Monday, 25 August 2025

	41st International Conference on Radar Meteorology		
	Toronto II/III		
8:15	**Opening Remarks**		**8:15**
8:45	**Keynote Speakers**		**8:45**
	1.1 The Early History (1939-1945) of Radar Meteorology in Canada **Paul I. Joe** **1.2**. Canada's Pivotal Role in Identification of Precipitation Types with Polarization Diversity Radars **Brian Barge**		
9:45	**Coffee Break (Toronto Ballroom Foyer)**		**9:45**
	Toronto II/III	**Toronto I**	
10:30	**Microphysical Studies with Radar**	**Emerging Technology and Phased Arrays**	**10:30**
	2A. 1 Radar Investigations of the Microphysical Structure of Winter Cyclones and Arctic Frontal Systems during NASA IMPACTS **Robert M. Rauber** **2A. 2** Introducing the Snow Sensitivity to Clouds in a Mountain Environment (S2noCliME) Field Campaign **Claire Pettersen** **2A. 3** Radar/Lidar-Derived High Latitude Boundary Layer Cloud Properties: Dependence on Environmental Conditions **Greg M. McFarquhar** **2A. 4** Temporal Evolution of Cloud-Top Generating Cells: A Case Study **Jairo Michael Valdivia Prado Sr.** **2A. 5** Arctic Multi-Frequency Radar Observations including the G-band Differential Absorption Radar GRaWAC **Mario Mech**	**2B. 1** New Capabilities of the Fully Digital Horus Phased Array Radar for Next-Generation Weather Surveillance **David Schvartzman** **2B. 2** Adaptive Focused Observations on the ATD Phased-Array Radar **Sebastian M. Torres** **2B. 3** Operational Phased Array Radar Network over the Greater Bay Area, China **Kun Zhao Sr.** **2B. 4** Bridging Operations and Research: Rapid Algorithm Integration on Operational Weather Radars **Jakub Bartel** **2B. 5** Polarimetric and MRMS Observations of Hail-Producing Storms Using a Fully-Digital, S-Band Phased Array Radar **Laura Shedd** **2B. 6** Characterization and Detection of Downburst Precursor Signatures in Environments of Ground Clutter using Adaptive Scanning Strategies from All-digital Phased Array Radar (PAR) **Tian-You Yu**	
12:15	**Lunch Break (Attendees on Own)**		**12:15**
1:30	**Panel Discussion: Conference Sub-Theme Research-Development-Operations-Services (Toronto II/III)**		**1:30**
2:30	**Poster Viewing & Coffee Break (Toronto Ballroom Foyer)**		**2:30**
4:00	**Artificial Intelligence in Radar Meteorology**	**Radar in Operational Meteorology**	**4:00**
	4A. 1 Towards Interpretable Machine Learning in the Atmospheric Sciences **Fraser King** **4A. 2** UNet-Based Methods for Identifying Chicago Lake Breeze Fronts from NEXRAD **Robert C. Jackson** **4A. 3** Application of Support Vector Machines for Data Quality Control in Korean Weather Radars **Lin Tang** **4A. 4** Application of a Predictive Recurrent Neural Network (PredRNN) for Quantitative Precipitation Nowcasting **Mst Mahfuja Akter** **4A. 5** Improving Deep Learning-Based Radar QPE in Different Precipitation Regimes **Haonan Chen** **4A. 6** AI-Driven Severe Weather Warnings from Dual-Polarization Moments **Matej Murín**	**4B. 2** Twenty-Five Years of Innovation in Radar Applications in Complex Orography **Urs M. Germann** **4B. 3** Collocated PAR and NEXRAD Radar Data and Microphysical Retrieval Comparisons in Quasi-Linear Convective Systems **Edwin Lee Dunnavan III** **4B. 4** Weather Radar Applications in Complex Terrain: Advances in Precipitation Estimation and Nowcasting in the San Francisco Bay Region (The AQPI Program) **V. Chandrasekar** **4B. 5** Investigating the Spatiotemporal Characteristics of Motion Fields Using Three-Dimensional Radar Echoes to Construct an Ensemble Nowcasting System **Kao-Shen Chung** **4B. 6** Comparative Evaluation of Radar Nowcasting Models: Extrapolation, STEPS, and AI-based Approaches with Comprehensive Verification **Dominique Brunet**	
