Calendar 2012

Banff International Research Station

JANUARY

• 1/8 - 1/13 Quantum Technology: Computational Models for Quantum Device Design: S. Schirmer (Cambridge), L. Hollenberg (Melbourne), F. Langbein (Cardiff)

• 1/15 - 1/20 Interactive Information Theory: N. Devroye (UI, Chicago), I. Blake (UBC), A. Khisti (Toronto)

• 1/22 - 1/27 Emergent Behaviour in Multi-Particle Systems With Non-Local Interactions: T. Kolokolnikov (Dalhousie), A. Bertozzi (UCLA), J.A. Carrillo (ICREA), R. Fetecau (SFU), M. Lewis (Alberta)

• 1/29 - 2/23 Neostability Theory: T. Scanlon (UC, Berkeley), B. Hart (McMaster), E. Hrushovski (Hebrew U., Jerusalem), A. Onshuus (U. de los Andes), A. Pillay (Leeds), F. Wagner (U. Lyon I)

FEBRUARY

• 2/5 - 2/10 Models of Sparse Graphs and Network Algorithms: N. Broutin (INRIA), L. Devroye (McGill), G. Lugosi (ICREA)

• 2/5 - 2/10 Probabilistic Versus Deterministic Techniques for Shared Memory Computation: P. Woelfel (Calgary), H. Attiya (Technion, IL), M. Herlihy (Brown)

• 2/12 - 2/17 Ordered Groups and Topology: D. Rolfsen (UBC), S. Boyer (UQÀM), P. Dehornoy (Caen), P. Linnell (Virginia Tech), A. Rhemtulla (Alberta), A. Sikora (SUNY, Buffalo)

• 2/12 - 2/17 Algebraic K-Theory and Equivariant Homotopy Theory: M. Hill (Virginia), V. Angeltveit (ANU), A. Blumberg (UT, Austin), T. Gerhardt (Michigan State), T. Lawson (Minnesota)

• 2/19 - 2/24 Outstanding Challenges in Combinatorics on Words: J. Currie (Winnipeg), J. Shallit (Waterloo)

•2/26 - 3/2 Operator Structures in Quantum Information Theory: M.B. Ruskai (Tufts), P. Hayden (McGill), M. Junge (UIUC), D. Kribs (Guelph), A. Winter (Bristol)

MARCH

• 3/4 - 3/9 Banach Space Theory: B. Sari (North Texas), R. Anisca (Lakehead), S. Dilworth (South Carolina), E. Odell (UT, Austin)

• 3/11/ - 3/16 Advances in Hyperkahler and Holomorphic Symplectic Geometry: R. Moraru (Waterloo), M. Gualtieri (Toronto), J. Hurtubise (McGill), D. Huybrechts (Bonn), E. Markman (UMass), J. Sawon (North Carolina)

• 3/18 - 3/23 Challenges and Advances in High Dimensional and High Complexity Monte Carlo Computation and Theory: Y. Chen (UIUC), D. Ceperley (UIUC), R. Craiu (Toronto), X.L. Meng (Harvard), A. Mira (Insubria), J. Rosenthal (Toronto)

• 3/25 - 3/30 Algebraic Stacks: Progress and Prospects: H.H.Tseng (Ohio State), P. Brosnan (UBC), R. Joshua (Ohio State)

APRIL

• 4/1 - 4/6 Stochastic Analysis and Stochastic Partial Differential Equations: D. Khoshnevisan (Utah), R. Dalang (ÉPF, Lausanne), Y. Xiao (Michigan State)

• 4/8 - 4/13 Open Dynamical Systems: Ergodic Theory, Probabilistic Methods and Applications: W. Bahsoun (Loughborough), C. Bose (Victoria), G. Froyland (UNSW)

• 4/15 - 4/20 Geometric Structures on Manifolds: I. Hambleton (McMaster), A. Kovalev (Cambridge), R. Stern (UC, Irvine)

• 4/22 - 4/27 Composite Likelihood Methods: H. Joe (UBC), D. Firth (Warwick), N. Reid (Toronto), P. Song (Michigan), C. Varin (Ca'Foscari)

