
Mathematics Calendar

January 2010

* 25–February 5 **Periodic approximation in dynamics**, Centro di Ricerca Matematica Ennio De Giorgi, Pisa, Italy.

Description: The Dynamical Systems School on Periodic Approximations in Ergodic Theory will focus on the study of periodic approximations as a tool to understand the ergodic properties of deterministic dynamical systems, and as a method of construction of examples (and counter-examples) of ergodic behavior, especially in dynamics related to quasi-periodic motion, such as perturbations of completely integrable systems, KAM theory, Arnol'd diffusion theory, quasi-periodic cocycles, Schrodinger equation, 1-dimensional complex dynamics around elliptic fixed points, etc. The topics included in the courses cover areas of dynamics that have been experiencing a growing activity recently, raising interests among many young researchers and doctoral students both in Europe and in the U.S. The school will be aimed at student and young researchers and its goal is to provide them with the state of the art ideas and techniques of the included topics. **Information:** <http://tinyurl.com/ykxpenz>.

* 30–February 6 **Winter School in Abstract Analysis, section Topology**, Hejnice, Czech Republic.

Description: The meeting continues the long tradition started by Z. Frolik. The topology section is devoted to the fields of Set Theory and Set Theoretic Topology. There is an emphasis on the “school” part of the name. The meeting is very informal with plenty of time devoted to discussions. The talks are split into a tutorial track (this

year J. Brendle, A. Dow, S. D. Friedman and M. Magidor will each give a tutorial) and a research track, where research and work in progress may be presented.

Information: More information, registration deadline, etc. is available on the website <http://winterschool.eu>.

February 2010

* 8–12 **YMIS 10 - Young Mathematicians in Segovia**, Segovia, Spain.

Description: This is the sixth edition of the school Young Mathematicians in Segovia. YMIS is mostly intended for Ph.D. students and young postdocs working on algebraic geometry, singularities or commutative algebra. YMIS 10 will consist of four courses: Course 1 by Norbert A'Campo (Universität Basel), Course 2: “Homological Algebra of Gorenstein Singularities” by Ragnar-Olaf Buchweitz (University of Toronto), Course 3: “Algebraic curves and their combinatorics” by Pierrette Cassou-Noguès (Université de Bordeaux I) and Course 4: “Zeta functions and exponential sums: homological and geometric methods” by Antonio Rojas León (Universidad de Sevilla). Traditionally, these courses will be supplemented by short talks by junior participants.

Accommodation/Deadline: Lodging, meals will take place at the Hotel Las Sirenas in Segovia. Lectures will take place at the Palacio de Mansilla, C/Trinidad, 3. Accommodation and food is fully funded. If you are interested in participating please contact ann.lemahieu@wis.kuleuven.be. The number of places is limited and deadline for registration is December 20th.

This section contains announcements of meetings and conferences of interest to some segment of the mathematical public, including ad hoc, local, or regional meetings, and meetings and symposia devoted to specialized topics, as well as announcements of regularly scheduled meetings of national or international mathematical organizations. A complete list of meetings of the Society can be found on the last page of each issue.

An announcement will be published in the *Notices* if it contains a call for papers and specifies the place, date, subject (when applicable), and the speakers; a second announcement will be published only if there are changes or necessary additional information. Once an announcement has appeared, the event will be briefly noted in every third issue until it has been held and a reference will be given in parentheses to the month, year, and page of the issue in which the complete information appeared. Asterisks (*) mark those announcements containing new or revised information.

In general, announcements of meetings and conferences carry only the date, title of meeting, place of meeting, names of speakers (or sometimes a general statement on the program), deadlines for abstracts or contributed papers, and source of further information. If there is any application deadline with respect to participation in the meeting, this fact should be noted. All communications on meetings and conferences

in the mathematical sciences should be sent to the Editor of the *Notices* in care of the American Mathematical Society in Providence or electronically to notices@ams.org or mathcal@ams.org.

In order to allow participants to arrange their travel plans, organizers of meetings are urged to submit information for these listings early enough to allow them to appear in more than one issue of the *Notices* prior to the meeting in question. To achieve this, listings should be received in Providence **eight months** prior to the scheduled date of the meeting.

