IAGE Student Chapter Symposium 2026

August 24, 2026 • Université du Québec à Trois-Rivières (UQTR)

PROGRAM

TIME	ACTIVITY
8:00 am–8:30 am	Coffee & Registration
8:30 am–8:40 am	Welcome (Prof. Samaneh Shahgaldi)
8:40 am–9:00 am	Talk 1 (Dr. Elaheh Oliaii)
9:00 am–12:00 pm	Oral Presentations
12 pm–1:00 pm	Lunch
1:00 pm–1:20 pm	Talk 2 (Prof. François Allard)
1:20 pm–3:20 pm	Oral Presentations
3:20 pm–3:40 pm	Talk 3 (Prof. Olivier Fontaine)
3:40 pm–4:00 pm	Group Photography
4:00 pm–5:30 pm	IRH & CIPP Tour
5:30 pm–7:00 pm	Poster Session and Awards

Organizer

Professor Samaneh Shahgaldi

Associate Professor, Université du Québec à Trois-Rivières (UQTR)

Adjunct Associate Professor, University of Waterloo

Canada Research Chair in Proton Exchange Membrane (PEM) Fuel Cells and Electrolyzers

Professor Shahgaldi is a member of the Institute of Innovations in Ecomaterials, Ecoproducts and Ecoenergies (I2E3) and the Hydrogen Research Institute (IRH) at UQTR. She is an award-winning researcher, Chair of the Scientific Committee, and a member of the Editorial Board of the International Journal of Green Energy. Prior to her academic career, she was a Senior Research Scientist at Cummins/Hydrogenics, where she worked on fuel cell and water electrolyzer projects. Her research combines academic expertise and industrial experience to advance clean energy technologies.

Invited Speakers

Dr. Elaheh Oliaii

Senior Professional Researcher & Chemical Engineer, Nouveau Monde Graphite

Dr. Elaheh Oliaii is a Senior Professional Researcher and Chemical Engineer at Nouveau Monde Graphite. She holds a Ph.D. from the Université de Sherbrooke, where she developed expertise in electrochemistry and materials science. Her current work focuses on advanced green energy technologies, including the development of high-performance, lightweight components for clean fuel cells from natural graphite.

Professor François Allard

Centre Énergie Matériaux Télécommunications (INRS)

Professor François Allard joined the Centre Énergie Matériaux Télécommunications in 2022, where he develops research programs in applied electrochemistry and numerical modeling of electrochemical cells. His research includes finite element modeling of batteries, fuel cells, and high-temperature electrolyzers, as well as the development of metal and ceramic materials for electrolysis and energy-storage technologies. He is also a member of the INRS-UQTR joint research unit on materials and technologies for the energy transition.

Professor Olivier Fontaine

Professor, Department of Chemistry, Université de Montréal

Professor Olivier Fontaine is a Professor of Chemistry at the Université de Montréal. His research focuses on electrochemistry, energy storage, and advanced battery technologies, with particular expertise in electrolytes and electrochemical interfaces. His work aims to develop innovative materials and approaches for next-generation energy-storage systems.

CHAIR OF THE EVENT

Dr. Nassim Noura

Nassim Noura, PhD, is a distinguished researcher and leader at the forefront of the energy transition, currently serving as Director of the Hydrogen Research Institute (IRH) Office and Project Director at the University of Quebec at Trois-Rivières (UQTR). Their work is instrumental in advancing innovation within energy transition and mainly the hydrogen value chain, encompassing fundamental sciences, engineering, and social sciences to foster new knowledge and train future innovators

ORAL PRESENTATIONS

Morning Session | 9:00 am–12:00 pm

9:00 am–9:20 am | Muneendra Prasad Arkhat

Shahgaldi Research Group – UQTR

Advancing PEM Water Electrolysis: Innovative Porous Transport Layers, Reduced Precious Metal Loading, Quality Control, and Component-Level Optimization

9:20 am–9:40 am | Pritish Kumar Behura

Brock University

HF-Free Ru–P Co-Doped $Ti_3C_2T_x$ MXenes for Alkaline Water Splitting

9:40 am–10:00 am | Vahid Mostafavi

UQTR

Hydrogen Hybrid-Electric Propulsion: Comparative Analysis of Fuel-Cell/Turbogenerator Configurations

10:00 am –10:20 am | Emeka Olisa

Université de Sherbrooke

Modeling Methane Pyrolysis Deactivation through Carbon Deposition and Pore Blocking

10:20 am –10:40 am | Xin Zeng

University of Waterloo

From Catalyst Materials to Membrane Electrode Assembly Architecture: Design Strategies for High-Performance Proton Exchange Membrane Fuel Cells