5:30	**Sessions End for the Day**		**5:30**
5:30	**Icebreaker Reception (Toronto Ballroom Foyer)**		**5:30**

Tuesday, 26 August 2025

	41st International Conference on Radar Meteorology		
	Toronto II/III	**Toronto I**	
	Severe Storms and Mesoscale Meteorology	**Emerging Technology and Phased Arrays II**	
8:15	**5A. 1** Rapid-scan, Polarimetric, Mobile, X-band, Doppler Radar Observations of the Evolution of Cyclonic and Anticyclonic Tornadoes in a Supercell in Kansas **Haward B. Bluestein** **5A. 2** 3D Wind Retrievals to investigate Hail Cell Dynamics in Germany **Tobias Scharbach** **5A. 3** Observed Updraft Characteristics Using Multi-Doppler Analyses from the TORUS Field Campaign **Martin Satrio** **5A. 4** TTU-Ka Mobile Doppler Radar Analysis of Tornado Structure from the Low-Level Internal Flow of Tornadoes (LIFT) Experiment **Ethan B. Steward** **5A. 5** The Characteristics of Bow Echo and related Anthropogenic Impacts in South China **Ang Zhou** **5A. 6** Radar/Lidar Observations of Surface-Layer Vertical Vorticity Worms in Supercell Inflow **Robby M. Frost**	**5B. 1** Improved Elevation Profile Estimation for Side-Looking Airborne Phased Array Weather Radar **Eliichi Yoshikawa** **5B. 2** Is 16-bit ADC Necessary for Solid-State Radars? **Boonleng Cheong** **5B. 3** Solid-State or Magnetron? Results and Experiences from the Dual Transmitter Radar Test at the DWD Research Radar Hohenpeißenberg **Michael Frech** **5B. 4** Photonic-RF Technology for Cloud and Precipitation Radar **Lihua Li** **5B. 5** Utilization of Depolarization Ratios Measured By a Polarimetric Phased Array Radar **Alexander V. Ryzhkov** **5B. 6** Investigation of Copolar Pointing Offsets on the Differential Reflectivity Estimate for Fully-Digital Polarimetric Phased Array Weather Radar **Jonah Christopher Pehl**	**8:15**
9:45	**Coffee Break (Toronto Ballroom Foyer)**		**9:45**
	Microphysical Studies with Radar II	**Radar in Operational Meteorology II**	
10:30	**6A. 1** Comparison of Simulated and Observed Radar Data in a Tropical Maritime Convection Event **Ting-Yu Cha** **6A. 2** The Impacts of Process-Based Initiation of Multiple Ice Categories in the Predicted Particle Properties (P3) Microphysics Scheme on Simulated Supercell Storm Structure and Behavior. **Daniel T. Dawson II** **6A. 3** Drizzle Droplet Evoluation: Part 2. Examined with Lagrangian Microphysics Modeling **Kaitlyn Loftus** **6A. 4** Towards Developing a Microphysical Retrieval Based on Beam-aware Columnar Vertical Profiles: Combining Side-looking Polarimetry with Vertical Radar Measurements **Christian Stefan Heske** **6A. 5** Bridging Observations and Simulations: Microphysical Insights into Stratiform Precipitation in Germany and Türkiye **Julian Alberto Giles** **6A. 6** Solving the Electromagnetic Scattering for Melting Hydrometeors with MIDAS **Kwo-Sen Kuo**	**6B. 1** The Untapped Potential of Operational Weather Radars for Vertical Profiling of Precipitation and Clouds **Michael Frech** **6B. 2** Title: Bandpass filter to mitigate RFI in S-Band Canadian Weather Radar **Hamid Nasr** **6B. 3** On Predicting The Impact of Wind Farms On Canadian Weather Radar **Norman R. Donaldson** **6B. 4** Study of Wind Turbine's Impacts on Radar QPE When Heavy Rains Cover Wind Farms **Pengfei Zhang** **6B. 5** Development of Analysis Techniques for Severe Weather based on Radar Data in Korea Peninsula **Mi-Kyung Suk** **6B. 6** Putting It All Together: A Comprehensive New Polarimetric Hail Algorithm. **Scott Michael Ganson**	**10:30**
