
Mathematics Calendar

Please submit conference information for the Mathematics Calendar through the Mathematics Calendar submission form at <http://www.ams.org/cgi-bin/mathcal-submit.pl>. The most comprehensive and up-to-date Mathematics Calendar information is available on the AMS website at <http://www.ams.org/mathcal/>.

September 2012

1-3 **13th International Pure Mathematics Conference**, Quaid-i-Azam University, Islamabad, Pakistan. (Apr. 2012, p. 592)

Description: The 13th international conference in the series of Pure Mathematics Conferences that take place in Islamabad every year in August/September. It is a thematic conference on Algebra, Geometry, and Analysis held under the auspices of the Pakistan Mathematical Society (<http://www.pakms.org.pk>) and Algebra Forum (<http://www.algebraforum.org.pk>).

Support: There will be free housing for foreign participants. Some travel grants are available for foreign speakers. Several free recreational trips will be organized in and around Islamabad introducing the unique local and multi-ethnic culture.

Registration: Please fill in the on-line registration form at <http://www.pmc.org.pk> and find more information therein. The conference is convened by Professor Dr Qaiser Mushtaq (Department of Mathematics, Quaid-i-Azam University, Islamabad, Pakistan, president@pakms.org.pk).

Information: <http://www.pakms.org.pk>, www.pmc.org.pk.

* 3-5 **Summer School on Quantum Ergodicity and Harmonic Analysis (Part One)**, Philipps University Marburg, Germany.

Description: The school intends to give an introduction to quantum ergodicity. It will consist of three lecture series: Ingo Witt, Göttingen: Introduction to semiclassical analysis; Frédéric Faure, Grenoble: Ergodicity of quantum maps; Roman Schubert, Bristol:

Quantum ergodicity on negatively curved manifolds and single talks by participants.

Support: Financial support can be provided. The school will have a second part to be held in Goettingen in Fall 2012 that revolves around applications of quantum ergodicity to harmonic analysis.

Information: <http://www.mathematik.uni-marburg.de/~ramacher/QE>.

3-5 **Workshop on Combinatorics**, University of Lisbon, Lisbon, Portugal.

Description: The "Workshop on Combinatorics" will be held at IIIUL, http://www.ciul.ul.pt/index_en.htm, in Lisbon, Portugal, from September 3 to 5, 2012. This meeting consists of two mini-courses, supplemented by contributed talks and posters and it is mostly addressed to graduate students and researchers interested in exploring and extending their knowledge on topics related to Matroid Theory and Triangulations of Polytopes.

Invited Speakers: Henry Crapo: Topics on Matroid Theory, Francisco Santos: Triangulations of Polytopes.

Registration fees: Registration until June 30, 2012: 50 euro (students: 40 euro). Registration after June 30, 2012: 70 euro (students: 60 euro).

Deadline: For submission of contributed talks: July 15, 2012.

Information: If you have any further questions, please contact us at <http://worklis2012.fc.ul.pt>.

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/>.

3-6 **Symmetries in Differential Geometry and Mathematical Physics**, University of Luxembourg, Luxembourg City, Luxembourg.

Description: The purpose of the conference is to bring together mathematicians and mathematical physicists working in related areas of Differential Geometry and Mathematical Physics. It is intended to present new results about the geometry of symmetric and homogeneous spaces, theory of Lie algebras and superalgebras, Lorentzian and pseudo-Riemannian geometry, spin geometry, mathematical aspects of supersymmetry. The conference is in honor of Dmitri Alekseevsky.

Information: <http://math.uni.lu/symm2012/index.html>.

3-7 **Geometry, Structure and Randomness in Combinatorics**, Centro di Ricerca Matematica Ennio De Giorgi, Scuola Normale Superiore, Collegio Puteano, Piazza dei Cavalieri, 3, I-56100 Pisa, Italy.

Description: This workshop is organized by the Centro di Ricerca Matematica Ennio De Giorgi of the Scuola Normale Superiore, jointly with the Center for Discrete Mathematics, Theoretical Computer Science and Applications (DIMATIA) of Charles University and with the National Research Council of Italy (CNR). It aims to reflect some key recent advances in combinatorics, and to demonstrate the broad spectrum of techniques and its relationship to other fields of mathematics, particularly to geometry, logic and number theory.

