
Mathematics Calendar

April 2011

* 16 **Herbert Federer Memorial Conference**, Brown University, Providence, Rhode Island.

Description: This one-day conference will feature six lectures relevant to the work of Herbert Federer.

Speakers: William Allard, Wendell Fleming, Robert Hardt, Jean Taylor, Brian White, and William Ziemer. There will be a banquet in the evening.

Information: <http://artin.math.brown.edu/federer/>.

* 16–17 **CombinaTexas 2011**, Sam Houston State University, Huntsville, Texas.

Description: CombinaTexas is an annual regional conference on Combinatorics, Graph Theory, and Computing. It is dedicated to the enhancement of both the educational and the research atmosphere of the community of combinatorialists and graph theorists in Texas and surrounding states. The special focus of CombinaTexas 2011 will be algebraic combinatorics.

Invited speakers: Federico Ardila (San Francisco State University), Chris Godsil (University of Waterloo), Gregg Musiker (University of Minnesota), Michael Orrison (Harvey Mudd College), Rosa Orellana (Dartmouth College), Bernhard Schmidt (Nanyang Technological University), and Catherine Yan (Texas A&M University). CombinaTexas 2011 will also include several contributed talks by faculty, postdocs, and graduate students; and a poster session by under-

graduate students. This conference is supported by the National Science Foundation.

Information: <http://www.shsu.edu/~ldg005/combinatexas>.

* 18–22 **4th annual conference on Polynomial Computer Algebra 2011**, The Euler International Mathematical Institute (EIMI), St. Petersburg, Russia.

Description: The Conference will be devoted to modern polynomial algorithms in Computer Algebra which are gaining importance in various applications of science as well as in fundamental researches.

Topics: Groebner bases, Combinatorics of monomial orderings, Differential bases, Involutive algorithms, Computational algebraic Geometry, D-modules polynomial differential operators, Parallelization of algorithms, Algorithms of tropical mathematics, Quantum computing cryptography, Tropical manifolds, Matrix algorithms, Complexity of algorithms and other.

Information: <http://www.pdmi.ras.ru/EIMI/2011/pca/index.html>.

* 25–29 **The Kervaire Invariant and Stable Homotopy Theory**, ICMS, Edinburgh, Scotland.

Description: At the 2009 Atiyah80 ICMS Workshop, Hill, Hopkins, and Ravenel announced a proof that there do not exist manifolds with Kervaire invariant 1 in dimensions $2^k - 2$ for any $k \geq 8$. This solves the longstanding open Kervaire invariant problem (except for dimension 126, the only dimension which now remains open), which has been of central importance in homotopy theory for over

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/>.

40 years. The principal objective is to disseminate the methods used in the solution of the Kervaire invariant conjecture, and the use of equivariant and motivic methods more generally. It is also hoped to assess the prospects for using the methods to prove structural results about stable homotopy, and to report on progress which will have taken place by the time of the meeting.

Information: <http://www.icms.org.uk/workshops/kervaire>.

May 2011

* 2–13 **Pedagogical school on “Knots and links: from theory to applications”**, Centro di Ricerca Matematica “Ennio De Giorgi”, Collegio Puteano, Piazza dei Cavalieri 3, 56124, Pisa, Italy.

Description: This pedagogical school wants to offer an introduction to the subject, aiming at covering in a brainstorming 2-week period some of the fundamental topics in both pure and applied contexts. Starting from the basic concepts of the theory of knots and links up to the forefront of topics of modern research, from knot polynomials to aspects of hyperbolic geometry, from tangles and braids to the role of invariants in dynamical and biological systems, the school will offer a unique opportunity to doctorate students as well as young researchers and mid-career academics to be exposed to some of the most interesting open problems of current research.

Lecturers: Slavik Jablan, Univ. Belgrade, Republic of Serbia; Louis H. Kauffman, Univ. Illinois at Chicago, USA; Sergei Matveev, Chelyabinsk State Univ., Russia; Kenneth C. Millett, Univ. California at Santa Barbara, USA; Carlo Petronio, Univ. Pisa, Italy; Renzo L. Ricca, Univ. Milano-Bicocca, Italy; Mauro Spera, Univ. Verona, Italy; De Witt Summers, Florida State Univ., USA.

Contact: renzo.ricca@unimib.it. (This event is part of the intensive research period “Knots and Applications”).

