

Working Draft Technical Program

Version Feb 10, 2026

We take this opportunity to thank and welcome everyone to the 9th Cleaner Earth & Atmosphere Conference (Holistic Engineering 2026), and Forging Forward Tenably 2026. We hope that you will have a wonderful time in the Southernmost city of Canada.

Please refer to <https://www.caeconference.ca/>, <http://www.turbulenceandenergylab.org/-annual-conference-series.html>, and <https://allinterestresearchinstitute.ca/conference> for updates and details. The banquet will be on Thursday June 18. Please advise us of dietary restriction, special needs, etc. via email to TELab@uwindsor.ca

This in-person-only conference is for paid delegates only. If you have not registered, please do so at <https://www.uwindsor.ca/engineering/research/495/turbulence-and-energy-lab-annual-conference> Remember to save the receipt as you checkout.

FFT2026 is running parallel to HE2026, under the 9th Cleaner Earth & Atmosphere Conference umbrella. Only one registration is required to attend. If the number of presentations is small, FFT2026 presentations will be scheduled in series with HE2026 presentations. If required, the presentations may run in parallel to fit all presentations within the two days, based on first come (register) first serve, where overflows will be presented as poster presentations only.

Please limit your presentation to 15 minutes, leaving 3 minutes for discussion, and 2 minutes for changeover. In case of a no-show, the next presentation(s) will be advanced accordingly.

Selected papers for the CEA2026 will be considered for a Refereed Conference Proceeding, a Reviewed Volume with Springer Nature. The first come (accepted after the review process) first serve approach will be invoked, where overflows may be considered for other active volumes we are editing.

Notation

- * presenting author
- † corresponding author

Paper/presentation Status

- 📄 presentation + full-length paper
- 🕒 reviews conveyed, waiting for revision
- ✓ paper accepted for the Springer Nature Proceeding
- ➔ pending confirmation; please update us

Thursday, June 18, 2026	
08:15–08:45	Centre for Engineering Innovation (CEI) Atrium Breakfast Registration Package Pickup
08:45–09:00	Welcome and Opening Remarks (Room 1101 CEI) Rupp Carriveau VP Research & Innovation – Shanthi Johnson, Dean of Engineering – Bill Van Heyst
09:00–09:40	Plenary Lecture #1 (Room 1101 CEI) 2030 – the passing of another courageous deadline? – Graham T. Reader
	Sustainable Engineering, Room 1101. Co-Chairs: Ahmad Vasselbehagh & Abimbola Grace Oyeyi
09:40–10:00	Sustainable Transport. Abimbola Grace Oyeyi ^{†*} Department of Civil and Environmental Engineering, University of Windsor, Windsor, Canada
10:00–10:20	Sustainable Cooling. Atousa Pirvaram*, Siu Ning Leung, Paul G. O’Brien [†] Department of Mechanical Engineering, Lassonde School of Engineering, York University, Ontario, Canada
10:20–10:40	Coffee Break
	Sustainable Development, Room 1101. Co-Chairs: Paul G. O’Brien & Jacqueline A. Stagner
10:40–11:00	Mitigating SDG2: Zero Hunger. Robyn Jadischke ^{*†} , William David Lubitz School of Engineering, University of Guelph, Canada
11:00–11:20	Modeling the Formation of an Ammonia-Powered Engine’s Contrail. Torge Bohlken, Ahmad Vasselbehagh ^{*†} Department of Mechanical & Aerospace Engineering, University of South Florida, Tampa, Florida, USA
11:20–11:40	Urban Stormwater Management. Richa Rayamajhi ^{†*} , Charitha Pathipati, Tirupati Boliseti Department of Civil and Environmental Engineering, University of Windsor, Windsor, Canada
11:40–12:00	Air-Sand Thermal Management for Advancing Compressed Air Energy Storage. Md Nasir Uddin Mondal*, David S-K Ting, Rupp Carriveau [†] Turbulence & Energy Laboratory, University of Windsor, Canada
12:00–13:00	Lunch & Poster Presentation

