

AESRC 2019 Technical Program

Note: All talks will take place in Bahen Centre (BA) 1130 on St. George Campus. Registration, posters, coffee breaks, lunch, and sponsor booths will be in the Bahen Centre Lobby.

Friday March 29

7:00-10:00 pm Registration and Meet-n-Greet (Hart House Debate Room, St. George Campus)

Saturday March 30

8:00-8:45 am Registration

8:45-9:00 am Opening Remarks

Session 1: Quaternary Science (Sponsored by the Canadian Quaternary Association)

9:00-9:15 am Timothy Roy A New Stimulated Luminescence Dating Lab at the University of Ottawa

9:15-9:30 am Tynan Pringle Micro-XRF geochemical and micropaleontological evidence for prehistoric land disturbance: construction of the Middle Woodland (ca. 300 BCE-700 CE) Serpent Mounds complex, Rice Lake (Ontario, Canada)

9:30-9:45 am Marissa Davies The relative role of internal and external factors on Holocene carbon accumulation in a Hudson Bay Lowland peatland, northern Ontario

9:45-10:00 am Sophia Zamaria The role of groundwater and subsurface hydrological processes in reconstructing the Green Sahara

10:00-10:15 am Hiromitsu Sato Fire and Low CO₂ Open Amazonian Dry Corridors

10:15-10:30 am Coffee Break

10:30-11:00 am **Keynote Speaker:** Sedimentary Geology - **Dr. Lilian Navarro**

Title: Neoproterozoic deep-marine phosphatic deposits in southern Canadian Cordillera: Phosphogenesis and paleoceanography

Session 2: Sedimentary Geology (Sponsored by the Canadian Society of Petroleum Geologists and Imperial)

11:00-11:15 am Man-Yin Tsang Seawater contamination in ODP/IODP porewater samples and its quantitative effects on studies of microbial sulfate reduction

11:15-11:30 am Rodrigo Narro Perez Understanding the impact of largescale flood events on the structure and stability of the latero-frontal moraine at Gígjökull, Iceland

11:30-11:45 am Rebecca Lee Investigating the impact of fast ice flow on the landform-sediment assemblages in the proglacial fields of Sléttjökull and Öldufellsjökull, Mýrdalsjökull Ice Cap, southern Iceland

11:45 -12:00 pm Curtis Ferron Unmixing Mixed Signals in Ancient Fluvial Deposits: Implications for Paleogeographic Reconstructions and Sedimentary Provenance Sampling Strategies

12:00-1:00 pm Lunch and CSEG Challenge Bowl

Saturday March 30 (continued)

1:00-1:30 pm	Platinum Sponsor Talk: Imperial – Ian Watson Title: Energy Outlook to 2040 and Your Roles
1:30-2:00 pm	Keynote Speaker: Geophysics – Dr. Semechah Lui Title: The effect of aseismic slip on the source processes of induced seismicity: Advancing or delaying the next earthquake? Session 3: Geophysics (Sponsored by the Canadian Geophysical Union and the Canadian Society of Exploration Geophysicists)
2:00-2:15 pm	Alzbeta Onderco Time-Series Approach to Remove Severe Noise from Airborne Time-Domain Electromagnetic Data Acquired in New Brunswick, Canada
2:15-2:30 pm	Joshua Guerrero Spurious transitions in convective regime due to viscosity clipping: Ramifications for modelling planetary secular cooling
2:30-2:45 pm	Sean Langemeyer The dynamics and impact of compositionally originating provinces in a mantle convection model featuring rheologically obtained plates
2:45-3:45 pm	Poster Session 1 and Coffee Break Session 4: Planetary Science
3:45-4:00 pm	Matt Duffy Characterizing the Microstructural Response of Impact-related Deformation in Lunar Anorthosite Breccia North West Africa 10272
4:00-4:15 pm	Chimira Andres A Quantitative Analysis of Sorted Patterned Ground within the Haughton Impact Structure, Devon Island, with Implications to Mars
4:15-4:30 pm	Stephen Korchinos Using Highly Siderophile Elements in Ureilites to Better Understand Asteroid Formation Processes
4:30-4:45 pm	Tanya Kizovski Identifying the Effects of Shock on the Composition of Martian Phosphate Minerals Using Correlative Structural and Chemical Techniques
7:00-10:00 pm	Conference Dinner (3 Brewers Yonge)

Sunday March 31

8:30-9:00 am Registration

Session 5: Environmental Geosciences (Sponsored by Isomass Scientific Inc.)

