



2022 Banff Calendar

JANUARY

- 1/9 – 1/14 Dynamical Principles of Biological and Artificial Neural Networks: Zachary Kilpatrick (U. Colorado), Sue Ann Campbell (U. Waterloo), Alona Fyshe (U. Alberta), Joel Zylberberg (York U.)
- 1/16 – 1/21 Emerging Insights in Insurance Statistics: Emiliano A. Valdez (U. Connecticut), Jingyi Cao (York U.), Arthur Charpentier (UQAM), Himchan Jeong (SFU)
- 1/23 – 1/28 Geometry and Swampland: Mariana Grana (Commissariat à l'Énergie Atomique - Saclay), Michela Petrini (Sorbonne U.), Irene Valenzuela (UAM)
- 1/30 – 2/4 Restriction, Kakeya, and Carleson-Type Problems: Joshua Zahl (UBC), Nets Katz (Caltech), Victor Lie (Purdue U.)

FEBRUARY

- 2/6 – 2/11 Additivity Problems in Quantum Information Theory: Felix Leditzky (UIUC), Nilanjana Datta (U. Cambridge), Debbie Leung (U. Waterloo), Graeme Smith (CU Boulder)
- 2/13 – 2/18 Sensing and Signaling in Immune Systems: Anton Zilman (U. Toronto), Armita Nourmohammad (U. Washington), Gregoire Altan-Bonnet (National Cancer Institute), Paul Francois (McGill U.)
- 2/20 – 2/25 Predicting Pathways for Microplastic Transport in the Ocean: Bruce Sutherland (U. Alberta), Michelle DiBenedetto (U. Washington), Ton van den Bremer (TU Delft), Alexis Kaminski (UC – Berkeley)
- 2/27 – 3/4 Stochastic Approaches to Turbulence in Hydrodynamical Equations: Konstantin Khanin (U. Toronto), Uriel Frisch (Observatoire de la Côte d'Azur), Alessandra Lanotte (Institute of Nanotechnology), Rahul Pandit (IIT Goa), Samridhhi Sankar Ray (ICTS – India)

MARCH

- 3/6 – 3/11 Interactions of Gauge Theory with Contact and Symplectic Topology in Dimensions 3 and 4: Hans Boden (McMaster U.), John Baldwin (Boston College), John Etnyre (Georgia Tech), Liam Watson (UBC)
- 3/13 – 3/18 Probability and Quantum Information Science: Jeffrey Schenker (MSU), Ramis Movassagh (IBM Research), Cécilia Lancien (Institut Fourier Grenoble), Simone Warzel (TUM)
- 3/20 – 3/25 Stochastic Mass Transports: Jan Obloj (U. Oxford), Mathias Beiglböck (U. Vienna), Martin Huesmann (U. Münster), Benjamin Joseph (U. Oxford)
- 3/27 – 4/1 Rate-Induced Transitions in Networked Systems: Vítor V. Vasconcelos (U. Amsterdam), Flavia Maria Darcie Marquitti (U. Estadual de Campinas), Lisa C. McManus (U. Hawaii – Manoa), Theresa W. Ong (Dartmouth College)
- 03/27 – 4/1 Interactions between Descriptive Set Theory and Smooth Dynamics: Matthew Foreman (UC – Irvine), Felipe Garcia-Ramos (UASLP), Marlies Gerber (Indiana U.), Anush Tserunyan (McGill U.), Brandon Seward (UC – San Diego)

APRIL

- 4/3 – 4/8 Women in Noncommutative Algebra and Representation Theory 3: Chelsea Walton (Rice U.), Karin Baur (U. Leeds), Andrea Solotar (U. Buenos Aires), Gordana Todorov (Northeastern U.)
- 4/10 – 4/15 Advances in Stein's method and its applications in Machine Learning and Optimization: Murat Erdogdu (U. Toronto), Krishnakumar Balasubramanian (UC – Davis), Larry Goldstein (USC), Lester Mackey (Microsoft Research)
- 4/17 – 4/22 Almost-Periodic Spectral Problems: David Damanik (Rice U.), Svetlana Jitomirskaya (UC – Irvine), Leonid Parnovskii (UCL)

- 4/24 – 4/29 At the Interface of Mathematical Relativity and Astrophysics: Juan A. Valiente Kroon (QMUL), Jose Luis Jaramillo (U. Bourgogne), Badri Krishnan (Albert Einstein Institute-Max Planck), Edgar Gasperin Garcia (IST – Lisboa)