Information: <http://www.crm.sns.it/event/203/>.

* 8–12 **Conference on Algebra and Applications in honour of Prof. Said Sidki on the occasion of his 70th birthday**, Caldas Novas, Goias, Brazil.

Description: This conference will bring together many of the leading mathematicians to report on recent developments of broad interest and to point the way for exciting directions for future research. In this way we plan to honor the significant contributions of Prof. Said N. Sidki on the occasion of his 70th Birthday.

Topics: Group theory; ring theory; commutative algebra and algebraic geometry; associative and non-associative algebras; number theory; applications.

Invited Speakers: Efim Zelmanov (University of California, USA); Rostislav Grigorchuk (Texas A&M University, USA); Donald Passman (University of Wisconsin-Madison, USA); George Glauberman (University of Chicago, USA); Laurent Bartholdi (University of Göttingen, Germany); Vladimir Nekrashevich (Texas A&M University, USA); Thomas Muller (Queen Mary College, University of London, UK); Zoran Sunik (Texas A&M University, USA).

Information: <http://www.mat.ufg.br/algebra>.

* 11–14 **41st Barrett Memorial Lectures—Mathematical Relativity**, University of Tennessee, Knoxville, Tennessee.

Description: This longstanding lecture series at the University of Tennessee focuses this year on recent developments in mathematical general relativity. The format consists of three series of survey lectures, six plenary lectures, and 30-minute talks by new Ph.D.s and postdocs.

Survey lecture speakers: Igor Rodnianski, Richard Schoen, Robert Wald.

Plenary lectures: Lydia Bieri, Hugh Bray, Mihalis Dafermos, Greg Galloway, Jim Isenberg, Marcus Khuri.

Information: <http://www.math.utk.edu/barrett/>.

* 12–15 **SETIT**, Sfax University, Tunisia.

Description: The scientific and organization committees of SETIT have decided to postpone the conference to May 12–15, 2011. So the submission date is reopened to February 15, 2011.

Information: <http://www.setit.rnu.tn>.

* 13–15 **Connections in Geometry and Physics: 2011 (GAP 2011)**, Fields Institute for Research in Mathematical Sciences, Toronto, Ontario, Canada.

Description: Each year, the format of GAP combines three separate but related themes in geometry and physics. This year’s themes are: advances in Floer Theory, geometric flows, and the AdS/CFT correspondence.

Principal speakers: Michael Anderson (Stony Brook), Octav Cornea (Montréal), Robin Graham (Washington), François Lalonde (Montréal), John Lott (UC Berkeley), Robert McCann (Toronto), Tom Mrowka (M.I.T.), André Neves (Imperial), Natasa Sesum (Rutgers), Pedro Vieira (Perimeter), Katrin Wehrheim (M.I.T.), Xi Yin (Harvard).

Organizers: Marco Gualtieri (Toronto), Spiro Karigiannis (Waterloo), Ruxandra Moraru (Waterloo), Rob Myers (Perimeter), McKenzie Wang (McMaster).

Information: <http://www.math.uwaterloo.ca/~gap>.

* 18–22 **2011 Georgia Topology Conference: Symplectic Topology and Floer Theory**, University of Georgia, Athens, Georgia.

Description: Funding is available for participation by graduate students and recent Ph.D.s.

Speakers: Peter Albers (Purdue), Strom Borman (University of Chicago), Jacqueline Espina (UC Santa Cruz), Viktor Ginzburg (UC Santa Cruz), Doris Hein (UC Santa Cruz), Richard Hind (Notre Dame), Sonja Hohloch (Stanford), Helmut Hofer (IAS), Sikimeti Ma’u (Columbia), Al Momin (Purdue), Yong-Geun Oh (Wisconsin), Yasha Savelyev (Massachusetts), Claude Viterbo (Ecole Polytechnique), Weiwei Wu (Minnesota).

Information: <http://math.uga.edu/~topology>.

June 2011

* 2–4 **IMA Hot Topics Workshop: Uncertainty Quantification in Industrial and Energy Applications: Experiences and Challenges**, Institute for Mathematics and its Applications (IMA), University of Minnesota, Minneapolis, Minnesota.