10:40 am –11:00 am | Dhinesh Kumar Murugaiah

Shahgaldi Research Group – UQTR

Dispersion-Driven Microstructure: Linking Catalyst Ink Design to PEMFC cathode catalyst layer

11:00 am –11:20 am | Muhammad Azhar Iqbal

Shahgaldi Research Group – UQTR

Engineering Ti-Felt Surface Morphology for Durable Low-Platinum Porous Transport Layers of PEM Water Electrolysers

11:20–11:40 | Yassine Ben Faiza

UQTR

Data-Driven Model Predictive Control of Auxiliary Components in a 1 kW PEMFC System

11:40 am–12:00 pm | Hafiz Muzammil Irshad

Shahgaldi Research Group – UQTR

Development of natural graphite-based composite bipolar plates for PEM fuel cell

Afternoon Session | 1:20–3:40

1:20 pm–1:40 pm | Yahia CHELALI

INRS-EMT

Progress into the Development of Rechargeable Zn–Air Batteries for Sustainable Energy Storage

1:40 pm–2:00 pm | Km Madhu Paswan

IIT Kharagpur

Development of High-Performance Hard Carbon Anodes for Sodium-Ion Batteries

2:00 pm–2:20 pm | Muhammad Jareer Chatholy

Shahgaldi Research Group – UQTR

A Nb‑B‑C Composite Architecture for High-Rate-Stable Anode Performance in Lithium-Ion Batteries

2:20 pm–2:40 pm | Fateme Ghasemi

University of Victoria

Influence of Solution Properties on the Electrospinning Performance of Lignin-Based Polymer Blends

2:40 pm–3:00 pm | Shahid Zaman

Shahgaldi Research Group – UQTR

Enhancing Anode Performance in PEM Water Electrolyzers through Catalyst Support Engineering

3:00 pm–3:20 pm | Richard Acheampong

Shahgaldi Research Group – UQTR

Fabrication vs. Performance: Ionomer Loading Trade-offs in Aquivion and Nafion IrOx Anode Catalyst Layers for PEM Water Electrolysis

Poster PRESENTATIONS

1.Niloufar Fadaei Mobarhan

Multiphysics Modeling of Redox Cycling-Induced Degradation in a Planar Solid Oxide Fuel Cell under Fuel Starvation

2. BAKALEM Amira

Catalyseurs résistants pour la pyrolyse du méthane par pyrolyse par pulvérisation de flamme (FSP)

3. Juan Alberto Chavez Ruiz

Synthesis and Characterization of WC-Promoted Ni/MCM-41 Nanocatalysts for Dry Reforming of Methane

4. Teresa Dong

hBN-based Anion Exchange Membranes for Improved Ionic Conductivity in Water Electrolysis for Clean Hydrogen Production

5. Zahra Mohammad Kazemi

X-ray Computed Tomography for Supercapacitor Studies: Beyond Conventional Imaging Techniques

6. Mathieu Lepage

Bis-AMOX-Based Metallosupramolecular Assemblies for Artificial Photosynthesis

7. Vivian Montanez Valderrama

Microwave Irradiation as a Powerful Tool for Sustainable Synthesis

8. Fatemeh Ghasemi

Influence of Solution Properties on the Electrospinning of Kraft Lignin Nanofibers

9. Anurag Anurag, Leila Moradizadeh

Niobium and Tantalum Interlayers for PTLs: Enhancing PEMWE Performance, Stability, and Reducing Precious Metal Loading

10. Muhammad Rahees Puthalath

Development of advanced anode electrocatalyst support for PEMWE

11. Sai Sandhya Saladia

Development of Cellulose-Based Materials for circular Electronic Printing

12. Mengyan Chen

Predicting Mass Transport in Microporous Layers: A Pore Network Modelling Approach

13. Muhammad Azhar Iqbal, Sukhvant Singh

Enhancing the durability of porous transport layer for PEM water electrolyzer via Surface and interface Engineering Strategies

14. Yaoyi Cao

Fabricating Porous Transport Layers for Next Generation AEM Water Electrolyzers

15. Nikita Malhotra

Operando DRT Analysis of PEM Water Electrolysis: Parametric Investigation and Degradation Assessment Using Intermittent ASTs

16. Zeeshan Ahmed

Fabrication of Iridium Nanoparticles supported on NbB2 for Proton Exchange Membrane Water Electrolyzers.