The complete listing of the Mathematics Calendar will be published only in the September issue of the *Notices*. The March, June/July, and December issues will include, along with new announcements, references to any previously announced meetings and conferences occurring within the twelve-month period following the month of those issues. New information about meetings and conferences that will occur later than the twelve-month period will be announced once in full and will not be repeated until the date of the conference or meeting falls within the twelve-month period.

The Mathematics Calendar, as well as Meetings and Conferences of the AMS, is now available electronically through the AMS website on the World Wide Web. To access the AMS website, use the URL: <http://www.ams.org/>.

Information: <http://www.singacom.uva.es/oldsite/segovia10/index.html>.

* 9-13 **31st Linz Seminar on Fuzzy Set Theory – “Lattice-Valued Logic and its Applications”**, Linz, Austria.

Description: The 31st Linz Seminar on Fuzzy Set Theory is devoted to the theme “Lattice-Valued Logic and its Applications”. The goal of the seminar is to present and discuss recent advances of mathematical fuzzy logic (understood in broader framework of lattice-valued logics) and concentrate on its applications in various areas of computer science, linguistics, and philosophy.

Information: <http://www.flll.jku.at/div/research/linz2010/index.html>.

* 16-19 **17 SIMMAC - International Symposium on Mathematical Methods Applied to the Sciences**, University of Costa Rica, San Jose, Costa Rica.

Description: The SIMMAC is the most important meeting on Applied Mathematics in Central America. It takes place every two years in San Jose, Costa Rica, since 1978.

Topics: Data Analysis, Statistics, Classification Optimization, Operations Research, Probability, Stochastic Processes, Numerical Analysis, Approximation, Modeling, Financial Mathematics, Biomathematics, Dynamical Systems, Optimal Control, Applications.

Deadline: For abstracts: November 20, 2009. Full articles: February 19, 2010. A refereed selection of full articles presented will be published at the Revista de Matematica: Teoria y Aplicaciones.

Information: <http://www.cimpa.ucr.ac.cr/simmac/>.

* 18-20 **International Conference on Partial Differential Equations**, University of Poitiers, France.

Description: The conference is dedicated to Professor Michel Chipot on the occasion of his 60th birthday.

Information: <http://www-math.univ-poitiers.fr/icpde2010/>.

* 22-26 **Magma 2010 Conference on p -adic L -functions**, Centre de recherches mathématiques, Université de Montréal, Pavillon André-Aisenstadt, 2920, Chemin de la tour, room 5357, Montréal (Québec) H3T 1J4, CANADA.

Description: This workshop is being run under the auspices of the MAGMA Computer Algebra Group (University of Sydney), and is devoted to computational aspects of the theory of p -adic L -functions. This topic has a rich history both in itself and in relation to global L -functions. It is only recently that the ability to explore various conjectures has become practical. An explicit example is with p -adic variants of Stark’s conjectures, which have been investigated at least in the abelian case. In some contexts, the computations have truly acted as an “experimental science”, in that the final refinements of the conjectures were largely aided by the numerical data.

Information: <http://www.crm.umontreal.ca/NT2010>.

* 22-March 5 **Advanced Course on Arithmetic Geometry for Function Fields of Positive Characteristic**, Centre de Recerca Matemàtica Apartat 50 E-08193, Bellaterra, Spain.

Titles: Curves and Jacobians over function fields. On main conjectures in geometric Iwasawa theory and related conjectures. Arithmetic of gamma, zeta, multizeta values in function fields. A cohomology for function fields arithmetic, and applications.

Information: <http://www.crm.cat/acarithff>.

* 22-March 5 **Second International School on Geometry and Physics. Geometric Langlands and Gauge Theory**, Centre de Recerca Matemàtica, Apartat 50 E-08193, Bellaterra, Spain.