Description: The workshop will bring together industrial scientists, lab scientists, and university-based researchers to share UQ state-of-the-art application experience, best practices, and future challenges in diverse applications and from different sectors, including aerospace and automotive applications, engine design, energy (nuclear, wind, solar, etc.) and global climate change. Presentations on academic UQ research and progress will open opportunities to transfer results for application problem solutions. Special focus will be given to exploit the joint potential of data-driven statistical approaches and model-based methodology. Moderated discussion sessions will catalyze joint research activities and knowledge transfers.

Information: <http://www.ima.umn.edu/2010-2011/SW6.2-4.11/>.

* 3–8 **XIIIth International Conference on Geometry, Integrability and Quantization**, Sts. Constantine and Elena Resort near Varna, Bulgaria.

Description: This conference is a continuation of meetings on Geometry and Mathematical Physics which took place in Bulgaria-Zlatograd (1995) and Varna (1998-2010). “Geometry” in the title refers to modern differential geometry of real and complex manifolds with some emphasis on curves, sigma models and minimal surface theory; “Integrability” to either the integrability of complex structures or classical dynamical systems of particles, soliton dynamics and hydrodynamical flows presented in geometrical form; and “Quantization” to the transition from classical to quantum mechanics expressed in geometrical terms.

Aim: To bring together experts in classical and modern differential geometry, complex analysis, mathematical physics, and related fields to assess recent developments in these areas and to stimulate research in related topics.

Information: <http://www.bio21.bas.bg/conference/>.

* 6–8 **Abelian Varieties & Galois Actions**, Faculty of Mathematics and Computer Sciences, the Adam Mickiewicz University, Poznań, Poland.

Main topics: Will cover some aspects of: Arithmetics of abelian varieties, Iwasawa theory and Galois module structure, L -functions, Galois representations, fundamental groups, algebraic K -theory.

Organizers: Wojciech Gajda (Poznań), Cornelius Greither (Monachium), Sebastian Petersen (Monachium).

Information: <http://avga.wmi.amu.edu.pl>.

* 6–15 **11th Canadian Summer School on Quantum Information**, Centre de Villégiature de Jouvence, Québec, Canada.

Description: This summer school is the 11th edition of a highly successful series of schools, with previous editions held in Calgary, Montreal, Toronto, Vancouver, and Waterloo. It follows the tradition of educating young researchers (prospective and current graduate students, as well as postdocs) on the rapidly-evolving field of quantum information science and brings together the world's experts from different areas.

Information: <http://www.crm.umontreal.ca/QI11/>.

* 7–11 **Finite Groups and Their Automorphisms**, Boğaziçi University, Istanbul, Turkey.

Description: This five-day workshop aims to bring together leading mathematicians and active researchers working on the theory of groups in order to exchange ideas, present new results, and identify the key problems in the field, especially but not exclusively, on the relationship between a finite group and another one acted upon by the first. There will be seven minicourses, several invited talks, a limited number of contributed talks and a poster session.

Information: <http://istanbulgroup.metu.edu.tr/>.

* 13–17 **Cluster Algebras and Lusztig's Canonical Basis**, University of Oregon, Eugene, Oregon.

Description: The goal of this workshop is to understand the statement that the cluster monomials on the coordinate ring of G/N are an important subset of the dual of Lusztig's canonical basis. The workshop will be aimed at graduate students and postdocs, with most of the talks given by the participants. We do not expect any of the participants to be experts in all of the subjects that are represented in this workshop. Rather, we hope to bring together participants with diverse backgrounds, and to weave these backgrounds together into a coherent picture through a combination of lectures and informal discussion sessions. The workshop will be led by David Speyer.

Information: <http://pages.uoregon.edu/njp/cluster.html>.

* 13–17 **Workshop on Moving in Geometry**, Centre de recherches mathématiques, Université de Montréal, Québec, Canada.

Description: Brought to maturity by Élie Cartan, the method of moving frames has been in the mathematical landscape for more than a century. From the Frenet-Serret frame to Cartan's "repère mobile" and beyond, moving-frame techniques have proven indispensable in the study of symmetries, invariants, and other intrinsic properties of geometrical objects. Explicit applications of moving-frame techniques range from classical differential geometry to integrable systems, and on toward control theory and computer vision.

Information: http://www.crm.math.ca/Moving11/index_e.php.

* 14–16 **CONIAPS-XIII: 13th Conference of the International Academy of Physical Sciences**, University of Petroleum and Energy Studies, Dehradun, India.

