



Banff International Research Station Calendar 2014



JANUARY

- 1/12 - 1/17 **Modern Developments in M-theory:** K. Dasgupta (McGill), S. Mukhi (IISERs), M. Van Raamsdonk (UBC)
- 1/19 - 1/24 **Theoretical Foundations of Applied SAT Solving:** A. Atserias (UPC), A. Biere (Johannes Kepler), S. Buss (UC, San Diego), A. Kolokolova (Memorial), J. Nordstrom (KTH), K. Sakallah (Michigan)
- 1/26 - 1/31 **Mathematicians and School Mathematics Education: A Pan-American Workshop:** E. Barbeau (Toronto), J. A. de la Peña (UNAM), P. Felmer (Chile), S. Friedberg (Boston College), W. McCallum (Arizona)

FEBRUARY

- 2/2 - 2/7 **Positivity of Linear Series and Vector Bundles:** S. Kovács (Washington), A. Küronya (Freiburg), T. Szemberg (Uniwersytet Pedagogiczny)
- 2/2 - 2/7 **Convex Bodies and Representation Theory:** M. Harada (McMaster), K. Kaveh (Pittsburgh), A. Khovanskii (Toronto)
- 2/9 - 2/14 **Statistical and Computational Theory and Methodology for Big Data Analysis:** M.-H. Chen (Connecticut), R. Craiu (Toronto), F. Liang (Texas A&M), C.H. Liu (Purdue)
- 2/16 - 2/21 **Computational Contact Mechanics: Advances and Frontiers in Modeling Contact:** V. Acary (INRIA Rhône-Alpes), R. Bridson (UBC), D. Kaufman (Columbia), J.-S. Pang (UIUC), J. Trinkle (RPI)
- 2/23 - 2/28 **Multifractal Analysis: From Theory to Applications and Back:** P. Abry (CNRS, ENS de Lyon), S. Jaffard (UPEC), U. Molter (UBA), V. Pipiras (North Carolina)

MARCH

- 3/2 - 3/7 **Advances in Scalable Bayesian Computation:** L. Bornn (Harvard), N. de Freitas (UBC), C. Robert (Dauphine), S. Schmidler (Duke)
- 3/9 - 3/14 **Geometric Tomography and Harmonic Analysis:** A. Koldobsky (Missouri), D. Ryabogin (Kent State), V. Yaskin (Alberta), A. Zvavitch (Kent State)
- 3/16 - 3/21 **Global/Local Conjectures in Representation Theory of Finite Groups:** G. Malle (TU Kaiserslautern), G. Navarro (Valencia), P. H. Tiep (Arizona)
- 3/23 - 3/28 **Parameterized Morse Theory in Low-Dimensional and Symplectic Topology:** D. Gay (Georgia), M. Sullivan (Massachusetts)
- 3/30 - 4/4 **Specialization of Linear Series for Algebraic and Tropical Curves:** M. Baker (Georgia), L. Caporaso (U. di Roma Tre), M. A. Cueto (Columbia), E. Katz (Waterloo), S. Payne (Yale)

APRIL

- 4/6 - 4/11 **Complex Monge-Ampère Equations on Compact Kähler Manifolds:** S. Boucksom (IMJ), P. Eyssidieux (Grenoble), V. Guedj (Toulouse III)
- 4/13 - 4/18 **Subfactors and Fusion Categories:** V. Jones (Vanderbilt), S. Morrison (ANU), D. Penneys (Toronto), E. Peters (Northwestern), N. Snyder (Indiana)
- 4/20 - 4/25 **WIN3: Women in Numbers 3:** L. Long (Iowa State), R. Pries (Colorado State), K. Stange (CU, Boulder)
- 4/27 - 5/2 **Recent Advances and Trends in Time Series Analysis: Nonlinear Time Series, High Dimensional Inference and Beyond:** Y. Gel (Waterloo), R. Kulik (Ottawa), H. Yu (Western Ontario)