•4/29 - 5/4 Manifolds with Special Holonomy and Their Calibrated Submanifolds and Connections: S. Karigiannis (Waterloo), B. Acharya (ICTP), R. Bryant (MSRI), N.C. Leung (Chinese U. of Hong Kong)

MAY

• 5/6 - 5/11 Linking Representation Theory, Singularity Theory and Non-Commutative Algebraic Geometry: V. Dlab (Carleton), J.A. de la Peña (UNAM), O. Iyama (Nagoya), H. Lenzing (Paderborn)

• 5/13 - 5/18 Connections Between Regularized and Large-Eddy Simulation Methods for Turbulence: E. Fried (McGill), B. Geurts (Twente), B. Layton (Pittsburgh), R. Moser (UT, Austin), U. Piomelli (Queens)

• 5/20 - 5/25 Optimal Transportation and Differential Geometry: Y.H. Kim (UBC), A. Figalli (UT, Austin)

• 5/27 - 6/1 Frontiers in the Detection and Attribution of Climate Change: P. Kushner (Toronto), A. Braverman (Caltech), R. Smith (UNC, Chapel Hill), D. Stone (Capetown), C. Tebaldi (Climate Central), M. Wehner (Lawrence Berkeley National Lab)

JUNE

• 6/3 - 6/8 Arithmetic Geometry of Orthogonal and Unitary Shimura Varieties: E. Goren (McGill), F. Andreatta (Milano), J. Bruinier (TU, Darmstadt)

• 6/10 - 6/17 Contemporary Methods for Solving Diophantine Equations: N. Bruin (SFU), M. Bennett (UBC), S. Siksek (Warwick)

• 6/17 - 6/22 Descriptive Set Theory and Functional Analysis: A. Toms (Purdue), E. Effros (UCLA), G. Elliott (Toronto), I. Farah (York), G. Hjorth (Melbourne)

• 6/24 - 6/29 Eigenvalues/Singular Values and Fast PDE Algorithms: Acceleration, Conditioning, and Stability: O. Bruno (Caltech), M. Haslam (York), M. Lyon (New Hampshire), C. Turc (Case Western Reserve)

JULY

• 7/1 - 7/24 Torsion in the Homology of Arithmetic Groups: Geometry, Arithmetic, and Computation: A. Venkatesh (Stanford), F. Calegari (Northwestern), P. Gunnells (UMass, Amherst)

• 7/8 - 7/13 Interactions Between Continuous and Discrete Holomorphic Dynamical Systems: E.F. Wold (Oslo), H. Peters (Amsterdam)

• 7/15 - 7/20 Rigidity Theory: Progress, Applications and Key Open Problems: W. Whiteley (York), R. Connelly (Cornell), T. Jordan (Eötvös), S. Power (Lancaster), I. Streinu (Smith College)

• 7/22 - 7/27 Tissue Growth and Morphogenesis: From Genetics to Mechanics and Back: J.J. Feng (UBC), C. Dahmann (Max Planck Inst., Dresden), L. Pismen (Technion, IL)

• 7/29 - 8/3 Conformal and CR Geometry: R. Graham (Washington), S. Alexakis (Toronto), K. Hirachi (Tokyo), P. Yang (Princeton)

AUGUST

• 8/5 - 8/10 Recent Trends in Geometric and Nonlinear Analysis: F. Robert (U. Henri Poincaré, Nancy 1), E. Hebey (U. Cergy Pontoise)

• 8/12 - 8/17 Syzygies in Algebraic Geometry, With an Exploration of a Connection with String Theory: I. Peeva (Cornell), L. Ein (UI, Chicago), D. Eisenbud (UC, Berkeley), G. Farkas (Humboldt U., Berlin)

• 8/19 - 8/24 New Trends and Directions in Combinatorics: B. Sudakov (UCLA), P. Haxell (Waterloo), M. Krivelevich (Tel Aviv)

• 8/26 - 8/31 The Geometry of Scattering Amplitudes: D. Skinner (Perimeter Inst.), N. Arkani-Hamed (IAS, Princeton), Z. Bern (UCLA), A. Goncharov (Yale), L. Mason (Oxford)

SEPTEMBER

• 9/2 - 9/7 Groups and Geometries: G. Stroth (Halle), I. Capdeboscq (Warwick), M. Liebeck (Imperial College), B. Mühlherr (Giessen)

• 9/9 - 9/14 Evolution Equations of Physics, Fluids, and Geometry: Asymptotics and Singularities: S. Gustafson (UBC), J. Colliander (Toronto), S. Ibrahim (Victoria), N. Masmoudi (Courant Inst.), K. Nakanishi (Kyoto), T.P. Tsai (UBC)

• 9/16 - 9/21 Model Reduction in Continuum Thermodynamics: Modeling, Analysis and Computation: E. Feireisl (Academy of Sciences, Czech Republic), J. Malek (Charles U.)