Focal Theme: Emerging Interfaces of Physical Sciences and Technology. The College of Engineering Studies, UPES, in collaboration with the International Academy of Physical Sciences, Allahabad, is organizing a 3-day international conference (CONIAPS-XIII) on "Emerging Interfaces of Physical Sciences and Technology".

Call for Papers: Original contributions on any topics related to all of the engineering field and other applied sciences: Physics, Chemistry, Mathematics, Statistics, Computer Science, Earth Sciences (Geophysics, Geology & Geography) as well as topics related to Applications of Physical Sciences to Biosciences (Biophysics, Bioinformatics, Biochemistry, Biomathematics etc.) are invited for presentation.

Deadline for Abstract: Each abstract with a maximum of 200 words may be sent to: coniapsxiii@gmail.com with registration form on or before March 30th, 2011.

* 16–17 **8th Canadian Student Conference on Quantum Information**, Centre de Villégiature de Jouvence, Québec, Canada.

Description: An official academic activity for which students will receive 3 graduate-level credits from the University of Sherbrooke. Participants of the student conference will receive 1 graduate level credit. These credits can be accounted for the student's graduate program, depending on regulations of their host institution.

Information: http://www.crm.umontreal.ca/QI11/index_e.php.

* 20–23 **Complex Analysis and Potential Theory in honour of Paul M. Gauthier and Kohur Gowrisankaran**, Centre de recherches mathématiques, Université de Montréal, Montréal, Canada.

Description: Complex Analysis and Potential Theory have always lived and thrived in symbiosis, and our aim is to bring together specialists from both areas to foster further cooperation and exchange of ideas and to find new research perspectives. With about 25 plenary lectures, given by some of the most established specialists in the fields, as well as shorter talks in parallel sessions, this conference will also provide researchers with a forum to present some of the main topics of current research, report on the latest developments in these areas, and be exposed to an overview of Complex Analysis and Potential Theory.

Information: http://www.crm.math.ca/Complex11/index_e.php.

July 2011

* 1–3 (NEW DATE) **The 4th Congress of the Turkic World Mathematical Society (TWMS)**, Baku, Azerbaijan. (Jan. 2011, p. 84)

Description: The aim of the Congress is to provide a forum where scientists and mathematicians from academia and industry can meet to share ideas of latest research work in all branches of pure and applied mathematics.

Information: <http://www.twmsc2011.com/>.

* 1–4 **8-International Conference on the Computer Analysis of Problems of Science and Technology**, Dushanbe, Tajikistan.

Themes: Mathematical aspects of computer sciences, computer problems, and information security.

Requirements for registration: (As usual for international conferences), all documents must be presented no later than May 15, 2011, to the address: 734042, Dushanbe, Str. 17, Tajikistan. The invitations and program of the conference will be sent out on June 1, 2011. Questions may be directed to: myu@yunusi.com. The conference fee, including conference publications, informational reports, and postage is US\$100. To apply to participate in the conference, please send text of talks (in duplicate), up until May 15, 2011, to the above address and an electronic version to: myu@yunusi.com.

Information: <http://www.yunusi.com>.

* 1–29 **Non-equilibrium Statistical Mechanics**, Centre de recherches mathématiques, Université de Montréal, Pavillon André-Aisenstadt, Montréal, Québec, Canada.

Description: This school is a second part of the joint semester “Frontiers in Mathematical Physics” organized by the Université de Cergy-Pontoise, and McGill University and the CRM. The first part of the semester will be held at Cergy in May 2011. July 1–10 will be a concentration period devoted to scientific interaction and collaboration. Jan Dereziński will give a special 15-hour course on Quantum Electrodynamics, July 11–15, 3 hours per day. The summer school lectures will take place July 18–22 and July 25–29. There will be 3-hour mini-course lectures and invited talks. The lectures will be accessible to graduate students. About 2/3 of the lectures will focus on open problems and overall state of the art regarding various research directions in non-equilibrium statistical mechanics. The other lectures will deal with the state of the art developments in other areas of statistical mechanics.

Information: http://www.crm.umontreal.ca/Mechanics11/index_e.php.

* 3–8 **Completely Integrable Systems and Applications—ESF-EMSERCOM Conference**, Erwin Schrödinger Institute, Vienna, Austria.