Description: The geometric Langlands correspondence lies at the core of one of the most significant current interactions between geometry and physics, integrating far-reaching discoveries and conjectures originating in physics, geometry, representation theory and arithmetic. This advanced school is designed to deliver training on this inter-

disciplinary topic. It is targeted at graduate students, postdocs and researchers working in geometry and physics at an international level.

Information: <http://www.crm.cat/aclanglands>.

March 2010

* 8-12 **Graphs and Arithmetic**, Centre de recherches mathématiques, Université de Montréal, Pavillon André-Aisenstadt, 2920, Chemin de la tour, room 5357, Montréal (Québec) H3T 1J4, Canada.

Description: There is a long history of interaction between number theory and combinatorics. In the past two decades, deep results in automorphic forms and number theory were used to construct (optimal) expanders, which are known to have wide applications in computer science and communication networks. These techniques were generalized to construct higher dimensional analogues. In the meanwhile, zeta functions for graphs and complexes are better understood. Recent exciting developments in arithmetic combinatorics provide new tools to construct families of good expanders, and these expanders in turn are used to obtain deep number theoretic results. At the same time, the concept of expansion is extended in group theory and computer science to a different context.

Information: http://www.crm.math.ca/Arithmetic10/index_e.php.

* 22-26 **Computer Methods for L -functions and Automorphic Forms**, Centre de recherches mathématiques, Université de Montréal, Pavillon André-Aisenstadt, 2920, Chemin de la tour, room 5357, Montréal (Québec) H3T 1J4, Canada.

Description: For years, computers have also played a key role in investigating the most central questions in the analytic theory of automorphic forms such as the existence of Maass wave forms. Recently, a team of researchers, including M. Rubinstein (Waterloo) and W. Stein (Seattle), has embarked on an ambitious collaborative effort to systematically gather vast amounts of data concerning, among other things, automorphic forms on higher rank groups. This effort is part of a three year (2008-2011) NSF funded Focused Research Group (FRG) grant dealing with L -functions and automorphic forms. The FRG effort is sure to generate challenges and new questions for people working both on the theoretical and the experimental side of the subject, as well as gathering valuable data that will be precious in suggesting conjectures or revealing new lines of enquiry.

Information: <http://www.crm.math.ca/Computer10>.

* 26-28 **CoNE Revisited: Celebrating the Inspirations of Michael O. Albertson**, Smith College, Northampton, Massachusetts.

Description: A mathematics research conference will be held in memory of Michael O. Albertson, March 26-28, 2010, at Smith College, Northampton, MA, USA. The conference is entitled “CoNE Revisited: Celebrating the Inspirations of Michael O. Albertson” and focuses on his areas of research interest, graph theory, combinatorics, and discrete geometry. With Professor Ruth Haas of Smith and Professor Karen Collins (Smith’81) of Wesleyan, Professor Albertson ran at Smith, from 1992 until 2001, a series of CoNE (Combinatorists of New England) conferences, whose open, collaborative, and diverse style we plan to emulate in this memorial conference. All are welcome to attend the talks and social events. Please send any questions to Prof. Joan P. Hutchinson at hutchinson@macalester.edu.

Information: Visit <http://www.math.smith.edu/cone/MikeAlbertsonConference.html>.

April 2010

* 5-9 **PDEs, relativity and nonlinear waves**, Granada, Spain.

Description: The mathematical work concerned with or inspired by General Relativity has increased substantially over the years and is still expanding, thanks to the wide variety of interesting and challenging problems that General Relativity can offer in several distinct areas of Mathematics, for example PDEs, Geometry and Numerical Analysis. Fundamental open questions in General Relativity, such as the stability of Kerr, the formation and structure of Black Holes and

the Cosmic Censorship Conjecture, require for their understanding a deep analysis of the global behavior of solutions to the Einstein equations. This conference brings together leading experts on General Relativity/non-linear wave equations and will cover topics of current and future research in these fields.

Information: <http://www.ugr.es/~kinetic/re1>.

- * 6-10 **Workshop on Iwasawa Theory over Function Fields of Characteristic p** , Centre de Recerca Matemàtica Apartat 50 E-08193, Bellaterra Spain.