Invited speakers: Imre Barany, Bela Bollobas, Maria Chudnovsky, Zeev Dvir, Zoltan Furedi, Patrice Ossona de Mendez, Alex Scott, Micha Sharir, Jozsef Solymosi, Endre Szemerédi, Luca Trevisan.

Support: For young researchers/students available at <http://crm.sns.it/event/241/financial.html>.

Deadline for applications: July 15, 2012. Registration (no fees) is required at <http://crm.sns.it/event/241/>. Partially supported by INdAM, DIMATIA and CNR Inst. for Informatics & Telematics.

Organizing Committee: Jaroslav Nesetril (Charles University, Prague), Marco Pellegrini (CNR, Pisa), Jiri Matousek (Charles University, Prague).

Information: email: crm@crm.sns.it; fax: 050/509177; <http://crm.sns.it/event/241/>.

3-7 **Dynamical Systems: 100 years after Poincaré**, University of Oviedo, Gijn, Spain. (May 2012, p. 716)

Description: The conference is organized by the Dynamical Systems Group at the University of Oviedo. The aim is to bring together a broad group of scientists working in the field of dynamical systems on the occasion of the 100th anniversary of the death of Henri Poincaré. All topics related to dynamical systems are considered but focusing on local and global bifurcations in discrete and continuous dynamical systems, planar vector fields and celestial mechanics. Applications to real-world problems will be highlighted. The conference will promote the diffusion of recent developments and future perspectives. There will be ten keynote speakers, sixty-four 30-minute contributed talks in two parallel sessions and also two poster sessions. Plenary speakers are experts chosen from different areas of Dynamical Systems.

Information: <http://www.unioviedo.es/ds100Poincare/>.

3-7 **International Conference on Differential-Difference Equations and Special Functions**, University of Patras, Patras, Greece. (Aug. 2011, p. 1014)

Description: The conference is dedicated to the memory of Professor Panayiotis D. Sifarakas, who left so early in 2010 and its main aim is to bring together experts working in all areas (including numerical investigations and applications) of differential equations, difference equations and special functions and to promote the research in these areas.

Information: <http://www.icddesf.upatras.gr>.

3-7 **1st International Conference on Mathematical Sciences and Applications (IECMSA)**, Prishtine University, Prishtine, Kosovo. (Mar. 2012, p. 455)

Description: The goal of the conference is to contribute to the development of mathematical sciences and its applications and to bring the mathematics community, interdisciplinary researchers, educators, mathematicians, statisticians and engineers from all over the world. The conference will present new results and future challenges, in series invited and short talks, poster presentations. The presentations can be done in the language of Albanian, Turkish and English. Also, original, unpublished papers are invited for presentation in the conference IECMSA. All presented paper's abstracts will be published in the conference proceeding. Moreover, selected and peer review articles will be published in the following journals: *Applied and Computational Mathematics* (SCI), *TWMS Journal of Pure and Applied Mathematics*, *TWMS Journal of Applied and Engineering Mathematics*, *International Electronic Journal of Geometry, Mathematical Sciences and Applications*, *e-Notes*. Looking forward to see you in IECMSA.

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

3-7 **Third Iberoamerican Meeting on Geometry, Mechanics and Control**, University of Salamanca, Salamanca, Spain.

Description: The Iberoamerican Meetings on Geometry, Mechanics and Control are held every two years and are intended for young and senior researchers with interest in differential geometry, mechanics and control theory. These subject matters are highly topical, interacting in a common area of Mathematics, Physics, Mechanics, and Engineering.

Plenary speakers: Henrique Bursztyn (IMPA, Brazil), Marco Castrillón (UCM and ICMAT, Spain), Gonzalo Contreras (CIMAT, Mexico), Rui L. Fernandes (IST, Portugal), Mark J. Gotay (PIMS, Canada), Janusz Grabowski (IMPAN, Poland), Darryl Holm (Imperial College, United Kingdom), Sonia Martínez (UCSD, USA)-to be confirmed, Juan-Pablo Ortega (CNRS, France), Edith Padrón (ULL, Spain), Narcisco Roman-Roy (UPC, Spain) and Carlos Tomei (PUC-Rio, Brazil). There are also 15 invited talks and a poster session.