12:00	**Lunch Break (Attendees on Own)**		**12:00**
1:30	**Panel Discussion: Radar4All (Toronto II/III)**		**1:30**
2:30	**Poster Viewing & Coffee Break (Toronto Ballroom Foyer)**		**2:30**
	Use of Radar Data for Numerical Weather Prediction and Analysis	**Airborne and Spaceborne Radar**	
4:00	**8A. 1** The Three-Dimensional Dynamical Structure of Convective Storms during the WesCon-WOEST Campaign **T. H. Stein** **8A. 2** The Heavy Rainfall Produced by Shallow Convection During Cold Seasons: Its Mechanisms Revealed by a 4DVar Doppler Radar Assimilation System **Meng-Jie Wu** **8A. 3** NowPrecip Version 2: New Techniques and Verification of Ensemble Areal Precipitation Nowcasting in the Complex Terrain of Switzerland **Anthanasios Ntoumos** **8A. 4** Simulated and Observed X-band ZDR Column Behavior in Potentially Tornadic Supercells **Jaime L Herriott** **8A. 5** Assimilation of Radar Radial Velocity and Dual-Polarization Observations Using JEDI-LETKF: A Case Study of an MCS Event in Taiwan **Rong Kong** **8A. 6** Utilizing Polarimetric Radar Observations to Improve the ICON-D2 Two-Moment Microphyiscs **Julian Steinheuer**	**8B. 1** Evaluation of the EarthCARE CPR Doppler Velocity Measurements for the Estimation of Particles Sedimentation Velocities and Convective Vertical Air Motions **Pavlos Kollias** **8B. 2** Introducing the Ku-Band Doppler Precipitation Radar (KuDPR) Onboarded the Precipitation Measuring Mission (PMM): The Future of Precipitation Observation **Akira Yamauchi** **8B. 3** Preliminary Study on Novel Earth Observation Platform: Stratospheric Balloon-Borne Weather Radar **Sung-Hwa Jung** **8B. 4** The EarthCARE Cloud Profiling Radar, Its Commissioning Results **Hirotaka Nakatsuka** **8B. 5** Advancing High-Latitude Precipitation Science: The Transformative Impact of CloudSat's W-Band Radar **Ali Behrangi**	**4:00**
5:30	**Sessions End for the Day**		**5:30**
5:30	**Virtual Poster Presentations (Toronto I)**		**5:30**
7:00	**Tribute to Prof. V. N. Bringi: The Scientist Educator, and Mentor (Toronto Ballroom II/III)**		**7:00**

Wednesday, 27 August 2025

	41st International Conference on Radar Meteorology		
	Toronto II/III	**Toronto I**	
	Microphysical Studies with Radar III	**Advancement of Weather Radar Technologies in Underrepresented World Regions**	
8:15	**9A. 1** Analysis of Generating Cell Fall Streaks in a Frontal Rainband Using Data from Airborne Dual-Frequency Radars and in Situ Microphysical Probes **Bart nmn Geerts** **9A. 2** A Model for Estimation of Electric Field Intensity Using the Polarimetric Ice Alignment Signature in Thunderstorms **Vitor Goede** **9A. 3** Retrieving Rain Drop Size Distribution Moments from NPOL S-band Polarimetric Radar: 3 Case Events **Merhala Thurai, PhD** **9A. 4** Microphysical Retrieval in Hailstorms Using Dual Polarimetric Scattering Simulation Based on in-Situ Aircraft Measurements and Radar Observations **Ivan Arias Hernandez** **9A. 5** Preliminary Analysis of Ground-Level Winter Precipitation Hydrometeor