: Track 1</b>	<b>Session Location: Track 2</b>	<b>Session Location: Track 3</b>
	<b>Workshop</b>	<b>Student Paper Finalists</b>	<b>BVLOS</b>
	<b>WORKSHOP - ORA/AC903 Review</b> Co-Chairs: Paul McKay, Transport Canada, RPAS Engineering Chris Healy, President, InFlight Data Group  Observations on SORA and its effect on BVLOS approvals to-date  AC 903 Sec. 10 DAA discussion AC 903 Sec. 9 Containment  Calculating Operational Volumes and the role of the OEM  Update on Strategic Mitigations to reduce SAIL values SORA automation tools	<b>Auto-link UAV to CAD: A Software Tool that Bridges the Gap Between UAV Design Optimization and CAD</b> Mateus Braga / Morga May University of Manitoba	<b>National deployment of RTM services in Canada</b> Laurent Huenaeerts Unify
1:30 PM		<b>LIDAR and Camera Sensor Fusion for Air-to-Air Detection and Tracking of Airborne Intruders</b> Daniel Justino University of Victoria Centre for Aerospace Research	<b>Leveraging Mobile Networks to Enable and Scale Beyond Line of Sight RPAS Operations in Canada</b> Dennis Nazarenko / Brian Forbes ClearSky Connect Inc.
2:00 PM		<b>Quadrotor Flight Control Using Deep Reinforcement Learning</b> Zifei Jiang / Alan Lynch University of Alberta	<b>Obtaining True BVLOS Permissions from Regulators in Canada and the U.S.</b> Alex Harmsen Iris Automation
2:30 PM	<b>Visit Tradeshow</b>		
3:00 PM	<b>Session Location: Track 1</b>	<b>Session Location: Track 2</b>	<b>Session Location: Track 3</b>
	<b>Public Safety and Security</b>	<b>RPAS Control Systems and Autonomy</b>	<b>Regulations</b>
	<b>Automated Computer Vision Analysis of Public Space Redesign to Improve Compliance to Social Distancing amid the COVID-19 Pandemic</b> Maged Gouda / Karim El-Basyouny University of Alberta	<b>Specialized Agents Allocation in Autonomous Multi-Agent Unmanned Systems</b> Omar Al-Buraiki University of Ottawa	<b>ASSURE Regulatory Research Update</b> Steve "Lux" Luxion ASSURE, FAA Center of Excellence for Unmanned Aircraft Systems
3:30 PM	<b>Video Livestreaming Fundamentals for Public Safety &amp; Industry RPAS Operations</b> Brian Fentiman BlueForce UAV Consulting	<b>Disturbance Observer-Based Integral Backstepping Control for UAV</b> Amir Moeini / Alan Lynch University of Alberta	<b>RPAS Regulation: The First Year, and the Path Forward</b> Brendan Schulman DJI
4:00 PM	<b>How Airborne Thermal Imaging is Saving Lives and Livelihood</b> Brett Kanda FLIR Systems Inc.	<b>Trends of Urban Air Mobility in Japan</b> Gaku Minorikawa Urban Air Mobility Laboratory, Hosei University, Japan	<b>Update on RPAS Research Activities Supporting Regulatory Framework Development</b> Charles Vidal, NRC Carlos Ruella, Transport Canada
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## November 5 - Markets and Applications - Day 3

8:30 AM		<b>Keynote: The Future of Unmanned in Canada</b> Kevin Hagan, Account Executive, Unmanned Systems, Peraton			
9:00 AM	<b>Session Location: Track 1</b>	<b>Defence Panel</b> Moderator: Karim Elsharnouby, Peraton Canada, Business Development Manager Dr. Tony Collins, UK MoD, Innovation Partner - International, Defence and Security Accelerator Commander Chris Taitt, RCN, Director Naval Requirements 2 L.Col. Jason Furlong, RCAF, Dir Air Reqts - RPAS Project Director			
10:30 AM		<b>Visit Tradeshow</b>			