MAY

- 5/1 – 5/6 Interpretability in Artificial Intelligence: María Rodríguez Martínez (IBM - Zurich Research Lab), Joaquin Dopazo (Fundación Progreso y Salud), An-phi Nguyen (ETH Zurich), Carlos Loucera (Fundación Progreso y Salud)
- 5/8 – 5/13 Inverse Problems for Anomalous Diffusion Processes: William Rundell (TAMU), Diane Guignard (U. Ottawa), Barbara Kaltenbacher (U. Klagenfurt)
- 5/8 – 5/13 Combinatorial Reconfiguration: Naomi Nishimura (U. Waterloo), Marthe Bonamy (LaBRI), Nicolas Bousquet (U. Claude Bernard Lyon 1), Takehiro Ito (Tohoku U.)
- 5/15 – 5/20 Emergent Collective Behaviors: Lennaert van Veen (Ontario Tech U.), Oleg Igoshin (Rice U.), Nicole Abaid (Virginia Tech U.), Raluca Eftimie (U. Dundee)
- 5/22 – 5/27 New Interactions Between Statistics and Optimization: Jonathan Niles-Weed (NYU), Francis Bach (ENS), Lénaïc Chizat (U. Paris Sud), Rachel Ward (UT – Austin)
- 5/29 – 6/3 Cross-community Collaborations in combinatorics: Natasha Morrison (UVic), Jozef Skokan (LSE), Marthe Bonamy (LaBRI)
- 5/29 – 6/3 Dynamics and Data Assimilation, Physiology and Bioinformatics: William Ott (U. Houston), Noemie Elhadad (Columbia U.), Melike Sirlanci Tuysuzoglu (U. Colorado), Tony Humphries (McGill U.)

JUNE

- 6/5 – 6/10 Poisson Geometry, Lie Groupoids and Differentiable Stacks: Rui Loja Fernandes (UIUC), Henrique Bursztyn (IMPA), Brent Pym (McGill U.), Jiang-Hua Lu (HKU)
- 6/12 – 6/17 Arithmetic Aspects of Algebraic Groups: Mikhail Ershov (U. Virginia), Alex Lubotzky (Hebrew U. Jerusalem), Gopal Prasad (U. Michigan), Dave Morris (U. Lethbridge)
- 6/19 – 6/24 Modern Breakthroughs in Diophantine Problems: Samir Siksek (U. Warwick), Michael Bennett (UBC), Nils Bruin (SFU), Bianca Viray (U. Washington)
- 6/26 – 7/1 Mathematical Frameworks for Integrative Analysis of Emerging Biological Data Types: Aedin Culhane (Harvard TH Chan School of Public Health), Elana Fertig (John Hopkins), Kim-Anh LeCao (U. Melbourne)

JULY

- 7/3 – 7/8 Derived Categories, Arithmetic, and Reconstruction in Algebraic Geometry: Martin Olsson (UC – Berkeley), Laure Flapan (MSU), Katrina Honigs (SFU), Adam Topaz (U. Alberta)
- 7/3 – 7/8 Markov Chains with Kinetic Constraints and Applications: Cristina Toninelli (University Paris Dauphine), Shirshendu Ganguly (UC - Berkeley), Fabio Martinelli (Universita Roma Tre)
- 7/10 – 7/15 Mathematical aspects of the Physics with non-self-Adjoint Operators: Petr Siegl (TU Graz), Lyonell Boulton (Heriot-Watt U.), David Krejcirik (CTU)
- 7/17 – 7/22 - Theoretical and Applied Aspects for nonlocal Models: Petronela Radu (UNL), Lia Bronsard (McMaster U.), Ihsan Topaloglu (VCU), Kaushik Dayal (CMU)
- 7/24 – 7/29 Communication Complexity and Applications, III: Amit Chakrabarti (Dartmouth College), Toniann Pitassi (U. Toronto), Gillat Kol (Princeton U.), Mika Göös (EPFL)
- 7/31 – 8/5 Interfacial Phenomena in Reaction-Diffusion Systems: Hiroshi Matano (Meiji U.), Peter Polacik (U. Minnesota), Luca Rossi (CNRS – EHESS), Hirokazu Ninomiya (Meiji U.)

AUGUST

- 8/7 – 8/12 Mathematical Models in Biology: from Information Theory to Thermodynamics: Peter Thomas (CWRU), Michael Hinczewski (CWRU), Andrew Eckford (York U.)