Information: <http://fundacion.usal.es/3imgmc>.

3-8 **XVII Geometrical Seminar**, Zlatibor, Serbia Hotel "Ratko Mitrović" (Apr. 2012, p. 592)

Conference Topics: Differential geometry, topology, lie groups, mathematical physics, discrete geometry, integrable systems, visualization, as well as other subjects related to the main themes are welcome.

Organizers: Faculty of Mathematics, University of Belgrade, Belgrade, Serbia; Mathematical Institute of the Serbian Academy of Sciences and Arts Belgrade, Serbia.

Co-organizer: Bogolubov Laboratory of Geometrical Methods Mathematical Physics, Moscow.

Deadlines: Registrations: June 1, 2012. Abstracts: July 1, 2012.

Hotel reservation: By June 1, 2012. Contact person: Miroslava Antic; email: geometricalseminar@matf.bg.ac.rs.

Information: <http://poincare.matf.bg.ac.rs/~geometricalseminar/>.

4-9 **MADEA 2012 International Conference on Mathematical Analysis, Differential Equations and Their Applications**, Mersin University, Mersin, Turkey. (Apr. 2012, p. 592)

Description: This is the sixth Turkish-Ukrainian Mathematical conference which will be held in Mersin-Turkey. The first conference was held August 26-30, 2003, in National Juriy Fedkovich University of Chernivtsi (Chernivtsi, Ukraine), The second was held September 7-11, 2004, in Mersin University (Mersin, Turkey). The third was held September 18-23, 2006, in Uzhgorod National University (Uzhgorod, Ukraine). The fourth was held September 12-15, 2008, at Eastern Mediterranean University (Famagusta, North Cyprus). The fifth was held September 15-20, 2010, at Sunny Beach, Bulgaria. The conference format includes the plenary lectures and the section sessions. **Languages:** English, Russian and Turkish.

Information: email: mkucukaslan@mersin.edu.tr or mk-kaslan@gmail.com; <http://madea2012.mersin.edu.tr/>.

5-7 **Complex patterns in wave functions: Drums, graphs, and disorder**, Kavli Royal Society International Centre, Chicheley Hall, Chicheley, Newport Pagnell, Buckinghamshire MK16 9JJ, UK. (May 2012, p. 716)

Description: Wave functions display complex patterns which are intensively studied in many branches of Mathematics and Physics. Their value distributions, nodal sets, extreme values, and localization properties – to cite a few examples – are investigated using diverse methods developed within a network of fields whose connectivity leaves a lot to be desired. This conference gives a unique opportunity to discuss these common questions, and present different points of view and methods, yet in a single high-level forum. A set of world-leading researchers has been invited to lecture on their recent contributions to the field. The participants will have the opportunity to present contributions in a poster session and discuss future directions across discipline borders.

Information: <http://royalsociety.org/events/Complex-patterns-in-wave-functions/>

5-7 **ICERM Semester Program: Computational Challenges in Probability**, ICERM, Providence, Rhode Island. (Jan. 2012, p. 106)

Description: Modern explorations in science, technology and medicine increasingly demand complex stochastic models. Computational and theoretical advances are needed in order to formulate, analyze, apply, and interpret these models. Recent years have witnessed a remarkable interplay between computation and probability. On the one hand, probabilistic techniques have led to powerful computational methods such as Markov chain Monte Carlo algorithms, while on the other hand, the calculation of probabilistic quantities such as modes and marginals of high-dimensional distributions and the analysis of data from random samples has posed several computational challenges. The fall 2012 semester on “Computational Challenges in Probability” aims to bring together leading experts and young researchers who are advancing the use of probabilistic and computational methods to study complex models in a variety of fields. The goal is to identify common challenges, exchange existing tools, reveal new application areas.

Information: <http://icerm.brown.edu/sp-f12>.

5-9 **Lie Algebras and Applications**, Uppsala University, Uppsala, Sweden. (Mar. 2012, p. 455)

Invited speakers: Peter Fiebig (Universität Erlangen-Nürnberg), Maria Gorelik (Weizmann Institute), Jonas Hartwig (Stanford University), Daniel Nakano (University of Georgia), Maxim Nazarov (University of York), Ivan Penkov (Jacobs University Bremen), Alistair Savage (University of Ottawa), Vera Serganova (University of California at Berkeley), Eric Vasserot (Université Paris VII), Weiqiang Wang (University of Virginia), Geordie Williamson (MPIM Bonn), Kaiming Zhao (Wilfrid Laurier University).