11:00 AM	<b>Session Location: Track 1</b>	<b>Jammers &amp; Jail - Closing the Gap Between Hype, Policy and the Law</b> C-UAS Panel Moderator Trevor Bergmann, AeroVision Canada Martin Jobin, RCMP Head C-UAS Program Mathieu Carle, RCMP Technical Lead C-UAS Program Phil Cork, Qinetiq Canada Jared Giesbrecht, Defence Research and Development Canada, Suffield AB Mark Espenant, R&D Project Manager (C-UAS), DRDC Centre for Security Sciences			
12:30 PM		<b>Visit Tradeshow</b>			
1:00 PM	<b>Session Location: Track 1</b>	<b>Session Location: Track 2</b>	<b>Session Location: Track 3</b>	<b>Session Location: Track 4</b>	
	Iris Automation <b>Current State of the UAS Industry &amp; Vision</b> Jon Damush, CEO, Iris Automation <b>DAA and Computer Vision Technology Overview</b> Alejandro Galindo, VP of Research & Development, Iris Automation <b>BVLOS Regulatory Review (Transport Canada)</b> William DeKeiser, Director UAS Cluster of Excellence, UAS Centre of Excellence Sean Devere, Director Government Affairs, Iris Automation Trevor Linn, Director Airspace Integration, Iris Automation	<b>RPAS Control Systems /</b> <b>Onboard Real-Time Kinodynamic Path Planning for UAVs</b> Hélder Cristóvão Instituto Superior Técnico / University of Victorian	<b>RPAS Operations and Training</b> <b>Securing Nations from Pandemics; Design, Testing and Training</b> Paul St Onge Aero Concept Systems	<b>RPAS Design and Manufacture</b> <b>In-flight Identification of Sparse Nonlinear Dynamics for RPAS Adaptive Control</b> Sean Bazzocchi University of Victoria	
1:30 PM		<b>Autonomy and Positioning - Assured</b> Neil Guerin Hexagon	<b>Property Level Wildfire Risk Assessment Using Machine Learning Methods to Identify Hazardous Trees Using Consumer-Grade UAVs</b> Hannah Zhao University of Alberta	<b>Combining Cloud Computing, Videogames and Simulation to Boost a New UAV Innovation Wave with the Formal-Virtual-Teleoperated (FVT) Development Paradigm</b> Luca Gianoli / Abdo Shabah Humanitas Solutions	
2:00 PM		<b>Quantifying Turing: A Systems Approach to Quantitatively Assessing the Degree of Autonomy of Any System</b> Mike Meakin	<b>Concept of Operations for Application of RPAS to Airborne Geophysics</b> Richard Fortin / Maurice Coyle Geological Survey of Canada, Natural Resources Canada	<b>Patented Fixed Angle Rotor VTOL Enables Seamless Transitions, with Closed-Source Software for Data Security</b> Yulia Druzhnikova FIXAR	
2:30 PM		<b>Visit Tradeshow</b>			
3:00 PM	<b>Session Location: Track 1</b>	<b>Session Location: Track 2</b>	<b>Session Location: Track 3</b>	<b>Session Location: Track 4</b>	
	<b>Australia's Leading RPAS Sector: An Overview, BVLOS, Testing and Opportunities (3:00PM)</b> <b>RPAS Regulatory Environment in Australia: Live presentation and Q&amp;A (3:45PM)</b>	<b>Utilities Applications</b> <b>Reinventing the Drone for Contact Inspection</b> Nikita Iliushkin / Courtland Penk Skygauge Robotics	<b>RPAS Operations and Training</b> <b>Developing a Data-Focused Concept of Operations (CONOPS)</b> Niall McCallum SkyX	<b>RPAS Design and Manufacture</b>	
3:30 PM	Australia is at the forefront of drone innovation. Discover why companies like Google Wing, Boeing and Airbus are all expanding to Australia to conduct business operations.	<b>Enabling Persistent Hypertemporal Intelligence, Surveillance, and Reconnaissance</b> Francis Doumet Metaspectral	<b>International Test Pilot School A System for Testing UAVs in National Airspace, BVLOS</b> David Cooke International Test Pilot School	<b>BVLOS Unmanned Aerial Vehicles-Made in Canada</b> Rob Walker Volatus Aerospace Group	
