

OCTOBER 14TH AND 15TH, 2022



Science Atlantic

MSCS

Mathematics & Statistics
and Computer Science
Conference

SCHEDULE

Friday October 14th

10:00-7:00 Check-in — Sir James Dunn Building -Foyer

11:30-12:00: Programming competition briefing — Dunn 102

12:00-5:00: Programming competition — Dunn 102

1:00-4:00: Math competition — Avarad Dixon G10

2:30-3:30: Science Atlantic joint Math/CS meeting — Dunn 106

3:30-4:30: Science Atlantic Math meeting — Dunn 106

3:30-4:30: Science Atlantic CS meeting — Dunn 111

5:30-7:00: Pizza party for all students— Jennings Hall Mezzanine

7:00-8:00: Field Lecture -Dr. Jude Kong — Dunn 113

8:00-9:30: Reception — Purdy Crawford Arts Centre Foyer
(Including Cash Bar)

Saturday October 15th

8:30-11:00: Check-in —Dunn Foyer

9:00-10:40: Contributed student talks — Dunn 106 and 113

10:40-11:00: Coffee Break — Dunn Foyer

11:00-12:00: Blundon Lecture -Dr. Peter Selinger— Dunn 113

12:00-2:00: Lunch — Jennings Hall

2:00-4:00: Contributed student talks — Dunn 106 and 113

4:00-4:30: Coffee Break — Dunn Foyer

4:30-5:30: Sedgewick Lecture -Dr. Amber Simpson — Dunn 113

5:30-6:00: Prizes and wrap-up — Dunn 113 The Wu Centre

Tweedie Hall (in McCain Student Center) will be open all day Saturday as a get- away space.

SPEAKERS



Dr. Peter Selinger
Dalhousie University

Blundon Lecture

Hex as a combinatorial game



Dr. Jude Kong
York University

Field Lecture

Harnessing the power of mathematical models to inform disease outbreak policies.



Dr. Amber Simpson
Queen's University

Sedgewick Lecture

Solving Fundamental Cancer Problems with AI

MountAllison
UNIVERSITY

[HTTPS://SCIATL.ORG/MSCS2022](https://sciatl.org/mscs2022)

Dunn 106

Morning

- 9:00 Lauren Farrell MTA**
 A Pair Formation Model with
 Recovery of Monkeypox
- 9:20 David Cassagrande CBU**
 Blow-up solutions of the nonlinear
 Schrödinger equation with moving
 mesh methods
- 9:40 Logan Pipes MTA**
 Bounding Real Tensor Optimizations
 via the Numerical Range
- 10:00 Saurav Neupane UPEI**
 Analysis on the factors affecting
 access to in-school music education
 in Canadian adolescents

Afternoon

- 2:00 Peilin Li Dal**
 The interaction between simplicial
 collapsing and Betti numbers of
 monomial resolution
- 2:20 Ruoyan (Christine) Fang Dal**
 Stern's Diatomic Sequence and its
 Analogue on $\mathbb{Z}[\sqrt{2}]$
- 2:40 Xiaoyu Jia Dal**
 Modular Forms and Convolution
 Sums of the Divisor Function
- 3:00 Zachary Murray Dal**
 Implementing Double Categories
 in the Lean Proof Assistant
- 3:20 Matthew Kozma UPEI**
 An Analysis and Overview of
 Deterministic Finite Automata
 with Output
- 3:40 Alistair May STFX**
 Creating visual representations of
 finite state automata

Dunn 113

Morning

- 9:00 Benjamin Stanley MUN**
 A Survey of the 2-Block Intersection
 Graphs of Twofold Triple Systems
- 9:20 Dylan Pearson MTA**
 Slow Localization
- 9:40 Alexander Saunders SMU**
 Tiling and Asymptotics of the Aztec
 Diamond
- 10:00 Peter Collier Dal**
 Zero Forcing on subgraphs of Proper
 Interval Graphs
- 10:20 Grace Wilson UPEI**
 Eviction on Triangular Grids

Afternoon

- 2:00 Wangwei Han UPEI**
 Machine Learning for Parameter
 Tuning, An Application to Differential
 Evolution
- 2:20 Louis Bu Dal**
 Hybrid Search: Application of
 Zermelo's Navigation Problem
- 2:40 Jingyuan (Crystal) Zhang Dal**
 Healthcare fraud and abuse
 detection using machine learning
- 3:00 Yuchen Wei STFX**
 Short temporal word sense
 disambiguation
- 3:20 Patrick Bowen STFX**
 Fill in the blank stance detection with
 language models
- 3:40 Crystal Sharpe MTA**
 Mutual Opacity between Multiple
 Adversaries

Conference Attendees can access the Internet Via
Eduroam or
by entering the Username and Password on the back of
their Name Tags.