MAY

- 5/4 - 5/9 **Dynamics in Geometric Dispersive Equations and the Effects of Trapping, Scattering and Weak Turbulence:** S. Gustafson (UBC), J. Marzuola (UNC, Chapel Hill), D. Tataru (UC, Berkeley)
- 5/11 - 5/16 **Mathematical Finance: Arbitrage and Portfolio Optimization:** K. Kardaras (LSE), W. Schachermayer (Vienna), G. Zitkovic (UT, Austin)
- 5/18 - 5/23 **Imaging and Modeling in Electron Microscopy - Recent Advances:** P. Binev (South Carolina), N. Browning (PNNL), W. Dahmen (RWTH Aachen), R. DeVore (Texas A&M), T. Vogt (USC), P. Voyles (Wisconsin-Madison)
- 5/25 - 5/30 **Geometric Aspects of Semilinear Elliptic and Parabolic Equations: Recent Advances and Future Perspectives:** M. del Pino (Chile), P. Polacik (Minnesota), J.C. Wei (CUHK)

JUNE

- 6/1 - 6/6 **The Future of Trace Formulas:** W. T. Gan (NUS), C. P. Mok (McMaster), Y. Sakellaridis (Rutgers), S. Takeda (Missouri)
- 6/8 - 6/13 **Integrability in Holography:** N. Gromov (KCL), A. Sever (Princeton), P. Vieira (Perimeter Institute)
- 6/8 - 6/13 **Programming with Chemical Reaction Networks: Mathematical Foundations:** A. Condon (UBC), C. Thachuk (Oxford)
- 6/15 - 6/20 **Quantum Curves and Quantum Knot Invariants:** V. Bouchard (Alberta), M. Khovanov (Columbia), M. Mulase (UC, Davis), A. Oblomkov (Massachusetts), M. Stošić (IST, Portugal), P. Sułkowski (Caltech)
- 6/22 - 6/27 **Emerging Statistical Challenges and Methods For Analysis of Massive Genomic Data in Complex Human Disease Studies:** M. Boehnke (Michigan), S. Bull (Samuel Lunenfeld Research Institute), M. Epstein (Emory), X.H. Lin (Harvard), L. Sun (Toronto), M. Wu (North Carolina)
- 6/29 - 7/4 **Entropy Methods, PDEs, Functional Inequalities, and Applications:** E. Carlen (Rutgers), J. Dolbeault (Dauphine), D. Matthes (TU München), D. Slepcev (Carnegie Mellon)

JULY

- 7/6 - 7/11 **New Directions in Financial Mathematics and Mathematical Economics:** U. Horst (Humboldt), S. Jaimungal (Toronto), R. Sircar (Princeton), T. Zariphopoulou (UT, Austin)
- 7/13 - 7/18 **Stochastic Network Models of Neocortex (a Festschrift for Jack Cowan):** P. Bressloff (Utah), C. Chow (NIH), B. Ermentrout (Pittsburgh), S. Kauffmann (Vermont), P. Thomas (Case Western Reserve), H. Wilson (York)
- 7/20 - 7/25 **Spin Glasses and Related Topics:** E. Bolthausen (Universität Zürich), M. Cranston (UC, Irvine), D. Panchenko (Texas A&M)
- 7/27 - 8/1 **Statistics and Nonlinear Dynamics in Biology and Medicine:** J. Cao (Western Ontario), D. Earn (McMaster), G. Hooker (Cornell), E. Ionides (Michigan), D. Wilkinson (Newcastle)

AUGUST

- 8/3 - 8/8 **Approximation Algorithms and the Hardness of Approximation:** C. Chekuri (UIUC), J. Cheriyan (Waterloo), R. O'Donnell (Carnegie Mellon), M. Salavatipour (Alberta), D. Williamson (Cornell)
- 8/10 - 8/15 **Recent Progress in Dynamical Systems and Related Topics:** B. Hasselblatt (Tufts), Y. Pesin (Penn State), F. R. Hertz (UdeLaR), K. Schmidt (Vienna)
- 8/17 - 8/22 **Mathematical Modelling of Particles in Fluid Flow:** S. Dalziel (Cambridge), E. Meiburg (UC, Santa Barbara), B. Sutherland (Alberta)
- 8/24 - 8/29 **Communication Complexity and Applications:** A. Chakrabarti (Dartmouth), F. Ergun (SFU), A. McGregor (Massachusetts), A. Rao (Washington)
- 8/31 - 9/5 **Front Propagation and Particle Systems:** J. Berestycki (UPMC), J. Quastel (Toronto), L. Ryzhik (Stanford)