Organizer: Volodymyr Mazorchuk.

Registration: Deadline: June 15, 2012.

Information: email: lie2012@math.uu.se. <http://www.math.uu.se/Lie2012/>.

7-12 **Workshop on Stochastic and PDE Methods in Financial Mathematics**, Yerevan State University, Yerevan, Armenia. (May 2012, p. 716)

Description: Institute of Mathematics of the National Academy of Sciences in association with Yerevan State University and American University of Armenia is organizing an international workshop in Stochastic and PDE Methods in Financial Mathematics, September 7-12, 2012.

Objective: The objective of this workshop is to bring together experts in the area of partial differential equations and stochastic analysis, working within financial mathematics to encourage and give an opportunity to young mathematicians in the region, to initi-

ate contacts with experts in this area, and to stimulate contacts between theoretical and applied science and financial companies of the region having interests in development of mathematical modelling and research. The program of the workshop will consist of invited 50-minute plenary lectures and contributed 20-minute talks, poster sessions as well as short presentations.

Information: <http://math.sci.am/conference/sept2012/index.html>.

9-12 **2012 Federated Conference on Computer Science and Information Systems (FedCSIS)**, Wroclaw, Poland.

Description: We would like to cordially invite you to consider contributing a paper to the FedCSIS 2012.

Information: For all matters relating to this conference please visit: <http://www.fedcsis.org>.

9-14 **26th Large Installation System Administration Conference (LISA '12)**, Sheraton San Diego Hotel and Marina, 1380 Harbor Island Drive, San Diego, California.

Description: Join us for the most in-depth, practical system administration training available. The annual LISA conference is the meeting place of choice for system and network administrators and engineers; it is the crossroads of Web operations, DevOps, enterprise computing, educational computing, and research computing. The conference serves as a venue for a lively, diverse, and rich mix of technologists of all specialties and levels of expertise. LISA is the place to teach and learn new skills, debate current issues, and meet industry gurus, colleagues, and friends. The 6-day event offers training by industry leaders; invited talks; the latest research through refereed papers, practice and experience reports, posters, and workshops; answers to your toughest questions; and that all-important face-to-face time with experts in the community.

Information: <http://static.usenix.org/events/lisa12/index.html>.

9-16 **Fourth Russian-Armenian workshop on mathematical physics, complex analysis and related topics**, Institute of Mathematics, Siberian Federal University, Krasnoyarsk, Russian Federation.

Description: We plan to publish the abstracts of the accepted talks. The abstract should be prepared (in Russian or English) in LaTeX according to the template and using the conference LaTeX class file `rus-am.cls`. Both can be downloaded here. The abstracts (both tex and pdf files) should be sent by e-mail, using the address above.

Information: <http://conf.sfu-kras.ru/conf/math2012/info>.

10-12 **3rd IMA Conference on Numerical Linear Algebra and Optimisation**, University of Birmingham, United Kingdom. (Feb. 2012, p. 340)

Scope: The success of modern codes for large-scale optimisation is heavily dependent on the use of effective tools of numerical linear algebra. On the other hand, many problems in numerical linear algebra lead to linear, nonlinear or semidefinite optimisation problems. The purpose of the conference is to bring together researchers from both communities and to find and communicate points and topics of common interest.

Topics: Include any subject that could be of interest to both communities, such as: Direct and iterative methods for large sparse linear systems, eigenvalue computation and optimisation, large-scale nonlinear and semidefinite programming, effect of round-off errors, stopping criteria, embedded iterative procedures, optimisation issues for matrix polynomials, fast matrix computations, compressed/sparse sensing, PDE-constrained optimisation, applications and real time optimisation.

Information: http://www.ima.org.uk/conferences/conferences_calendar/numerical_linear_algebra_and_optimisation.cfm.

10-13 **3rd International Conference of the Moroccan Society of Applied Mathematics (SM2A)**, Cadi Ayyad University, Marrakesh, Morocco.