17. Mohammad Hossein Johar

Effect of Acid Pretreatment on the Corrosion Resistance and Stability of Ta-Coated Titanium Bipolar Plates for PEM Fuel Cells

18. Yasin Mehdizadeh

Power-Dependent Morphology and Alkaline Corrosion Behaviour of DC-Sputtered Ni Coatings on SS316L for AEMWE Bipolar Plates

19. Hadhemi Nffisi

Cellulose-Derived Carbon Microporous Layers for PEM Fuel Cells

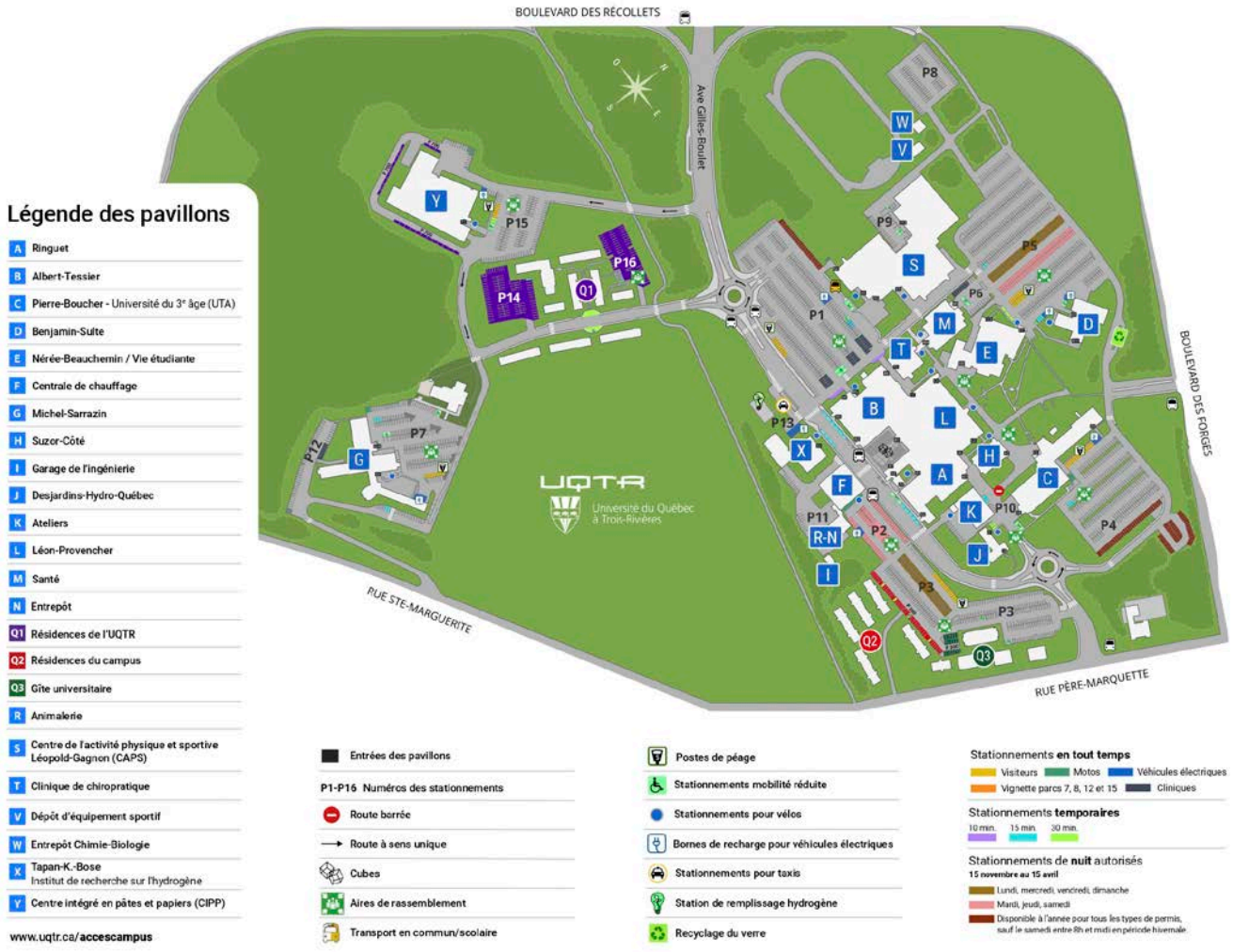
PRACTICAL INFORMATION

Venue

Atrium Salon
Université du Québec à Trois-Rivières (UQTR)
Trois-Rivières, Québec, Canada

Parking

Please refer to the UQTR campus parking map for parking areas and access. The campus map identifies parking areas P1–P16 and the location of the Institut de recherche sur l'hydrogène (IRH).



Contact

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AWARD COMMITTEE

1. **Prof. Jason Lee**
2. **Dr. Elaheh Oliaii**
3. **Dr. Nassim Noura**