Thursday, June 18, 2026

	Cleaner Tomorrow, Room 1101. Co-Chairs: Paul Henshaw
13:00–13:20	Recent Advances in Thermophotovoltaic Technology. Paul G. O'Brien*†, Nima Talebzadeh, Keshaw Ramparsad, Shahryar Homaei Department of Mechanical Engineering, Lassonde School of Engineering, York University, Toronto, Ontario, Canada
13:20–13:40	Cleaner Construction Materials Adeyemi Adesina*† Department of Civil and Environmental Engineering, University of Windsor, Windsor, Canada
13:40–14:00	Advancing Freshwater Ecosystem Monitoring through the Application of a Slocum Glider. Lydia L. Paulic*†, R.L. Robinson, R. Miller, T.A., Hayden, B. Possamai, J.D. Stockell, K. Rosier, S. Ruberg, K. Johnson, D.M. Webber, C. Smith, T. Fraser, M. Wells, Aaron T. Fisk RAEON, School of the Environment, University of Windsor, Ontario, Canada University of Michigan, Cooperative Institute for Great Lakes Research, Michigan, USA Center for Systems Integration and Sustainability, Department of Fisheries and Wildlife, Michigan State University, Michigan, USA Rubenstein Ecosystem Science Laboratory, University of Vermont, Vermont, USA National Oceanic and Atmospheric Administration, Great Lakes Environmental Research Laboratory, Michigan, USA Innovasea, Nova Scotia, Canada University of Toronto Scarborough, Ontario, Canada
14:00–14:20	Cleaner Combustion Engines. Navjot Sandhu*†, Xiao Yu, Ming Zheng Clean Combustion Engine Laboratory, University of Windsor, Windsor, Ontario, Canada
14:20–14:40	Indoor Air Quality. Dora Strelkova*† Mechanical Engineering, University of Windsor, Windsor, Ontario, Canada
14:40–15:00	<u>Coffee Break</u>
	Nurturing Tomorrow, Room 1101. Co-Chairs: Quade Digweed & Narayan Kar
15:00–15:20	
15:20–15:40	Controlled Environment Food Production. Quade Digweed*† Agriculture and Agri-Food Canada
15:40–16:00	An Energy Efficient Greenhouse. Kayes Reza*† Under Sun Acres Inc.. Canada
16:00–16:20	Exploring Canadian Cattle, Poultry, and Swine Barn Clean Energy Pathways. Nicholas Schembri, Jacqueline Stagner†, Rupp Carriveau* Environmental Energy Institute, Turbulence & Energy Laboratory, University of Windsor, Windsor, Canada
16:20–16:40	
0.701388889	Bus leaves CEI, University of Windsor (@ 4:50 pm) for Banquet
18:00–20:00	Banquet at Cooper's Hawk Vineyards
0.833333333	Bus returns from banquet (~8:00 pm) to CEI, & then, hotels, as needed

Friday, June 19, 2026	
08:15–08:45	Centre for Engineering Innovation (CEI) Atrium Breakfast Registration Package Pickup
08:45–09:00	Gift Draw (Room 1101 CEI) Rupp Carriveau
09:00–09:40	Plenary Lecture #2 (Room 1101 CEI) “Wake up! A call for holistic environmental assessment of shipping.” – Ida-Maja Hassellöv
	Holistic Engineering, Room 1101. Co-Chairs: Jacqueline A. Stagner & Jamie Smith
09:40–10:00	On Intense and Isotropic Turbulence Generation. Johnson Babalola*†, David S-K Ting Turbulence & Energy Laboratory, University of Windsor, Canada
10:00–10:20	Enhanced Radiative Cooling Using Underlying Parabolic Reflectors. Po-Chun Chiu*, Atousa Pirvaram, Thomas Cooper, Siu Ning Leung, Paul G. O'Brien† Department of Mechanical Engineering, Lassonde School of Engineering, York University, Toronto, Ontario, Canada
10:20–10:40	Coffee Break
	Energy and Food, Room 1101. Co-Chairs: Fadi Al-Daoud & Niharendu Biswas
10:40–11:00	What you can't see can hurt you and your bumblebees – the importance of monitoring natural UV light levels in your greenhouse. Fadi Al-Daoud*†, Sharon Kitur, Caroline Strang Ontario Ministry of Agriculture, Food and Agribusiness, Canada Department of Psychology, University of Western Ontario, Canada
11:00–11:20	Exergy Analysis of Clean Hydrogen for Corn Drying. Muhammad Ali*, David S-K Ting, Rupp Carriveau† Turbulence & Energy Laboratory, University of Windsor, Canada
11:20–11:40	Optimal Lighting for Healthy Plants. Sabrina Sawan*, Quade Digweed†, Jason Lanoue Agriculture and Agri-Food Canada
11:40–12:00	
12:00–13:00	Lunch & Posters