Description: The Moroccan Society of Applied Mathematics (SM2A) organizes its Third International Conference in Marrakech from 10 to 13 September 2012. This conference follows the first two sessions held in Rabat in 2008 and 2010 respectively and having been attended by over 250 researchers from, Europe, the United States, Africa and Morocco. This third conference aims to consolidate all the developed efforts, enabling Moroccan mathematicians to review research in the field of applied mathematics, explore opportunities for cooperation and exchanges with their mates in the region and worldwide and enable young researchers in the region of North Africa to get in or regain contact with researchers of international renown.

Information: <http://sm2a-2012.ucam.ac.ma/en/index.html>.

10-14 **6th International Conference on Stochastic Analysis and its Applications**, The Mathematical Research and Conference Center of the Institute of Mathematics of the Polish Academy of Sciences, Bedlewo, Poland. (May 2012, p. 716)

Description: The conference will be the 6th in a series of international conferences on Stochastic Analysis and Its Applications. The previous ones were held at Seattle (2006), Seoul (2008), Beijing (2009), Osaka (2010) and Bonn (2011). The main topics of the conference are 1. Dirichlet forms and stochastic analysis; 2. Jump processes; 3. Stochastic partial differential equations; 4. Stochastic analysis and geometry; 5. Optimal transport and allocation problems; 6. Potential theory; 7. Random media, percolation clusters and fractals; 8. Stochastic models in physics and biology

Information: <http://bcc.impan.pl/6ICSA/>.

* 10-14 **Indo-Spanish Conference on Geometry and Analysis**, ICMAT, Madrid, Spain.

Description: This conference is dedicated to M. S. Narasimhan for his 80th birthday.

Speakers: V. Balaji (CMI, Chennai), D. Faraco (ICMAT & UAM, Madrid), M. Garcia-Fernandez (QGM, Aarhus), L. Goettsche (ICTP, Trieste), T. Gomez (ICMAT, Madrid), G. Harder (MPI, Bonn), N. Hitchin (Oxford), Y. Holla (TIFR, Mumbai), J. N. Iyer (IMSc, Chennai), V. Mehta (TIFR, Mumbai), I. Mundet i Riera (UB, Barcelona), E. K. Narayanan (IISc, Bangalore), P. Newstead (Liverpool), N. Nitsure (TIFR, Mumbai), J. Parcet (ICMAT, Madrid), C. Pauly (ICMAT Madrid & Nice), M. S. Raghunathan (TIFR, Mumbai), S. Ramanan (CMI, Chennai), K. Rogers (ICMAT, Madrid), R. Rubio (Oxford), R. Sarkar (ISI, Kolkata), J. Sengupta (TIFR, Mumbai), S. Thangavelu (IISc, Bangalore), X. Tolsa (ICREA, UAB, Barcelona), V. Trivedi (TIFR, Mumbai).

Information: <http://www.icmat.es/congresos/isc2012/>; <http://www.icmat.es/facilities/howtoarrive>.

10-15 **International Conference on Nonlinear PDE & Free Surface and Interface Problems Workshop**, Oxford, United Kingdom.

Description: The main objective of the conference is to bring together scientists with interests in the analysis of nonlinear partial differential equations (PDE) and their applications to present recent developments and explore new connections between nonlinear PDE and other areas in mathematics and related fields in the sciences. Held at the Maths Institute, Oxford, there will be 12 lectures and 8 mini-symposium sessions over 4 days (Monday to Thursday). The workshop will be held at St. Anne's College, Oxford, and consist of three sessions, each three hours in duration (Friday and Saturday).

Theme: The theoretical and numerical aspects of nonlinear hyperbolic and dispersive free boundary and interface problems.

Speakers: Luigi Ambrosio, Constantine Dafermos, Isabelle Gallagher, Martin Hairer, Fanghua Lin, Pierre-Louis Lions, Felix Otto, Frank Pacard, Richard Schoen, Gigliola Staffilani, Andrew Majda, Eitan Tadmor.

Information: <http://www.maths.ox.ac.uk/groups/oxpde/events>.