• 9/23 - 9/28 Integrable Systems, Growth Processes and KPZ Universality: C. Tracy (UC, Davis), E. Basor (AIM), J. Harnad (Concordia), J. Quastel (Toronto), T. Seppalainen (Wisconsin)

• 9/30 - 10/5 Lie Algebras, Torsors and Cohomological Invariants: K. Zainoulline (Ottawa), S. Gille (Ludwig-Maximilians U.), N. Karpenko (Paris 6), A. Pianzola (Alberta), V. Serganova (UC, Berkeley)

OCTOBER

• 10/7 - 10/12 Graph Searching: R. Nowakowski (Dalhousie), F. Fomin (Bergen), P. Pralat (West Virginia), D. Thilikos (National & Kapodistrian U. of Athens)

• 10/14 - 10/19 Topological Data Analysis and Machine Learning Theory: D. Feichtner-Kozlov (Bremen), G. Carlsson (Stanford), R. Jardine (Western Ontario), D. Morozov (Stanford)

• 10/21 - 10/26 Recent Advances in Transversal and Helly-Type Theorems in Geometry, Combinatorics and Topology: L. Montejano (UNAM), I. Barany (Renyi Inst.), T. Bisztriczky (Calgary), D. Oliveros (UNAM), R. Pollack (Courant Inst.)

• 10/28 - 11/2 New Trends in Noncommutative Algebra and Algebraic Geometry: J. Bell (SFU), M. Artin (MIT), C. Ingalls (New Brunswick), L. Small (UC, San Diego), J. Zhang (U. Washington)

NOVEMBER

• 11/4 - 11/9 Spectral Analysis, Stability and Bifurcation in Modern Nonlinear Physical Systems: O. Kirillov (Helmholtz Center, Dresden), P. Binding (Calgary), T. Bridges (Surrey), Y. Fukumoto (Kyushu), I. Hoveijn (Groningen), D. Pelinovsky (McMaster)

• 11/11 - 11/16 Nonequilibrium Statistical Mechanics: Mathematical Understanding and Numerical Simulation:G. Stoltz (École des Ponts, CERMICS), J. Lebowitz (Rutgers), S. Olla (CEREMADE - Paris, Dauphine)

• 11/18 - 11/23 First Nations Math Education: M. Alvarez-Adem (PIMS), G. Fox (First Nations Adult and Higher Education Consortium), S. Friesen (Calgary), C. Nicol (UBC)

• 11/25 - 11/30 Cohomological Methods in Geometric Group Theory: G. Niblo (Southampton), B. Farb (Chicago), D. Morris (Lethbridge), K. Vogtmann (Cornell)

DECEMBER

• 12/2 - 12/7 String Theory and Generalized Geometries: D. Robbins (Texas A&M), K. & M. Becker (Texas A&M), D. Morrison (UC, Santa Barbara), S.T. Yau (Harvard)

• 12/9 - 12/14 Thin Liquid Films and Fluid Interfaces: Models, Experiments and Applications: M. Shearer (North Carolina State), R. Behringer (Duke), K. Daniels (North Carolina State), R. Levy (Harvey Mudd College), O.K. Matar (Imperial College), T. Witelski (Duke)

BIRS also hosts Focused Research Groups, Research in Teams, Summer Schools, and 2-Day Workshops. Please visit www.birs.ca.

BIRS is also supported by:
- **The Pacific Institute for the Mathematical Sciences (PIMS)**
- **The Mprime Network**
- **The Mathematical Science Research Institute Berkeley (MSRI)**
- **The Instituto de Matemáticas at the Universidad Nacional Autónoma de México (UNAM)**

NSERC CRSNG · NSF · CONACYT · Alberta Innovates