4:00 PM	The panel discussion will be followed by a live presentation and Q&A with the Head of RPAS for Australia's transportation regulator, CASA.	<b>Energy Applications with Focus on Oil and Gas</b> Kenro Tanaka Blue Innovation Company Ltd.	<b>An exciting journey to integrate RPAS in the Civil Airspace</b> Nicola Toniazzi Leonardo S.p.a.	<b>End-user Accreditation with Japanese (JUIDA) ISO23665 Licensed School System</b> Kakuya Iwata Japan UAS Industrial Development Association (JUIDA)	
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**November 6 - Markets and Applications - Day 4**

8:30 AM	<b>Visit Tradeshow</b>		
9:00 AM	<b>Session Location: Track 1</b>	<p><b>Integrating RPAS and Airports</b>            Moderator: Jordan Cicoria, Aerium Analytics            Steve Maybee, VP Operations, Edmonton International Airport            Mark Anderson, Manager Edmonton TWR   Whitehorse TWR and FIC, NAVCanada            Justin Jedlinski, Chief Aviation Security, Transport Canada            Paul Woods, Manager – Training Standards, Systems, and Compliance, Greater Toronto Airports Authority (GTAA)</p>	
10:30 AM		<p><b>Panel: 100 Pilots and Counting - Government of Alberta</b>            Moderator: Sam Pidwerbesk, ; District Fish and Wildlife Officer, Fish and Wildlife Enforcement Branch, Justice and Solicitor General            Dan Juhlin, RPAS Operations Coordinator, Government of Alberta RPAS Program, Environment and Parks            Nick Grimshaw, Executive Director, Environmental Enforcement Branch, Environment and Parks            Gary Neilson, Senior Advisor – Crown Liaison, Major Investigations Team, Compliance and Liability Management Branch, Alberta Energy Regulator            Aaron Poirier, Sr., Project Officer, Jobs Economy and Innovation</p>	
12:00 PM	<b>USC-STC Awards. Mark Cuss Scholarship, Pip Rudkin Award, Organizational Award, Student Awards</b>		
12:30 PM	<b>Visit Tradeshow</b>		
1:00 PM	<b>Session Location: Track 1</b>	<p><b>Disruption in Mining</b>            Panel Moderator: Kathryn McCulloch, Dentons Canada LLP, Partner, Drones and Aviation            Denis Laviolette, Goldspot Discoveries Inc., President and CEO            Matt MacKinnon, Unmanned Aerial Services Inc., President and CEO            Iain McKillip, Glencore, Manager Mine Technical Operations</p>	
2:30 PM		<p><b>Session Location: Track 1</b></p> <p><b>GIS/Mapping</b></p> <p><b>New end-to-end ArcGIS Drone Collections from Esri</b>            Pierre Bilodeau / Bryan Ladds            ESRI Canada</p>	<p><b>Session Location: Track 2</b></p> <p><b>Counter-UAS</b></p> <p><b>The Design, Development and Testing of the Next Generation Counter-Drone System</b>            Michael Venables            KWESST International</p>
3:00 PM	<p><b>COMET-Over the Horizon, Secure, High Data Rate Communications for Space Denied Environment</b>            Colin Myers            Comtech Systems Inc.</p>	<p><b>A Real-Time Trajectory Optimization Approach Towards a TCAS for Autonomous UAS</b>            Antonio Ramalho            Instituto Superior Técnico</p>	<p><b>Canadian Emergency Responders: Working Together for the Future</b>            Scott Wilkinson            Winnipeg Fire Department</p>
3:30 PM	<b>Visit Tradeshow</b>		
4:00 PM	<b>Visit Tradeshow</b>		