10-December 14 **Materials Defects: Mathematics, Computation and Engineering**, Institute for Pure and Applied Mathematics (IPAM), UCLA, Los Angeles, California. (Oct. 2011, p. 1325)

Description: Material defects present a huge challenge for mathematical modeling and simulation, as anything that breaks up the regular, homogenous structure of a calculation requires special consideration. In recent years, there has been particular focus on the multiscale nature of materials research—how computational methods and mathematical models for describing materials vary from the atomistic to the continuum scale. This program aims to promote collaboration among scientists to assess the current status of defect modeling, promote the development of new computational techniques, and stimulate new applications. An application is available online. 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/md2012/>.

11-14 **Workshop on Operator Theory and Operator Algebras 2012-WOAT 2012**, Instituto Superior Técnico, Universidade Técnica de Lisboa, Portugal. (May 2012, p. 717)

Description: The main scientific goal of WOAT 2012 is to present developments in operator theory, operator algebras and their applications, and to promote research exchanges in the operator theory and operator algebras areas. This workshop is dedicated to Professor António Ferreira dos Santos.

Information: <http://www.math.ist.utl.pt/~woat2012>.

12-14 **Algebra Geometry and Mathematical Physics – 8th workshop – Brno 2012**, Faculty of Mechanical Engineering, Brno University of Technology, Czech Republic. (Mar. 2012, p. 455)

Description: AGMP is the traditional scientific meeting on contemporary topics in Algebra, Geometry and Mathematical Physics, with an emphasis on the interface between them. The aim of the conference is to bring together researchers in these disciplines. The meeting is organized in Brno, the city in the geographical center of Europe. All participants are encouraged to present a contributed talk. The proceedings of the conference is planned to be published as a special number of an established journal.

Information: <http://agmp.eu/brno12/general.php>.

* 12-14 **Conference on Geometric Measure Theory**, University Paris Diderot (Paris 7), Paris, France.

Description: This conference in geometric measure theory will focus on the latest fundamental developments in the field as well as recent applications to and interactions with differential geometry, probability theory, real analysis and partial differential equations. It will be held on the new campus Paris Rive Gauche of University Paris Diderot (Paris 7).

List of Speakers: Raphael Cerf, Camillo De Lellis, Nicola Fusco, Jan Maly, Andre Neves, Herve Pajot, David Preiss, Severine Rigot, Tristan Riviere, Antonio Ros, Neshan Wickramasekera.

Organizers: Thierry De Pauw, Antoine Lemenant, Vincent Millot.

Information: <http://www.ljll.math.upmc.fr/~lemenant/GMT/index.html>.

17-19 **IMA Conference on Mathematics of Medical Devices and Surgical Procedures**, University of London, United Kingdom. (Apr. 2012, p. 592)

Description: The conference programme will include keynote speakers drawn from both clinical and mathematical communities, along with contributed presentations and poster sessions. The programme will also include breakout sessions in certain topics as well as refreshment breaks for informal discussions. Social events include a drinks reception and a conference dinner.

Topics: The topics that will be discussed will broadly include cardiovascular devices, medical imaging, ophthalmology, cell biology, disease transmission, orthopaedic, advanced simulations, as well as health in ageing.

Information: http://www.ima.org.uk/conferences/conferences_calendar/maths_of_medical_devices_&_surgical_procedures.cfm.

17-21 **ICERM Workshop: Bayesian Nonparametrics**, ICERM, Providence, Rhode Island. (Jan. 2012, p. 106)

Description: Data-rich investigations need advanced tools for allowing data to inform and interact with models. Bayesian Nonparametrics is a rapidly growing subfield of statistics and machine learning that provides a framework for creating complex statistical models that are both expressive and tractable. Recent successful applications of nonparametric Bayesian models across a variety of domains suggests that these models have the potential for wide use. The challenge of constructing and using models on very high-dimensional or even infinite-dimensional spaces creates many opportunities for fruitful interactions between mathematicians, statisticians, and computer scientists. Areas of interest include prior construction, posterior inference, posterior asymptotics, algorithmic development, and practical applications.

Information: <http://icerm.brown.edu/sp-f12-w1>.