Scientific Committee: Francesc Bars (Universitat Autònoma de Barcelona), Gebhard Böckle (Universität Duisburg-Essen), David Burns (King's College of London), David Goss (Ohio State University), Ignazio Longhi (Università di Milano), Douglas Ulmer (Georgia Institute of Technology), Fabien Trihan (University of Nottingham), Xavier Xarles (Universitat Autònoma de Barcelona).

Tentative List of Speakers: Anglès, Bruno, Laboratoire de Mathématiques Nicolas Oresme; Bandini, Andrea, Università di Pisa; Burns, David, King's College London; Pablos Romo, Fernando, Universidad de Salamanca; Pál, Ambrus, Imperial College London; Popescu, Cristian D., University of California at San Diego; Tan, Ki-Seng, National Taiwan University; Thakur, Dinesh S., University of Arizona; Ulmer, Douglas, Georgia Institute of Technology; Yasuda, Seidai, University of Kyoto.

Information: <http://www.crm.cat/wkiwasawa>.

- * 6-June 25 **Trimester in Combinatorics and Control: Workshop, School, Advanced Course, Research in Teams, and International Conference**, Madrid and Zaragoza, Spain.

Focus: The role of combinatorial Hopf algebras at the interface of geometric control theory, algebraic combinatorics, and geometric numerical integration. April 6-9, 2010, Madrid: Workshop. April 12-16, 2010, Zaragoza, School: Targeted at graduate and postdoctoral students in control, computation and combinatorics. April 19-June 18, 2010, Madrid, Research in Teams: 2-4 researchers each work collaboratively on projects for periods of 2-4 weeks. May, 2010, Madrid: Advanced Course "Modern Algebraic Combinatorics and its Applications to Control Theory": Targeted at Ph.D. students. June 21-25, 2010, Madrid, International Conference: Summarizing current research results and redefining future research objectives. Grant support for travel and subsistence is pending. Researchers in the early stages of their careers, including advanced graduate students, especially from traditionally underrepresented groups, are encouraged to apply for support.

Information: <http://dftuz.unizar.es/coco2010>.

- * 12-16 **Advanced Course and Workshop on Drinfeld Modules and L -functions**, Centre de Recerca Matemàtica Apartat 50 E-08193, Bellaterra, Spain.

Scientific Committee: Francesc Bars (Universitat Autònoma de Barcelona), Gebhard Böckle (Universität Duisburg-Essen), David Burns (King's College of London), David Goss (Ohio State University), Ignazio Longhi (Università di Milano), Douglas Ulmer (Georgia Institute of Technology), Fabien Trihan (University of Nottingham), Xavier Xarles (Universitat Autònoma de Barcelona).

Advanced Course's Tentative List of Speakers: Goss, David, Ohio State University at Columbus.

Workshop's Tentative List of Speakers: Böckle, Gebhard, Universität Duisburg-Essen; Chang, Chieh-Yu, National Center for Theoretical Sciences (NCTS); Consani, Caterina, Johns Hopkins University; Gekeler, Ernst-Ulrich, Universität des Saarlandes; Papanikolas, Matthew, Texas A&M University; Papikian, Mihran, The Pennsylvania State University; Pellarin, Federico, Université Jean Monnet; Taelman, Lenny, Universiteit Leiden; Thakur, Dinesh S., University of Arizona.

Information: <http://www.crm.cat/wkacdrinfeld>.

- * 19-23 **Counting Points: Theory, Algorithms and Practice**, Centre de recherches mathématiques, Université de Montréal, Pavillon André-Aisenstadt, 2920, Chemin de la tour, room 5357, Montréal (Québec), H3T 1J4 Canada.

Description: The development of efficient (polynomial time) algorithms for counting the number of points on varieties over finite fields represents a highly attractive area of application, in part because it relies on sophisticated mathematical theories like the étale and p -adic cohomology theories whose development was a cornerstone of number theory in the second half of the 20th century. The workshop will be devoted to recent advances in this area and its applications.

Information: http://www.crm.math.ca/Points10/index_e.php.