Transitions using Disdrometer, MRR and C-band Weather Radar Observations **Joan Bech** **9A. 6** Secondary Ice Production in Deep Convective Clouds over Coastal Urban Areas: Insights from TRACER Radar Observations and Large-Eddy Simulations **Yongjie Huang**	**9B. 1** Advancing the Sustainability of the Caribbean Weather Radar Network through the CMO Operational Radar Group: A Paradigm Shift and Community of Practice **Kenneth Kerr IV** **9B. 2** Weather Radar for Severe Weather Forecasting in East Africa: Current Status, Lessons Learned and Future Pathways **Anna del Moral Méndez, Ph.D** **9B. 4** The ATTO-Campina site: Profiling Tropical Convection Using Multi-frequency Radars at in the Central Amazon **Rachel I. Albrecht** **9B. 5** Enhancing Weather Surveillance in India: The Augmentation of the Doppler Weather Radar NetworkGajendra Kumar , India Meteorological Department and V.Chandrasekar, Colorado State University **Gajendra Kumar**	**8:15**
9:45	**Coffee Break (Toronto Ballroom Foyer)**		**9:45**
	Severe Storms and Mesoscale Meteorology II	**Signal/Data Processing Techniques for Radar**	
10:30	**10A. 1** Kinematic Structure of a Tornado Based on an Analysis of Lofted Debris Speeds, Debris Orientation, and Mobile Radar Data **Roger M. Wakimoto** **10A. 2** Microphysical Evolution of Heavy Rainfall during a Bow Echo Event in South China: Characteristics and the Mesoscale-realted Impacts **Qiqing Liu** **10A. 3** Using a Novel Tropical Cyclone Radar Database to Observe Moderately Sheared Storms **Cameron Pine** **10A. 4** Structural and Evolution-Based Diagnosis of Mesoscale Convective Systems in the Monsoon Core Zone Using Satellite, Polarimetric Radar, and Lightning Observations **Sachin M. Deshpande** **10A. 5** Shear-Driven Microphysical Transitions in Wintertime Orographic Storms: Insights from S2noCliME **Troy Justin Zaremba** **10A. 6** An Observational Study of Quasi-Periodic Lightning Activity in the Inner Core of Super Typhoon Hato (2017) Before Landfall **Yuanyuan Xu**	**10B. 1** Log-Periodic Sampling and Counter-Aliasing of Doppler Spectrum **Tworit Dash** **10B. 2** Detecting Electromagnetic Interference Using the Phase of Time-Series Samples **Christopher Curtis** **10B. 3** Eliminating "Purple Haze" in NEXRAD Velocity Displays with Regressions FIltering and VRAD **John C. Hubbert** **10B. 4** Radar Differential Phase upon Transmission: Its Impacts and Measurement **Valery M. Melnikov** **10B. 5** Robust Automatic Detection of Wind Turbine Clutter for the NEXRAD Using Computationally Simple Features **Feng Nai** **10B. 6** Hybrid Batch: A Dual-PRF Algorithm for Enhanced Recovery of Polarimetric Radar Measurements **D. S. Zrnic**	**10:30**
12:00	**Lunch Break (Attendees on Own)**		**12:00**
1:30	**Panel Discussion: Industrial Panel (Toronto II/III)**		**1:30**
2:30	**Sessions End for the Day**		**2:30**

Thursday, 28 August 2025

41st International Conference on Radar Meteorology

	Toronto II/III	Toronto I	
8:15	**Use of Radar Data for Numerical Weather Prediction and Analysis II**	**Airborne and Spaceborne Radar II**	8:15