Friday, June 19, 2026

Friday, June 19, 2026	
	Natural Resources, Room 1101. Co-Chairs: Atousa Pirvaram & Rajeev Ruparathna
13:00–13:20	Advances in Roof-top Radiative Cooling Technology. Fatemeh Massah*, Siu Ning Leung, Paul G. O'Brien† Department of Mechanical Engineering, Lassonde School of Engineering, York University, Ontario, Canada
13:20–13:40	Preliminary Comparison of Measured Atmospheric Fluxes Across Urban, Natural, and Photovoltaic Canopies Ahmed Tolba, Ahmad Vasselbehagh*† Department of Mechanical and Aerospace Engineering, University of South Florida, Tampa, USA
13:40–14:00	Clean Energy Applications & Energy Storage: Thermal and Electrochemical. Himanshu Tyagi*† Department of Mechanical Engineering, Indian Institute of Technology Ropar, Rupnagar, Punjab, India
14:00–14:20	Development of an App for Water Distribution Emergency Monitoring and Response Stanley Madziyire*, Jacqueline Stagner†, Rupp Carriveau, Katelynn Johnson, Aaron Fisk Environmental Energy Institute, Turbulence & Energy Laboratory, School of the Environment, University of Windsor, Windsor, Ontario, Canada
14:20–14:40	
14:40–15:00	<u>Coffee Break</u>
	Holistic Engineering, Room 1101. Co-Chairs: Himanshu Tyagi & Adeyemi Adesina
15:00–15:20	Understanding Turbulent Flow around a Wheel. Zhi-Sheng Chen*†, David S-K Ting Ford Motor Company, Dearborn, Michigan, USA Turbulence & Energy Laboratory, University of Windsor, Canada
15:20–15:40	A Multiscale Modeling Approach to the Atmospheric Boundary Layer Above Solar Farms Using LES and Monin–Obukhov Similarity. Michael Edgemon, Ahmad Vasselbehagh*† Department of Mechanical & Aerospace Engineering, University of South Florida, Tampa, Florida, USA
15:40–16:00	Evaluating Hydrogen and Electric Alternatives for High-Horsepower Agriculture Equipment. Joshua Martin*, Jacqueline Stagner†, Rupp Carriveau Environmental Energy Institute, Turbulence & Energy Laboratory, University of Windsor, Windsor, Ontario, Canada
16:00–16:20	➔ ✓ Waste Management. Muhammad Sajid Khan*†, Chen Chen Innovation Research Institute of Zhejiang University of Technology, Shengzhou, Zhejiang, China College of Mechanical Engineering, Zhejiang University of Technology, Hangzhou, Zhejiang, China
16:20–16:40	Awards Committee Meet Committee: Paul O'Brien (Chair), Jacqueline Stagner, Ahmadreza Vassel-Be-Hagh, Ambimbola Grace Oyeyi
16:40–17:00	<u>Awards¹ Presentation in Atrium</u>
	Thank you for your contribution. We look forward to seeing you next year.

The Awards are:

Best Cleaner Earth & Atmosphere Presenter
Exceptional Eco-Friendly Paper / Poster
Finest Tenable Progress Paper /Poster
Most Holistic Research Presenter

Accepted Posters

Waste Heat Recovery.

Muhammad Sajid Khan, Chen Chen

Innovation Research Institute of Zhejiang University of Technology, Shengzhou, Zhejiang, China

College of Mechanical Engineering, Zhejiang University of Technology, Hangzhou, Zhejiang, China

• Development of an App for Water Distribution Emergency Monitoring and Response

Stanley Madiziyire, Jacqueline Stagner, Rupp Carriveau, Katelynn Johnson, Aaron Fisk

Environmental Energy Institute, Turbulence & Energy Laboratory, School of the Environment, University of Windsor,
Windsor, Ontario, Canada

• Delegate will bring the poster, CEA2026 will provide the easel.

See you again!

The 10th Cleaner Earth & Atmosphere Conference, June 17-18, 2027 (TBC). Information will become available at

<https://www.caeconference.ca/>
<http://www.turbulenceandenergylab.org/>
<http://www.turbulenceandenergylab.org/-annual-conference-series.html>

Engineering a Vibrant Tomorrow 2027

<https://allinterestresearchinstitute.ca/>
<https://allinterestresearchinstitute.ca/conference>

Wholesome Advancement 2027

The 11th Cleaner Earth & Atmosphere Conference, June 15-16 (or 22-23?) (TBC), 2028. Information will become available at

<https://www.caeconference.ca/>
<http://www.turbulenceandenergylab.org/>
<http://www.turbulenceandenergylab.org/-annual-conference-series.html>

Benign Engineering & Development 2028

<https://allinterestresearchinstitute.ca/>
<https://allinterestresearchinstitute.ca/conference>

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