- * 21-23 **Bone Tissue: Hierarchical Simulations for Clinical Applications**, Institute for Pure and Applied Mathematics (IPAM), UCLA, Los Angeles, California.

Organizing Committee: Maria-Grazia Ascenzi (UCLA Orthopedic Hospital), John S. Adams (UCLA Orthopedic Hospital), Elena Cherkaev (University of Utah), Paul Dechow (Texas A&M Baylor College of Dentistry), Eve Donnelly (Hospital for Special Surgery), Gwendolen Reilly (University of Sheffield).

Aim: To bring together orthopedic surgeons, clinicians, system biologists, mechanical and software engineers, and applied mathematicians to share the latest findings and formulate a plan to develop the next generation of three-dimensional multi-scale virtual rendering of bone tissue able to address specific clinical issues.

Application/Registration: Registration form is available at: <http://www.ipam.ucla.edu/programs/bone2010>. Early registration closes Jan. 15, 2010. Residents and junior investigators, and women, underrepresented minorities, and individuals with disabilities are encouraged to apply. Scholarships will be awarded to the first author of the nine most meritorious abstracts.

Information: <http://www.ipam.ucla.edu/programs/bone2010/>.

May 2010

- * 3-7 **Second International Workshop on Zeta Functions in Algebra and Geometry**, Universitat de les Illes Balears, Palma de Mallorca, Spain.

Description: The conference will focus on zeta functions in algebra and geometry. Among the main topics to be covered are: 1) Arithmetic and geometric aspects of local, topological and motivic zeta functions, 2) Poincaré series of valuations, 3) Zeta functions of groups, rings and representations, 4) Prehomogeneous vector spaces and their zeta functions, 5) Height zeta functions, 6) Computation of zeta functions and applications.

Scientific Committee: A. Campillo (Spain), J. Denef (Belgium), F. Grunewald (Germany), S. M. Gusein-Zade (Russia), M. Larsen (USA), I. Luengo (Spain), Y. Tshinkel (USA), A. Yukie (Japan).

Organizing Committee: A. Melle-Hernández (Spain), W. Veys (Belgium), W. A. Zúñiga-Galindo (México).

Local Organizing Committee: L. I. Huguet (Chair), A. Campillo, G. Cardona, M. González-Hidalgo, A. Mir (Spain).

Information: <http://www.singacom.uva.es/oldsite/seminarios/cartel.jpg>.

June 2010

- * 3-5 **12th Chico Topology Conference**, Chico, California.

Description: Researchers at all levels are invited to present 20-minute contributed talks in any area of topology. To apply, please send a title and abstract to Thomas Mattman (email: TMattman@CSUChico.edu) by May 1, 2010.

Invited speakers: Alejandro Illanes (UNAM, Mexico); Marcus March (CSU, Sacramento); Chris Mouron (Rhodes College, Memphis); and Ramin Naimi (Occidental College, LA).

Information: <http://www.csuchico.edu/~tmattman/CTC.html>.

- * 8-9 **2010 Clay Research Conference**, Institut Henri Poincaré, Paris, France.

Information: <http://www.claymath.org>.

* 22–July 2 **RMMC 2010: Conservation Laws and Applications**, University of Wyoming, Laramie, Wyoming.

Description: Conservation Laws (or balance laws) are systems of partial differential equations which arise naturally as models for a variety of physical phenomena (e.g., fluid dynamics, magneto-hydrodynamics, combustion, oil recovery, and nonlinear elasticity). The primary focus of this summer program will be on recent developments in our understanding of such equations. Beginning with a rapid tutorial phase, the aim of the program will be to expose participants to current areas of active research and to help prepare them to pursue open problems in the field. The program will touch on both theoretical and computational aspects of conservation laws, and application areas (old and new) in which conservation laws play a central role will be highlighted.

Speakers: H. Kristian Jenssen (Penn State University), James Rossmanith (University of Wisconsin-Madison), Benjamin Texier (Université Paris-Diderot (Paris 7)).

Sponsors: Rocky Mountain Mathematics Consortium. NSF and IMA Funding possible.