Description: The scope of the conference includes Completely Integrable Systems (mostly PDEs and systems of ODEs) and related subjects such as Random Matrices, Whitham and Seiberg-Witten theory, Orthogonal Polynomials, Processes in Combinatorial Probability that are asymptotically described by Integrable Systems and Exactly Solvable Interacting Particle Systems modeling nonequilibrium phenomena. We will particularly stress questions of “universality” appearing in both random matrices and semiclassical limits of integrable systems and “non-self-adjoint” problems. We will also address the newly evolving area of boundary problems for integrable PDEs.

Information: <http://www.esf.org/conferences/11369>.

* 3–16 **41st Probability Summer School**, Saint-Flour, France.

Description: This summer school is intended for Ph.D. students, teachers, and researchers who are interested in probability theory, statistics, and in applications of these techniques. Three courses will be given: Itai Benjamini: Isoperimetric inequalities, invariance and random processes; Emmanuel Candes: The power of convex relaxation: the surprising stories of compressed sensing and matrix completion; Gilles Schaeffer: Enumerative and bijective combinatorics for random walks, trees and planar maps. The participants will also have the opportunity to give short lectures.

Information: <http://math.univ-bpclermont.fr/stflour/>.

* 4–8 **2011 Taiwan International Conference on Geometry: Special Lagrangians and Related Topics**, Department of Mathematics, National Taiwan University, Taipei, Taiwan.

Description: This conference will start a series of bi-yearly international conferences on differential geometry in Taiwan. An important area in geometry will be specified as the main theme each time. Our purpose is to create a discussion and interaction platform in the chosen area, and at the same time to foster future cooperations and introduce new people into the field. Additional short courses may also be arranged around the same time as the conference.

Topic: Special Lagrangians and Related Topics will include special Lagrangians, Lagrangian mean curvature flow, J -holomorphic curve techniques for Lagrangians, and the calibrated geometries in general. The tentative topic for 2013 is “Geometry and General Relativity”.

Information: <http://www.tims.ntu.edu.tw/workshop/Default/index.php?WID=111>.

* 25–27 **Euler Society 2011 Conference**, Carthage College, Kenosha, Wisconsin.

Description: The 10th Annual Euler Society Conference will be held this year in a new venue, in Kenosha, WI. Talks are welcomed discussing any aspect of Euler’s life, work, and influence. Also welcome are discussions from the larger world of eighteenth century mathematics and science. Talks can be given in either 20- or 50-minute formats.

Deadline: Abstract deadline is June 15. Reduced conference fees are available for those with no institutional support. Contact

conference organizers Erik Tou (etou@carthage.edu) or Dominic Klyve (klyved@cwu.edu) for more information.

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

* 25–August 12 **International Seminar and Workshop on Weak Chaos, Infinite Ergodic Theory, and Anomalous Dynamics**, Max Planck Institute for the Physics of Complex Systems, Dresden, Germany.

Description: Weak chaos refers to systems exhibiting zero Lyapunov exponents, meaning that the separation of nearby trajectories is weaker than exponential. Still, the dynamics is typically very irregular. Rigorous mathematical results about such systems have recently been obtained by infinite ergodic theory, which is an extension of ordinary ergodic theory to dynamical systems with non-normalizable measures. These theoretical concepts predict novel nonequilibrium physical properties in form of anomalous dynamics, which can be tested in experiments. The purpose of this conference is to initiate cross-disciplinary collaborations between physicists working on both the deterministic and the stochastic aspects of weakly chaotic systems and anomalous dynamics, and mathematicians being active in the relevant branches of dynamical systems and ergodic theory.

Information: <http://www.pks.mpg.de/~wchaos11/>.

* 25–August 12 **IMA Participating Institution Summer Graduate Program Topological Methods in Complex Systems**, University of Pennsylvania, Philadelphia, Pennsylvania.

Description: The University of Pennsylvania will be the host of the Institute for Mathematics and its Applications (IMA) Summer Graduate Program in Mathematics. The course will concentrate on topological methods in complex systems. Topological methods are generating a revolution in the understanding and management of data in large systems ranging from robotics, dynamics, sensors, materials, biology, communications, and vision. Such methods, inspired by a century’s worth of development in algebraic and geometric topology, have the virtue of being qualitative and robust under perturbations. Of particular utility is the local-to-global nature of topological invariants, a feature of increasing relevance in large systems with distributed or modular constraints.

