

Student Talks/Exposés Étudiants: Thursday/Jeuudi July/ juillet 25th

	Jeffery Hall 101	Jeffery Hall 102	Jeffery Hall 110	Jeffery Hall 118
9:00 am	Exploring the Shape of Hysteresis Loops in Ordinary Differential Equations <i>Gina Faraj Rabbah</i>	Suslin's problem and the axiomatization of the reals <i>Léo Lortie</i>	Simplifying Nahn Data with Group Actions <i>Christopher Lang</i>	Self-Similarity and Long-Range Dependence <i>Zhenyuan Zhang</i>
9:30 am	A Survey of Gerstenhaber's Problem <i>Wanchun Shen</i>	The Case for Recategorification: From Counting Sheep to Representation Theory <i>Calder Morton-Ferguson</i>	Tensor Product Reproducing Kernel Hilbert Spaces and Learning Tensor <i>Junqi Liao</i>	Introduction to Algebraic Topology <i>Leon Yao</i>
10:00 am	The Inscribed Square Problem <i>Amanda Petcu</i>		Finite Model Theory and First Order Definability <i>Nikki Sigurdson</i>	On the Structure of NTRU and BIKE Key Encapsulation Mechanisms <i>Katarina Spasojevic</i>
1:00 pm	Computational Study of Optimal Control for Mathematical Models for Infectious Diseases <i>Hongruiyu Chen</i>	Schur Polynomials and Young Tableaux <i>Kevin Anderson</i>	Lie superalgebra : a basic introduction <i>Ekta Tiwari</i>	Graph Theory and Stable Sparse Systems <i>Rebecca Bonham-Carter</i>
1:30 pm	Approximating Chance-Constrained Knapsack Sets <i>Brendan Ross</i>	Ciphers for Dummies: How They Work and How to Crack Them <i>Valerie Gilchrist</i>	Pseudolinear and Pseudocircular Arrangements <i>Lily Wang</i>	An Algebraic Proof of Quadratic Reciprocity <i>Alex Rutar</i>
2:00 pm	Power of States: Electoral College <i>Max Sun</i>		Spectral Methods and Delay Differential Equations <i>Reuben Rauch</i>	Quantum Computing 101 <i>Alexandra Kirillova</i>

Student Talks/Exposés Étudiants: Friday/Vendredi July/ juillet 26th

	Jeffery Hall 101	Jeffery Hall 102	Jeffery Hall 110	Jeffery Hall 118
9:00 am	Box count de l'ensemble des fonctions schlicht <i>Philippe Drouin</i>	Inca String Theory <i>Emma Classen-Howes</i>	Connectivity in dominating graphs <i>Young Lim Ko Park</i>	Paradoxes in Mathematical Logic <i>Sonia Knowlton</i>
9:30 am	It's not about the model; It's all about your data <i>Shuo Feng</i>	An Introduction to Mapping Class Groups and The Nielsen-Thurston Classification of Mapping Classes <i>Curtis Grant</i>	Borel's Proof of the Heine-Borel Theorem <i>Zishen Qu</i>	Extinction of Variant spelling <i>Suemin Lee</i>
10:00 am	The Bounded Moment Problem <i>Nour Fahmy</i>	Long-Term Dependencies in Neural Networks <i>Victor Geadah</i>	An Introduction to the Hilbert Scheme with Applications to Number Theory <i>Siddharth Mahendraker</i>	Visualization of Water Flow in the Columbia-Kootenay Rivers Confluence <i>Michelle Boham</i>
10:30 am	Combinatorial Straightening Algorithms of Classical and Symplectic Bideterminants <i>Colin Krawchuk</i>	Analyzing Risks the Wrong-Way <i>Agassi Iu</i>	Independent Sets in Double Vertex Graphs <i>Fady Abdelmalek & Esther Vander Meulen</i>	Some Applications of Mathematics in Brain Modeling <i>Rebecca Bonham-Carter</i>