	12A. 1 The KNU Dual-Polarization Radar Observation Operator (K-DROP) for Improved Microphysical Representation and Data Assimilation **Ji-Won Lee** **12A. 2** Evaluating the Impact of Temperature Data Assimilation on Hydrometeor Evolution in Convective Precipitation Systems **Chieh-Ying (Ching-Yin) Ke** **12A. 3** Evaluation of the Rain Microphysics Representation in Five Schemes for Extreme Rainfall Using Polarimetric Radar and 2DVD **Huiqi Li** **12A. 5** Improving AROME Polarimetric Radar Simulations: Selection of Optimal Microphysics and Enhancement of the Radar Forward Operator **Clotilde Augros** **12A. 6** Assimilating 3D Polarimetric Microphysical Retrievals in the Operational ICON Modelling Framework of the German Meteorological Service (DWD) **Armin Blanke**	**12B. 1** Design and Flight Results of the Airborne Microwave Barometric Radar and Sounder (MBARS) **Matthew Walker McLinden** **12B. 2** Doppler Velocity Validation for EarthCARE Cloud Profiling Radar (CPR) Using Ground-Based Radars in High-Latitude Regions **Jiseob Kim** **12B. 3** Airborne Phased Array Radar (APAR): The Next Generation of Airborne Polarimetric Doppler Weather Radar for Observing Heavy Precipitation and High-Impact Weather Events **Everette David Joseph** **12B. 4** Characterization of Extreme Precipitation Events in the Western Mediterranean using GPM IMERG V07B and Evaluation of a High-Impact Case Study **J. Bech** **12B. 5** Identification of Convective and Stratiform Rain using Vertical Doppler Velocities Measured by the Cloud Profiling Radar of the EarthCARE Satellite **Yuichi Ohno** **12B. 6** Airborne W- and G-band radar observations of Arctic mixed-phase clouds and in-cloud water vapor **Mario Mech**	
9:45	**Coffee Break (Toronto Ballroom Foyer)**		9:45
10:30	**QPE and Hydrology**	**Signal/Data Processing Techniques for Radar II**	10:30
	13A. 1 Comparison of AQPI X-Band and NEXRAD S-Band Radar-Estimated Rain Rates during Two Extreme Atmospheric River Events over the Northern San Francisco Bay Area **R. B. Vilela** **13A. 2** Rainfall Estimation By Dual Polarimetric Radar at Ku Band. **T. Ushio** **13A. 3** Real-Time AI Optimization of Quantitative Precipitation Estimation **J. Bartel** **13A. 4** Improving Quantitative Precipitation Estimation in Complex Terrain Regions Through Integrating Ground-based Radar and Geostationary Satellite Observations **Liangwei Wang**	**13B. 1** Pulse Waveforms with High Sidelobe Suppression for Satellite Precipitation Radar **Mark Leifer** **13B. 2** A New Pulsing Scheme for an Airborne Cloud Radar **M. Dixon** **13B. 3** Enhancing Polarimetric Variable Estimation Using Adaptive Digital Beamforming for Phased Array Weather Radar **Yoon Kim** **13B. 4** Characteristics of Antenna Cross-Polar Contamination and Its Impact on Polarimetric Spectra of Ice Alignment Signatures **Min-Duan Tzeng** **13B. 5** Analysis of a Signal Processor Level RFI Suppressions Algorithm in Helsinki Testbed **Pekka Rossi** **13B. 6** Fast and Efficient Constrained Capon Adaptive Beamforming for the NSSL Advanced Technology Demonstrator using Deep Neural Networks **James M. Kurdzo**	
12:00	**Lunch Break (Attendees on Own)**		12:00
1:30	**Panel Discussion: Panel (Toronto II/III)**		1:30
2:30	**Poster Viewing & Coffee Break (Toronto Ballroom Foyer)**		2:30
4:00	**Severe Storms and Mesoscale Meteorology III**	**Radar Meteorology Education**	4:00