- 8/14 – 8/19 Extremal Combinatorics and Geometry: Andrew Suk (UC – San Diego), Dhruv Mubayi (UIC), Orit Raz (Hebrew U.), Caroline Terry (OSU)
- 8/21 – 8/26 Mathematical Questions in Wave Turbulence: Jalal Shatah (NYU Courant), Tristan Buckmaster (Princeton U.), Pierre Germain (NYU), Zaher Hani (U. Michigan)
- 8/28 – 9/2 Specialisation and Effectiveness in Number Theory: Alina Ostafe (UNSW), Cameron Stewart (U. Waterloo), Robert Tichy (TU Graz), Julie Tzu-Yueh Wang (Academia Sinica)

SEPTEMBER

- 9/4 – 9/9 New interfaces of Stochastic Analysis and Rough Paths: Harald Oberhauser (U. Oxford), Hao Ni (UCL), Jing Dong (Columbia U.), Xin Zhang (South China U. of Technology)
- 9/11 – 9/16 Rank Conjectures in Algebraic Topology and Commutative Algebra: Srikanth B. Iyengar (U. Utah), Nàtalia Castellana (UAB), Claudia Miller (Syracuse U.), Marc Stephan (Bielefeld U.)
- 9/18 – 9/23 Building Networks: Women in Complex & Nonlinear Systems: Nancy Rodriguez (CU Boulder), Nina Fefferman (U. Tennessee), Heather Zinn Brooks (Harvey Mudd College), Alexandria Volkening (Purdue U.)
- 9/25 – 9/30 Noncommutative Geometry and Noncommutative Invariant Theory: Jason Bell (Waterloo U.), Chelsea Walton (Rice U.)

OCTOBER

- 10/2 – 10/7 Biological Active Porous Materials: Scott MacLachlan (Memorial U), Filiz Ates (Mayo Clinic), Luis Dorfmann (Tufts U.), Oliver Röhrle (U. Stuttgart)
- 10/9 – 10/14 New Trends in Mathematics of Dispersive, Integrable and Nonintegrable Models in Fluids, Waves and Quantum Physics: Claudio Muñoz (U. Chile), Lucrezia Cossetti (KIT), Miguel Angel Alejo Plana (U. Córdoba)
- 10/16 – 10/21 Interactions between Hessenberg Varieties, Chromatic Functions, and LLT Polynomials: Laura Colmenarejo Hernando (NC State), Per Alexandersson (Stockholm U.), Martha Precup (Washington U.), Julianna Tymoczko (Smith College)
- 10/23 – 10/28 New Ideas in Computational Inverse Problems: Christina Frederick (NJIT), Yunan Yang (ETH Zurich), Yoonsang Lee (Dartmouth College), Kui Ren (Columbia U.)
- 10/30 – 11/4 Topology in Dimension 4.5: Hannah Schwartz (Princeton U.), Jason Joseph (Rice U.), Maggie Miller (MIT), Dave Gay (U. Georgia / MPIM)

NOVEMBER

- 11/6 – 11/11 Recent Progress in Kinetic and Integro-Differential Equations: Nestor Guillen (Texas State U.), Maria Galdani (UT – Austin), Maja Taskovic (Emory U.), Russell Schwab (MSU)
- 11/13 – 11/18 Analytic and Probabilistic Combinatorics: Miklos Bona (U. Florida), Ricardo Gomez (UNAM), Mark Daniel Ward (Purdue U.), Cecile Mailler (U. Bath)
- 11/20 – 11/25 Smooth Functions on Rough Spaces and Fractals with Connections to Curvature Functional Inequalities: Luke Rogers (U. Connecticut), Patricia Alonso Ruiz (TAMU), Takashi Kumagai (Waseda U.), Nageswari Shanmugalingam (U. Cincinnati)
- 11/27 – 12/2 Topics in Multiple Time Scale Dynamics: Hildeberto Jardón Kojakhmetov (U. Groningen), Maximilian Engel (Freie U. Berlin), Cinzia Soresina (U. Graz), Bjorn Sandstede (Brown U.)

DECEMBER

- 12/4 – 12/9 Toric Degenerations: Lara Bossinger (UNAM), Alessio Corti (Imperial College London), Megumi Harada (McMaster U.), Fatemeh Mohammadi (Ghent U.)