Deadline: For applications/abstracts of talks: April 1, 2010.

Information: <http://math.uwyo.edu/rmmc/2010>; Gregory Lyng, glyng@uwyo.edu, A. Duane Porter, adporter@uwyo.edu, Department of Mathematics, University of Wyoming, Laramie, WY 82071. For information about Laramie, <http://www.laramie.org/>.

* 24–27 **ACA 2010: Applications of Computer Algebra**, Vlora, Albania.

Description: The ACA series of conferences is devoted to promoting the applications and development of Computer Algebra and Symbolic Computation. Topics include computer algebra and symbolic computation in engineering, the sciences, medicine, pure and applied mathematics, education, communication and computer science. Call for Sessions: We are still accepting proposals to organize sessions at the conference. Session chairs are expected to organize four or more speakers on a theme consistent with that of the conference.

Information: See <http://aca2010.info/index.php/aca2010/aca2010>.

July 2010

* 5–9 **Modular Conference: Arithmetic of Modular Forms and Modularity Results**, Centre de Recerca Matemàtica Apartat 50 E-08193, Bellaterra, Spain.

Scientific Committee: Henri Darmon (McGill University, Montreal), Fred Diamond (King's College of London), Luis Dieulefait (Universitat de Barcelona), Bas Edixhoven (Leiden University), Victor Rotger (Universitat Politècnica de Catalunya).

Tentative List of Speakers: Barnet-Lamb, Thomas, Brandeis University; Berger, Laurent, École Normale Supérieure de Lyon; Böckle, Gebhard, Universität Duisburg-Essen; Colmez, Pierre, CNRS; Dettweiler, Michael, Universität Heidelberg; Diamond, Fred, King's College London; Dieulefait, Luis, Universitat de Barcelona; Dimitrov, Mladen, Université Denis-Diderot Paris 7; Harris, Michael, Jussieu, Paris; Katz, Nicholas, Princeton University; Paskunas, Vytautas, Universität Bielefeld; Ramakrishnan, Dinakar, Caltech University; Serre, Jean-Pierre, Collège de France; Tilouine, Jacques, Université de Paris XIII; Wiese, Gabor, Institut für Experimentelle Mathematik.

Information: <http://www.crm.cat/cmodular>.

* 11–14 **24th European Conference on Operational Research (EURO XXIV)**, FCUL - University of Lisbon, Lisbon, Portugal.

Description: This large conference is organized by EURO (The Association of European O.R. Societies) and APDIO (The Portuguese O.R. Society). All researchers, academicians, practitioners, as well as students interested in any branch of operational research, mathematical modelling or economic analysis are invited to participate in the conference and to present their papers. Abstract submission and registration are done online, via the Conference web page.

Deadline: For abstract submission: February 28, 2010.

Information: <http://www.euro2010lisbon.org>.

* 13–17 **5th International Conference on Origami in Science, Mathematics and Education (SOSME)**, Singapore Management University, Singapore, Singapore.

Description: Provides a platform for researchers, educators and artists to share and explore new ideas at the crossroads of origami, science, technology, mathematics, education and art. Conference: (Tuesday July 13; Thursday July 15). The conference starts with an evening reception on Tuesday, followed by two days of concurrent sessions covering origami in mathematics, science, engineering, education, art and design. Professor Erik Demaine and Dr. Robert J. Lang will present keynote lectures during the conference. Convention: (Friday July 16; Saturday July 17). Following the conference is a two-day origami convention, which includes folding classes, free folding sessions, an exhibition and more!

Information: <http://www.origami-usa.org/5osme>.

* 15–30 **XIII Summer Diffiety School**, Santo Stefano del Sole (Avellino), Italy.

Description: The aim of this permanent school is to introduce undergraduate and Ph.D. students in Mathematics and Physics as well as post-doctoral researchers in a recently emerged area of Mathematics and Theoretical Physics: Secondary Calculus. A “diffiety” is a new geometrical object that properly formalizes the concept of the solution space of a given system of (nonlinear) PDEs, much as an algebraic variety does with respect to solutions of a given system of algebraic equations. Secondary Calculus is a natural diffiety analogue of the standard Calculus on smooth manifolds, and as such leads to a very rich general theory of nonlinear PDEs. It appears that it is this the only natural language of quantum physics, just as the standard Calculus is for classical physics.

