Banff International Research Station

2022 Banff Calendar

JANUARY
- 1/3 – 1/4 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.)
- 1/23 – 1/28 Geometry and Swampland: Mariana Grana (Commissariat a l’Energie Atomique - Saclay), Michyla Pietri (Stony Brook), Irene Villavicencio (Cambridge), Lara Bossinger (UNAM)
- 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 Ledituzky (UIC), 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 Noorami(Nor), Gregoire Teyssier (York U.), Alexandre Zinovyev (Lyon)
- 2/22 – 2/27 Stochastic Approaches to Turbulence in Hydrodynamical Equations: Konstantin Khanin (U. Toronto), Uriel Frisch (Observatoire de la Côte d’Azur), Alessandra Pantani (U. Rome)

MARCH
- 3/6 – 3/11 Interactions of Health with Contact and Mobility: Christopher Hydén (U. Stockholm), Darrin Traylor (U. Arizona), Cagri Altay (U. Cambridge), Dylan Pendarvis (U. Washington)
- 3/27 – 3/31 Stochastic Approaches to Turbulence in Hydrodynamical Equations: Konstantin Khanin (U. Toronto), Uriel Frisch (Observatoire de la Côte d’Azur), Alessandra Pantani (U. Rome)

APRIL
- 4/10 – 4/15 Advances in Stein’s method and its applications in Machine Learning and Optimization: Murat Erdogdu (U. Toronto), Krishnakumar Balasubramanian (U. Cambridge), Larry Goldstein (UCS), 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 (QMU), Jose Luis Jaramillo (U. Bourgogne), Badri Krishnan (Albert Einstein Institute-Max Planck), Edgar Figueroa Garcia (IST – Lisbon)

MAY
- 5/1 – 5/6 Interpretability in Artificial Intelligence: Marcus Rodrigues Martinez (IBM – Zurich Research Lab), Joaquin Dopazo (Fundacion Progreso y Salud), An-phi Nguyen (ETH Zurich), Carlos Loucera (Fundacion Progreso y Salud)
- 5/18 – 5/23 Combinatorial Reconfiguration: Naomi Nicholas (U. Waterloo), Marthe Bonamy (LaBRI), Nicolas Bousquet (ICTS – India)

JUNE
- 6/3 – 6/10 Poisson Geometry, Lie Groupoids and Differentiable Stacks: Rui Loja Fernandes (UIC), Henriette Bursztyn (IMPA), Brent Pym (McGill U.), Jiang-Hua Lu (HKU)
- 6/12 – 6/17 Arithmetic Aspects of Algebraic Groups: Mikhail Ershov (U. Virginia), Daniel Berwick-Evans (Tel Aviv U.), Takehiro Ito (Tohoku U.)
- 6/19 – 6/24 Modern Breakthroughs in Diophantine Problems: Samir Siksek (U. Warwick), Michael Bennett (UBC), Nils Brin (SFU), Bianca Viray (U. Washington)
- 6/26 – 7/11 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), Shizhuang Gao (UC – Berkeley), Fabio Martinelli (University Roma Tre)
- 7/17 – 7/22 Theoretical and Applied Aspects for nonlocal Models: Petronela Radu (UNL), Bronsard (McMaster U.), Hans Kramlich (Rossen) (KU)

AUGUST
- 8/7 – 8/12 Mathematical Models in Biology: from Information Theory to Thermodynamics: Peter Thomas (CRM/C), Michael Hinczinski (CRM/C), Andrew Eckford (York U.)
- 8/14 – 8/19 Extremal Combinatorics and Geometry: Andrew Suk (UC – San Diego), Dhrumubhai (UCL), Orit Raz (Hebrew U.), Caroline Terry (OSU)

SEPTEMBER
- 9/4 – 9/9 New Interactions of Stochastic Analysis and Rough Path Theory: 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), Natalia Castellana (U. Cambridge), Claudia Miller (Yale U.), Marc Stephan (Bielefeld U.)
- 9/25 – 9/30 Noncommutative Geometry and Noncommutative Invariant Theory: Jason Bell (Waterloo U.), Chelsea Walton (Rice U.)

OCTOBER
- 10/6 – 10/7 Biological Active Porous Materials: Scott MacLachlan (Memorial U.), Filiz Atay (Moylan Clin), Luis Ortobre (Cuenca U., U. Canada)
- 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 Rosset (KIT), Miguel Angel Alejo Plana (U. Córdoba)
- 10/16 – 10/21 Interactions between Hessenberg Varieties, Chromatic Functions, and LTL Polynomials: Laura Colmenarejo Fernandez (NC State), Per Alexandersson (Stockholm U.), Martha Prepp (Washington U.), Julianna Tymoczko (Stock College)
- 10/23 – 10/28 New Ideas in Computational Inverse Problems: Christine Frederick (NIST), Yunan Yang (ETH Zurich), Tsung Lee (Dartmouth College), Kui Ren (Columbia U.)

NOVEMBER
- 11/6 – 11/11 Recent Progress in Kinetic and Integro-Differential Equations: Nestor Guillen (Texas State U.), Maria Grandalui (UT – Austin), Mafia Taskovic (Emory U.), Russell Schwab (MSU)

DECEMBER
- 12/4 – 12/9 Toric Degenerations: Lara Bossinger (U. Toronto), Jolanta Krasnodamir (Texas State U.), Elizabeth Scheideck (University of Padua), Taryn Grant (NYU), Bhargav Bhatt (U. Chicago)