	15A. 1 DOW Radar Studies of the Mechanisms for Tornadogenesis, Maintenance and Dissipation **Karen A. Kosiba** **15A. 2** Radar Determined Intense Tornado Frequencies, Wind Profiles and the BEST Tornado Study **Joshua Wurman** **15A. 3** Novel Observations of Supercells and Tornadoes with the Horus Fully Digital S-band Polarimetric Phased Array Radar **Brandon K. Cohen** **15A. 4** How to Better Estimate Near-Surface Winds Using Ground-Based Coastal Radars During Hurricane Landfalls: Insights from Large-Eddy Simulations **Xiaomin Chen** **15A. 5** Waterspouts: A Radar-Based Analysis of a Severe Weather Phenomenon in the Persian Gulf **Jeff (Jafar) Sepehri, PhD Candidate.** **15A. 6** Can “Immense” ZDR Columns Be Used for Tornadogenesis Prediction? **Michael M. French** **15A. 7** Rapid-Scan Radar Observations of Tornado-Scale Vortices in a Quasi-Linear Convective System on 3 March 2023 during PERiLS **Morgan Schneider** **15A. 8** Multi-Doppler Analyses of Tornadic Events with a NEXRAD-Coupled Multistatic Radar Network **Samuel Emmerson**	**15B. 1** Breaking Down Barriers in Weather Radar Education and Outreach **Michael M. Bell** **15B. 2** The Educational and Outreach Activities Using the Mobile Rapid Scan X-Band Polarimetric (RaXPol) Radar During 2024-2025 **Hsiu-Wei Hsu** **15B. 3** LROSE Science Gateway: A Gateway to Advanced Radar/Lidar Data Analysis and Visualization to Streamline Weather Radar Education and Outreach **Brenda Javornik**	
		Open Radar Science: Toolkits, Applications, Data, Education and Outreach, Capacity Building, and Best Practices.	5:00
		15B. 1 A Framework for Evaluating the Performance of Multi-Doppler Radar Measurements and Retrievals Using Observational Radar Data and Open Source Codes **Mariko Oue** **15B. 2** Advancing Open Radar Science: FAIR Principles and Cloud-Native Data Management **15B. 3** Py-ART 2.0: Cross-Community Collaboration	
6:00	**Sessions End for the Day**		6:00

Friday, 29 August 2025

	41st International Conference on Radar Meteorology		
	Toronto II/III	**Toronto I**	
	QPE and Hydrology II	**Weather Radar Applications For Wildfires**	
8:15	**16A. 1** Generalized Polarimetric Radar Snow Relations **Petar Bukovicic** **16A. 2** Heavy Precipitation: Radar QPE for a Hurricane, Hailstorm and Rainstorm **Sudesh Boodoo** **16A. 3** Quantifying Phased Array Radar-Derived Quantitative Precipitation Estimation with NSSL's Advanced Technology Demonstrator **Emily Blumenauer** **16A. 4** Advancing R(KDP) Algorithms for Extreme Rainfall Estimation Using Dynamic Multiplier and Polarimetric Profiling **Jiaxi Hu** **16A. 5** Developing a Quality Assurance Processing Chain for X-Band: A Disdrometer-Based Approach **Nikolaos Antonoglou** **16A. 6** Implementing Novel, Adaptive Radar Rainfall Estimators to Improve Quantitative Precipitation Estimation in Western Germany. **Daniel Sanchez-Rivas**	**16B. 1** Radar-Based Detection and Tracking of Aerosol Plumes from Biomass Burning on the South African Highveld **Gerhardt Botha** **16B. 2** Verification fo WoFS-Smoke Forecasts using Polarimetric Observations from Weather Radar **Emma Mae Miller** **16B. 3** Radar-Based Detection of Wind-Driven Smoke Dispersion During the 2024 Smokehouse Creek Fire **Min-Duan Tzeng** **16B. 5** Signatures of Smoke, Clear-Air, Birds, and Insects on Solid-State Radars **Miloslav Stanek** **16B. 6** Assimilation of Doppler Radial Velocity from Biomass Burning Debris into the Warn-on-Forecast System **Thomas A. Jones**	**8:15**
9:45	**Coffee Break (Toronto Ballroom Foyer)**		**9:45**
10:30	**Keynote Speaker (Toronto Ballroom II/III)** **17. 1** Radar Nowcasting around Wild Fires **Peter Thomas May**		**10:30**
11:00	**Awards Ceremony and Closing Remarks (Toronto II/III)**		**11:00**
11:30	**Conference Adjourns**		**11:30**