9:00-9:15 am	Reisa San Pedro	Further investigation of the relationship between population density, unsewered waste input, and As in Bangladesh groundwaters
9:15-9:30 am	Sian Ford	Microbial communities supported by Precambrian fracture water in the deep subsurface
9:30-9:45 am	Mohamed El-Waraky	Assessment of the relationship between the biodegradation of hydrocarbons and the production of methane in an oil sands End Pit Lake
9:45-10:00 am	Nabila Rahman	Tracing mercury sources in contaminated freshwater sediments and biota using mercury isotopes: St. Clair River Area of Concern
10:00-10:15 am	Natalie Szponar	Tracking Atmospheric Mercury Sources by Isotopic Fingerprinting
10:15-10:30 am	Joan De Vera	What can we learn about the Arctic from Pb isotopes in seawater?

10:30-10:45 am Coffee Break

10:45-11:15 am **Keynote Speaker:** Economic and Igneous/Metamorphic Geology – **Dr. Melissa Anderson**
Title: The search for seafloor hydrothermal vents: Where tectonics, volcanism, and biology meet

Session 6: Economic Geology and Igneous/Metamorphic Geology
(Sponsored by the Society of Economic Geologists and the Prospectors and Developers Association of Canada)

11:15-11:30 am	Alice Alex	A New Experimental Apparatus to Study Magmatic Process at Precisely Controlled Redox Conditions
11:30-11:45 am	Naomi Welt	Geological evolution of the Chicobi basin, Quebec: A U-Pb study of intrusive gabbro and syenite in the Malartic transect, Abitibi Greenstone Belt
11:45-12:00 pm	Carter Grondahl	Initial magmatic fertility in continental arcs

Sunday March 31 (cont.)

12:00-1:00 pm	Lunch and AESRC Annual General Meeting	
1:00-2:00 pm	Poster Session 2	
2:00-2:30 pm	Keynote Speaker: Paleontology – Dr. Marc Laflamme Title: Complexity in the oldest animal communities	
	<u>Session 7: Paleontology</u>	
2:30-2:45 pm	Allen Chochinov	Olfactory Bulb Variation in New World Leaf Nosed Bats
2:45-3:00 pm	Katie Maloney	Early Neoproterozoic macrofossils from the Wernecke Mountains, Yukon
3:00-3:15 pm	Max Chipman	Investigating feeding strategies and fluid dynamics of irregular archaeocyathans from the Forteau Formation, Southern Labrador, Canada
3:15-3:30 pm	Johnathan Sorrentino	Decay experiment analyzing sulfur as a limiting reagent in fossiliferous siderite concretion formation
3:30-3:45 pm	Coffee Break	
3:45-4:15 pm	Awards and Closing Remarks	

Poster Presentations

Note: Posters will be displayed during entire conference. Poster session times in schedule above are when presenters can be found at their posters.

Quaternary Science	Rhys Buceta	Glaciers as Insight into the Creation and Excavation of the Dolpo Basin, Western Nepal
	Edward Crisostomo	Exploring the Interaction of Climate, Tectonics, and Glaciers in the Gurla Mandhata Region, Northwest Nepal
Geophysics	Julia Andersen	Attached/semi-attached lithospheric drips and their surface expression with insights from analogue modelling
	Payman Janbakhsh	Final magnitude and source-station epicentral distance estimation using Autoencoders and Recurrent Neural Networks
	Mostafa Khorshidi	Source Mechanism Characterization during Hydraulic Fracturing
	Tianshi Liu	Seismic imaging of the lithosphere of Alaska using ambient noise adjoint tomography
Planetary Science	Alexandre Boivin	Systematic Complex Permittivity Measurements of Ilmenite-bearing Lunar Analogue Materials
	Nikol Posnov	Colonization of Shocked Basalts from Vargeão Dome and Vista Alegre: Implications for the Search for Life on Mars
	Nicolas Randazzo	Stable Isotopes of Carbonates: A Tool in the Search for Life
Environmental Geosciences	Samantha Athey	From Your Laundry to the Lake: Blue jeans as a source of anthropogenic microfibers to the aquatic environment
Economic/Igneous and Metamorphic Geology	Joëlle Dufour	Geochemical analyses of barite associated with polymetallic ore deposits, Cyclades District, Greece
	Eugenia Lemberg	High-Precision U-Pb Geochronology within Metal Earth's Superior Province Transects: A Progress Report
Paleontology	Anna Moskalik	The Importance of Pyrite in Soft-Bodied Fossilization in Mazon Creek, Illinois