SEPTEMBER

- 9/7 - 9/12 **Mathematics of the Cell: Integrating Genes, Biochemistry and Mechanics:** E. Cytrynbaum (UBC), A. Dawes (Ohio State), A. Mogilner (UC, Davis), D. Sept (Michigan)
- 9/14 - 9/19 **Probability on Trees and Planar Graphs:** L. Addario-Berry (McGill), O. Angel (UBC), C. Goldschmidt (Oxford), S. Rohde (Washington)
- 9/21 - 9/26 **Multiscale Models of Crystal Defects:** M. Luskin (Minnesota), C. Ortner (Warwick), F. Theil (Warwick)
- 9/21 - 9/26 **Rigorously Verified Computing for Infinite Dimensional Nonlinear Dynamics:** J.-P. Lessard (Université Laval), K. Mischaikow (Rutgers), S. Rump (TUHH), J. B. van den Berg (VU University, Amsterdam), JF Williams (SFU)
- 9/28 - 10/3 **Vojta's Conjectures:** A. Levin (Michigan State), D. McKinnon (Waterloo), P. Vojta (UC, Berkeley), U. Zannier (Scuola Normale Superiore, PISA)

OCTOBER

- 10/5 - 10/10 **Sparse Representations, Numerical Linear Algebra, and Optimization:** G. Kutyniok (TU Berlin), M. Saunders (Stanford), S. Wright (Wisconsin-Madison), O. Yilmaz (UBC)
- 10/12 - 10/17 **Optimal Cooperation, Communication, and Learning in Decentralized Systems:** A. Mahajan (McGill), M. Raginsky (UIUC), D. Tenenetzis (U. Michigan, Ann Arbor), S. Yuksel (Queen's)
- 10/19 - 10/24 **Dynamics and C*-Algebras: Amenability and Soficity:** G. Elliott (Toronto), T. Giordano (Ottawa), D. Kerr (Texas A&M), A. Toms (Purdue)
- 10/26 - 10/31 **Biological and Bio-Inspired Information Theory:** T. Berger (Virginia), A. Eckford (York), P. Thomas (Case Western Reserve)

NOVEMBER

- 11/2 - 11/7 **Geometric Scattering Theory and Applications:** R. Froese (UBC), P. Hislop (Kentucky), R. Mazzeo (Stanford), P. Perry (Kentucky)
- 11/9 - 11/14 **Particle-Based Stochastic Reaction-Diffusion Models in Biology:** D. Coombs (UBC), M. Flegg (Oxford), S. Isaacson (Boston), P. Lötstedt (Uppsala), L. Petzold (UC, Santa Barbara)
- 11/16 - 11/21 **Algorithms for Linear Groups:** J. Carlson (Georgia), B. Eick (TU Braunschweig), A. Hulpke (Colorado State), E. O'Brien (Auckland), A. Seress (Ohio State)
- 11/23 - 11/28 **Algebraic and Model Theoretical Methods in Constraint Satisfaction:** M. Bodirsky (École Polytechnique), A. Bulatov (SFU), D. MacPherson (Leeds), J. Nešetřil (Charles)
- 11/30 - 12/5 **Families of Automorphic Forms and the Trace Formula:** W. Muller (Universität Bonn), S.-W. Shin (MIT), N. Templier (Princeton)
- 11/30 - 12/5 **Motivic Integration, Orbital Integrals, and Zeta-Functions:** W. Casselman (UBC), J. Gordon (UBC), F. Loeser (IMJ)

DECEMBER

- 12/7 - 12/12 **Cohomological Realizations of Motives:** R. de Jeu (VU University, Amsterdam), P. L. del Angel (CIMAT), E. J. Elizondo (UNAM), J. D. Lewis (Alberta), P. Lima-Filho (Texas A&M), D. Patel (VU University, Amsterdam)

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