Information: <http://www.ima.umn.edu/2010-2011/PISG7.25-8.12.11/>.

August 2011

* 1–5 **2011 CBMS-NSF Conference: 3-Manifolds, Artin Groups and Cubical Geometry**, CUNY Graduate Center, New York City, New York.

Keynote speaker: Daniel Wise (McGill University, Canada).

Additional speakers: Ian Agol (Univ. Calif., Berkeley), Ruth Charney (Brandeis), Cornelia Drutu (Oxford), Nathan Dunfield (Univ. Illinois, Urbana-Champaign), Mark Hagan (McGill), Chris Hruska (Univ. Wisconsin, Milwaukee), Michael Kapovich (Univ. Calif., Davis), Yair Minsky (Yale), Mark Sapir (Vanderbilt), Zlil Sela (Hebrew University), Eric Swensen (Brigham Young).

Financial support: From the NSF, especially for students and early career researchers. We intend to cover the local expenses for many such applicants.

Information: Please check the website to apply for support. To be considered for support, your application must be submitted by April 15th, 2011. Please direct all correspondence to: cubulate.nsf-cbms@gmail.com.

Organizers: Jason Behrstock (CUNY Lehman & GC), Abhijit Champanerkar (CUNY Staten Island); <http://comet.lehman.cuny.edu/behstock/cbms/>.

* 8–12 **AIM Workshop: Relating test ideals and multiplier ideals**, American Institute of Mathematics, Palo Alto, California.

Description: This workshop, sponsored by AIM and the NSF, will be devoted to the connection between two prominent and distinct means of measuring singularities: the multiplier ideal in complex algebraic geometry, and the test ideal in positive characteristic commutative algebra.

Information: <http://www.aimath.org/ARCC/workshops/testideals.html>.

* 22–December 21 **Multiscale Numerics for the Atmosphere and Ocean**, Isaac Newton Institute for Mathematical Sciences, Cambridge, United Kingdom.

Description: Numerical models of the atmosphere and ocean have proved to be immensely valuable forecasting tools for short time-scale weather and longer time-scale seasonal and climate prediction. As the decades pass, these models have been improving due to increased computing power, improved modelling of the dynamics, improved parametrisation of sub-grid scale processes and improved use of observations. These modelling improvements may be slowing and further large increases in computing power will almost certainly emerge from heterogenous computing architectures configured in even more massively parallel machines. If we are unable to exploit these new opportunities in high-performance computing, our current models and codes risk becoming obsolete.

Organizers: Dr. D. Ham, Dr. M. Piggott, Dr. T. Ringler, Dr. H. Weller and Dr. N. Wood.

Information: <http://www.newton.ac.uk/programmes/AMM/>.

September 2011

* 3–9 **10th International Conference on Geometry and Applications**, Geometrical Society “Boyan Petkanchin”, Sofia, Bulgaria.

Description: 10th International Conference on Geometry and Applications is organized from the Geometrical Society “Boyan Petkanchin” in Bulgaria. The following fields are included: differential geometry, finite geometries, computer methods in geometry, algebra and analysis, education in the school and university by computers, didactic of mathematics.

Information: Please contact: Prof. Dr. Grozio Stanilov; stanilov@fmi.uni-sofia.bg and Chavdar Lozanov; lozanov@fmi.uni-sofia.bg.

* 11–17 **14th International Conference on Functional Equations and Inequalities**, Mathematical Research and Conference Center, Bedlewo (near Poznan), Poland.

Description: The International Conference on Functional Equations and Inequalities—ICFEI has been organized by the Institute of Mathematics of the Pedagogical University of Cracow since 1984. The conference is devoted to functional equations and inequalities, their applications in various branches of mathematics and other scientific disciplines, as well as related topics. The 14th ICFEI is included in the programme of the Stefan Banach International Mathematical Center of the Polish Academy of Sciences.

Information: <http://mat.up.krakow.pl/icfei/14ICFEI/>.

* 18–24 **8th International Conference on Function Spaces, Differential Operators, Nonlinear Analysis (FSDONA-2011)**, Tabarz/Thuringia, Germany.