Student Talks/Exposés Étudiants: Saturday/Samedi July/ juillet 27th

	Jeffery Hall 101	Jeffery Hall 102	Jeffery Hall 110	Jeffery Hall 118
9:00 am	Fun with Čech Cohomology <i>Liam M. Fox</i>	A Partial History of the Prime Number Theorem <i>Sophie Kapsales</i>	Conformal Field Theories and the Bootstrap <i>Jonathan Classen-Howes</i>	Hypernetworks For Team Selection in Professional Soccer <i>Abdullah Zafar, Farzad Yousefian</i>
9:30 am	Rational Approximations of Numbers <i>David Salwinski</i>	Portfolio Optimization in the Multi-period Trinomial Tree Model <i>Hirohichi Kato</i>	Weyl's Law or: The Asymptotic Behaviour of the Laplacian Eigenvalues <i>Charles Senécal</i>	A Graph theory approach for determining the solvability for Quantum Binary Linear Systems <i>Junqiao Lin</i>
10:00 am	Le problème de ballottement <i>Julien Mayrand</i>	An Upper Bound on Sum-Free Subsets <i>Nathaniel Libman</i>	Aggregation Closures for Packing Integer Programs <i>Haripriya Pulyassary</i>	A generalization of Singmaster's conjecture <i>William Verreault</i>
1:00 pm	Resonant Oscillations in Frustums of Cones <i>Kevin Dembski</i>	A bijective proof of the hook-length formula <i>Yuval Ohapkin</i>	The mathematics of binary constraint system games <i>David Cui</i>	Fermat's Last Theorem by descent <i>Stephen Wen</i>
1:30 pm	Feynman diagrams: integration by pictures <i>Alex Karapetyan</i>	Introduction to Machine Learning and Deep Neural Networks <i>Adam Gronowski</i>	The Riemann Hypothesis: A Brief Introduction <i>David Hoskin</i>	Hidden Structures in Graphs in Large Chromatic Number <i>Farbod Yadegarian</i>
2:00 pm	An Introduction to Algebraic Number Theory: Unique Factorization <i>Adrian Carpenter</i>	What makes a good calculus test? <i>Kate Ing & Ruo Ning Qiu</i>	Dimensionality Reduction: An Approach to Better Understand Neural Networks <i>Stefan Horoi</i>	The Beauty of the Hyperbolic Plane <i>Isabel Beach</i>

Student Talks/Exposés Étudiants: Sunday/Dimanche July/juillet 28th

	Jeffery Hall 101	Jeffery Hall 102	Jeffery Hall 110	Jeffery Hall 118
9:00 am	Introduction to the Ricci Flow <i>Salim Deaibes</i>	The Nine Dragon Tree Conjecture <i>Logan Grout</i>	Student Impressions of Active Learning Spaces in First-Year Calculus <i>Yuveshen Moorooogen</i>	From Plato to Coxeter: The History of Polytopes <i>Spencer Whitehead</i>
9:30 am	An Introduction to Matchings <i>Benjamin Cook</i>	Numerical Evidence in the Theory of 1/3-homogenous Dendroids <i>Eddie Shillum</i>	An Introduction to Thompson's Group, and its Connections to Topology <i>Luke Cooper</i>	A Mathematician's Introduction to General Relativity <i>Erin Crawley</i>
10:00 am	This About Covers It: Broadcast Domination and Multipacking <i>Elizabeth McKenzie Case</i>	On the COmputation of Beta Invariants on Toric Varieties <i>Keenan McPhail</i>	Localization at prime ideals, and its applications <i>Amar Venga</i>	So Long Sucker, a Game of Bertayal <i>Marie Rose Jerade</i>
10:30 am	Algebra of the Hitchin system for matrix valued polynomials over a finite field <i>Brandon Gill</i>			Girth conditions and Rota's basis conjecture <i>Benjamin Friedman</i>