Information: <http://school.diffiety.org/page3/page0/page112/page112.html>

* 27–31 **LinStat'2010 - International Conference on Trends and Perspectives in Linear Statistical Inference**, Polytechnic Institute of Tomar, Portugal.

Description: The aim of the conference is to bring together researchers sharing an interest in a variety of aspects of statistics and its applications and offer them a possibility to discuss current developments in these subjects. The format of this meeting will involve plenary talks and sessions with contributed talks. The conference will mainly focus on a number of topics: estimation, prediction and testing in linear models, robustness of relevant statistical methods, estimation of variance components appearing in linear models, generalizations to nonlinear models, design and analysis of experiments, including optimality and comparison of linear experiments. The work of young scientists has a special position in the LINSTAT 2010 to encourage and promote them. The best poster as well as the best talk will be chosen. Prizes will be awarded to graduate students or scientists with a recently completed Ph.D. Prize-winning works will be widely publicized and promoted by the conference.

Information: <http://www.linstat2010@ipt.pt>.

August 2010

* 15–19 **Geometric, Asymptotic, Combinatorial Group Theory with Applications (GAGTA)**, Centre de recherches mathématiques, Université de Montréal, Pavillon André-Aisenstadt, 2920, Chemin de la tour, room 5357, Montréal (Québec), H3T 1J4 Canada.

Description: This workshop will be devoted to the study of a variety of topics in geometric and asymptotic group theory, with special emphasis on statistical methods and their applications (in theoretical cryptography). We have contributed to the organization of three similar conferences: in Manresa (Spain) in 2006, in Dortmund (Germany) in 2007, in New York in March 2008. We plan to gather leading specialists in various aspects of geometric, asymptotic, and algorithmic group theory. More specifically, the workshop topics will include quasi-isometries, isoperimetric functions, function growth, asymptotic invariants, random walks, algorithmic problems, etc.

Information: <http://www.crm.umontreal.ca/GT2010/index.php/>.

* 23-27 **Topics in Algorithmic and Geometric Group and Semigroup Theory**, Centre de recherches mathématiques, Université de Montréal, Pavillon André-Aisenstadt, 2920, Chemin de la tour, room 5357, Montréal (Québec) H3T 1J4 Canada.

Description: During the past 20 years, geometric group theory has developed many different facets, including relations with geometry, topology, analysis, and logic. The new, more geometric, perspectives have enabled rapid progress on many of these fronts. A tremendous solidification of previously disparate results has also occurred. In algorithmic group theory, in recent years, more and more interconnections between computer science and classical group and semigroup theory have been discovered. Automata theory has motivated the definition of new classes of groups, for instance, automaton groups and automatic groups. Techniques from rewriting theory, data compression, and automata theory are used in order to solve more efficiently word problems as well as other computational problems in (semi)group theory. The program of the workshop will capitalize on this recent surge of activity in both areas.

Information: <http://www.crm.umontreal.ca/GT2010/index.php>.

* 30-September 3 **Complexity and Group-based Cryptography**, Centre de recherches mathématiques, Université de Montréal, Pavillon André-Aisenstadt, 2920, Chemin de la tour, room 5357, Montréal (Québec) H3T 1J4 Canada.

Description: Building a solid mathematical foundation for the use of infinite groups in cryptography inevitably involves operating with various asymptotic and statistical aspects of infinite groups, and this is where modern group theory finds its important applications. We plan to invite specialists in group and number theory, computer science, and cryptography.

Information: <http://www.crm.umontreal.ca/GT2010/index.php>.

September 2010

* 2-4 **Moduli spaces**, Institut de Recherche Mathématique Avancée, University of Strasbourg, France.

Description: The focus is on moduli spaces. The conference is part of the series "Encounters between mathematicians and theoretical physicists". There will be survey lectures and specialized talks.