Description: This meeting will continue the series of previous successful FSDONA-conferences held in Finland, Czech Republic, and Germany: Sodankylä-88, Friedrichroda-92, Paseky-95, Syöte-99, Teistungen-01, Milovy-04, Helsinki-08. It is our intention to stimulate international collaboration, and to promote the interaction of function spaces, PDE and computational mathematics in unifying efforts. This time the focus will lie on the theory of function spaces and its applications to various fields of mathematics like: PDE’s (existence of solutions and regularity theory), spectral theory of differential and integral operators, approximation and computational mathematics, nonlinear analysis, inverse problems.

Information: <http://fsdona2011.uni-jena.de/>.

* 19–26 **Conference on Geometric Structures in Mathematical Physics**, Albena, Bulgaria.

Description: The purpose of the conference is to bring together physicists and mathematicians working in related areas of geometry, geometric analysis and theoretical physics. The main focus will be

on special geometric structures and their applications in differential and algebraic geometry, theoretical physics and string theory.

Information: <http://www.fmi.uni-sofia.bg/ivanovsp/MathPhys2011.html>.

October 2011

* 4–6 **Sixth International Workshop—Meshfree Methods for Partial Differential Equations**, Universitätsclub Bonn, Bonn, Germany.

Description: While contributions in all aspects of meshfree and particle methods are invited, some of the key topics to be featured are: Application of meshfree, particle, generalized/extended finite element methods, e.g., to multiscale problems, problems with multiple discontinuities and singularities, problems in high-dimensions, coupling of meshfree methods, finite element methods, particle methods, and finite difference methods, parallel computation in meshfree methods, mathematical theory of meshfree, generalized finite element, and particle methods, fast and stable domain integration methods, enhanced treatment of boundary conditions, identification and characterization of problems where meshfree methods have clear advantage over classical approaches.

Sponsor: Sonderforschungsbereich 611, Universität Bonn.

Information: <http://wissrech.ins.uni-bonn.de/meshfree>.

* 11–14 **Mal’tsev Meeting**, Sobolev Institute of Mathematics, Novosibirsk, Russia.

Description: Mal’tsev Meeting is an annual conference on algebra, mathematical logic, and applications organized by Sobolev Institute of Mathematics and Novosibirsk State University. In 2011 the meeting is dedicated to the 60th birthday of Sergei Goncharov. The programme of the conference will consist of invited talks and contributions in sections.

Main topics: Include computability theory, theoretical computer science, mathematical logic, group theory, ring theory, universal algebra, and related areas of mathematics.

Information: <http://www.math.nsc.ru/conference/mal-meet/11/index.html>.

* 31–November 4 **AIM Workshop: Geometry of large networks**, American Institute of Mathematics, Palo Alto, California.

Description: This workshop, sponsored by AIM and the NSF, is devoted to geometric models of large networks. It intends to bring together mathematicians, computer scientists, and engineers.

Information: <http://aimath.org/ARCC/workshops/largenetworks.html>.

November 2011

* 15–17 **International Seminar on the Application of Science and Mathematics 2011**, University Tun Hussein Onn Malaysia, Kuala Lumpur Convention Centre, Kuala Lumpur, Malaysia.

Description: ISASM 2011 aims to provide an international forum for researchers to present and discuss recent advances and new techniques in Science and Mathematics and its Applications. To bring together researchers and scientists in promoting and enhancing research collaboration among local and international participants.

Information: <http://k-utech.com.my/isasm2011/>.

December 2011

* 17–18 **The International Symposium on Biomathematics and Ecology: Education and Research (BEER-2011)**, University of Portland, Portland, Oregon.

Description: The main objective of this meeting is to provide a forum for researchers, educators, students and industries to exchange ideas, to communicate and discuss research findings in the fields of mathematics, biology, ecology and statistics.

Topics: Biomathematics, Mathematics, Biology, Ecology, Biostatistics.
Organizers: Olcay Akman, Hannah Callender, Timothy Comar, Steven A. Juliano.

Information: <http://www.biomath.ilstu.edu/beer>.