Speakers: Louis Funar (Grenoble), Lisa Jeffrey (Toronto), Dieter Kotschick (Muenchen), Kirill Krasnov (Nottingham), Andrei Losev (ITEP, Moscow), Feng Luo (Rutgers U.), Nikita Nekrasov (IHES), Sergei Oblezin (ITEP, Moscow), Jean-Marc Schlenker (Toulouse), Sergei Tabachnikov (Penn. State), Richard Wentworth (Maryland).

Organizers: Vladimir Fock (email: fock@math.u-strasbg.fr) and Athanase Papadopoulos (email: papadop@math.u-strasbg.fr).

Information: <http://www-irma.u-strasbg.fr/spip.php?article915>.

October 2010

* 4-9 **Group Actions and Dynamics**, Centre de recherches mathématiques, Université de Montréal, Pavillon André-Aisenstadt, 2920, Chemin de la tour, room 5357, Montréal (Québec) H3T 1J4 Canada.

Description: In his seminal book "Trees", Serre laid down the fundamentals of the theory of groups acting freely on simplicial trees. In the following decade Serre's novel approach unified several geometric, algebraic, and combinatorial methods of group theory into a unique powerful tool, known today as Bass-Serre Theory. Topologists became interested in R-trees with the work of Morgan and Shalen (1985) which generalized parts of Thurston's Geometrization Theorem. A joint effort of several researchers culminated in a description of finitely generated groups acting freely on R-trees, which is now known as Rips' theorem. The key ingredient of the theory is the so-called "Rips

machine". The idea of the Rips machine comes from Makanin's algorithm (or elimination process) for solving equations in free groups.

Information: <http://www.crm.umontreal.ca/GT2010/index.php>.

* 10-15 **International Conference in Systems Biology (ICSB)**, Edinburgh International Conference Centre, The Exchange, Edinburgh, EH3 8EE, Scotland.

Description: The leading international conference in Systems Biology, covering all aspects of the field. This conference is held annually attracting up to 1000 participants from across the globe and provides a ideal platform for catalysing international collaboration and showcasing the latest developments in the field.

Information: <http://www.icsb2010.org.uk/>.

* 11-15 **Equations and First-order Properties in Groups**, Centre de recherches mathématiques, Université de Montréal, Pavillon André-Aisenstadt, 2920, Chemin de la tour, room 5357 Montréal (Québec) H3T 1J4 Canada

Description: Solving equations is one of the main topics in mathematics. A more general and more difficult problem is to describe which formulas of the first-order logic hold in a given group. Recent works on the Tarski's problems (Kharlampovich, Miasnikov, Sela) opened a new direction of research called now "Algebraic geometry over groups". We are going to discuss some methods and techniques used for the solution of these problems, and developments in the algebraic geometry for groups, Lie Algebras, and other algebraic systems.

Information: <http://www.crm.umontreal.ca/GT2010/index.php>.

The following new announcements will not be repeated until the criteria in the next to the last paragraph at the bottom of the first page of this section are met.

March 2011

* 14-June 17 **Navigating Chemical Compound Space for Materials and BioDesign**, Institute for Pure and Applied Mathematics (IPAM), UCLA, Los Angeles, California.

Overview: This long program will bring together senior as well as junior researchers of diverse scientific communities, which are involved in addressing the question of how to best navigate chemical compound space, such that they can discuss current bottlenecks with each other and, in particular, with the applied mathematics community. It is expected to lead to fruitful collaborations where all participants benefit largely from mathematical insights on their specific optimization and design problems.

Organizing Committee: Anatole von Lilienfeld, Jean-Loup Faulon, William Hart, Kendall Houk, Peter Jones, Steven Lustig, Tamar Seideman, Mark Tuckerman.

Application: An application form is available at: <http://www.ipam.ucla.edu/programs/ccs2011>. Applications for individual workshops will be posted on individual workshop home pages. Encouraging the careers of women and minority mathematicians and scientists is an important component of IPAM's mission and we welcome their applications.

Information: <http://www.ipam.ucla.edu/programs/ccs2011/>.