January 2012

- * 9–July 6 **Semantics and Syntax: A Legacy of Alan Turing**, Isaac Newton Institute for Mathematical Sciences, Cambridge, United Kingdom.
Description: In several mathematical areas of Theoretical Computer Science, we perceive a distinction between research focusing on symbolic manipulation of language and structures (independent of meaning) and research dealing with interpreted computational meaning of structures. In mathematical logic, the distinction is known as syntax (symbolic manipulation) versus semantics (interpreted structures). This distinction recurs in many research areas, often under different (and sometimes incompatible) names. For research in these fields, both views are important and fundamental for gaining full understanding of the formal issues involved. This programme will bring together researchers from both sides of the syntax-semantics divide. We shall focus on four mathematical areas bordering computer science: logic, complexity, cryptography, and randomness.
Organizers: Dr. A. Beckmann, Professor S. B. Cooper, Professor B. Löwe, Professor E. Mayordomo, and Professor N. Smart.
Information: <http://www.newton.ac.uk/programmes/SAS/>.

- * 17–19 **ACM-SIAM Symposium on Discrete Algorithms (SODA12)**, The Westin Miyako, Kyoto, Japan.
Description: This symposium focuses on research topics related to efficient algorithms and data structures for discrete problems. In addition to the design of such methods and structures, the scope also includes their use, performance analysis, and the mathematical problems related to their development or limitations. Performance analyses may be analytical or experimental and may address worst-case or expected-case performance. Studies can be theoretical or based on data sets that have arisen in practice and may address methodological issues involved in performance analysis.
Information: <http://www.siam.org/meetings/da12/>.

February 2012

- * 13–17 **The 10th International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing (MCQMC 2012)**, The University of New South Wales, Sydney, NSW, Australia.
Description: MCQMC is a biennial conference devoted to Monte Carlo and quasi-Monte Carlo methods and their interactions and applications. (In brief, quasi-Monte Carlo methods replace the random choices that characterize the Monte Carlo method by well chosen deterministic choices.) For more information, click on the “Background” tab on the web site. This will be the first MCQMC conference to be held in the southern hemisphere. (Northerners may like to be reminded that February is summertime in Sydney!).
Plenary speakers: P. Del Moral, M. Giles, F. J. Hickernell, A. Hinrichs, M. Lacey, K. Mengersen, A. Neuenkirch, A. B. Owen, L. Plaskota, E. Platen. To receive further announcements please go the web site, click on the “mailing list” tab, and sign up. The web site includes a call for special sessions.
Information: <http://www.mcqmc2012.unsw.edu.au/>.

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.

July 2012

- * 16–December 21 **Topological Dynamics in the Physical and Biological Sciences**, Isaac Newton Institute for Mathematical Sciences, Cambridge, United Kingdom.
Description: The programme is intended to stimulate interaction between applied mathematicians, biologists and physicists who frequently encounter dynamical problems that have some explicit or implicit topological content. We use the term “topological” to convey the idea of structures, e.g., knots, links or braids in 3D, that exhibit

some measure of invariance under continuous deformation. Dynamical evolution is then subject to the topological constraints that express this invariance. A basic common problem is to determine minimum energy structures (and routes towards these structures) permitted by such constraints; and to explore mechanisms, e.g., diffusive, by which such constraints may be broken. Workshops: A number of workshops will take place during the programme. For full details please see: <http://www.newton.ac.uk/events.html>.

Organizers: Professor K. Bajer (Warsaw), Professor T. W. Kephart (Vanderbilt), Professor Y. Kimura (Nagoya), Professor H. K. Moffatt (Cambridge) and Professor A. Stasiak (Lausanne).
Information: <http://www.newton.ac.uk/programmes/TOD/>.

- * 23–August 17 **Spectral Theory of Relativistic Operators**, Isaac Newton Institute for Mathematical Sciences, Cambridge, United Kingdom.
Description: Relativistic operators are used to model important physical systems which include transport properties of graphene, and relativistic quantum field theory. This meeting will focus on the following areas of current research interest in such operators applied to mathematical physics. 1. For classical (one-particle) Dirac operators, current topics of interest include the Weyl-type theory, dissolution of eigenvalues of corresponding relativistic systems into resonances, asymptotics of the spectral function and spectral concentration as well as the role of the mass term of Dirac operators. 2. Stability of matter and asymptotic behaviour of the ground state energy for relativistic many-particle systems. 3. The interaction of photons with fast moving (relativising) electrons, positrons, and photons.
Organizers: Professor M. Brown (Cardiff), Professor M. J. Esteban (Ceremade), Dr. K. M. Schmidt (Cardiff) and Professor H. Siedentop (Munich).
Information: <http://www.newton.ac.uk/programmes/SRO/>.