17-21 **Summer School on New Trends in Harmonic Analysis, Fractional Operator Theory, and Image Analysis**, Inzell, Germany. (Apr. 2012, p. 592)

Description: Recently, focus has been placed on the detection and classification of singularities in images possessing fractional or fractal characteristics. Therefore, investigations center on fractional operator-like bases acting as multiscale versions of derivatives. This new methodology needs to firmly embed into the existing classical concepts of harmonic analysis, and the relations to image analysis have to be established and unified. To achieve the greatest possible synergy between the areas of harmonic analysis, fractional operator theory and image analysis, we have invited seven highly renowned researchers from these fields. The goal of the summer school is to bring together young researchers and a distinguished group of scientists whose lectures are intended to establish new and exciting directions for future investigations.

Information: <http://www-m6.ma.tum.de/Lehrstuhl/Inzell2012>.

18-21 **Dynamical systems on random graphs**, Cantabria, Spain.

Description: This conference aims to bring together mathematical physicists, experts in dynamical systems and neuroscientists, all with research interests in graph theory, networks, complex systems, continuous dynamical systems on random graphs and heterogeneous media, and their applications. The conference will comprise 4 sessions, each devoted to a different topic: random graphs and spectral theory, point models (e.g., neural networks or coupled ODEs), spatial models (e.g., quantum graphs or detailed neuron models) and complex networks. We plan to allow a significant amount of time for interdisciplinary discussion.

Speakers: Gustavo Deco (Universitat Pompeu Fabra, Barcelona, Spain), Krešimir Josić (University of Houston, USA), Bojan Mohar (Simon Fraser University, Canada), Uzy Smilansky (Weizmann Institute, Israel, and Cardiff University, UK).

Information: <http://www.uni-ulm.de/dsrg2012>.

19-21 **School on Singular Analysis**, University of Hanover, Germany.

Description: The school is aimed at doctoral students and offers introductory and advanced courses on the analysis of singular spaces. What the courses have in common is the use of pseudodifferential techniques to approach problems ranging from spectral theory to global analysis and nonlinear PDEs. Partial support for doctoral students is available.

Information: <http://www.math-conf.uni-hannover.de/ana12/>.

19-25 **ICNAAM2012: 3rd Symposium on Semigroups of Linear Operators and Applications**, Kypriotis Hotels and Conference Center, Kos, Greece. (Mar. 2012, p. 455)

Description: The 3rd Symposium on Semigroups of Linear Operators and Applications brings together researchers from all over the world to present new results in the theory of semigroups of linear operators and its applications. Besides scheduling talks from established mathematicians, we will give opportunity to junior researchers to present their works.

Information: http://www.fih.upt.ro/personal/dan.lemle/conferinta/Lemle_Simpozion_2012.pdf.

20-22 **Lie and Klein; the Erlangen program and its impact on mathematics and physics**, Institut de Recherche Mathématique Avancé, University of Strasbourg, France. (Nov. 2011, p. 1495)

Description: The theme is "Lie and Klein; the Erlangen program and its impact on mathematics and physics".

Organizers: Lizhen Ji and Athanase Papadopoulos.

The invited speakers are: Norbert A. Campo (Basel), Gérard Besson (Grenoble), Pierre Cartier (IHES), Hubert Goenner (Göttingen), Misha Gromov (IHES), to be confirmed, Frances Kirwan (Oxford), to be confirmed, Vladimir Matveev (Jena), Catherine Meusburger (Erlangen), Pierre Py (Strasbourg), Jean-Marc Schlenker (Toulouse), Alexei Sossinsky (Moscow), Anna Wienhard (Princeton).

Language: English. Graduate students and young mathematicians are welcome.

Reservations: Hotel booking can be asked for through the registration link. Contact: email: lji@umich.edu and athanase.papadopoulos@math.unistra.fr.

Information: <http://www-irma.u-strasbg.fr/article1173.html>.

20-October 20 **ERC research period on Diophantine geometry**, Centro di Ricerca Matematica "Ennio De Giorgi", Scuola Normale Superiore, Piazza dei Cavalieri 3, 56100 Pisa, Italy. (May 2012, p. 717)

Description: This event is part of the European Research Council programme. Beyond the natural scientific exchange among participants, the activities should consist of seminars. The event should focus on integral points, algebraic dynamics, unlikely intersections.

Scientific committee: Enrico Bombieri (Institute for Advanced Study), David Masser (University of Basel), Lucien Szpiro (Graduate Center, CUNY), Gisbert Wüstholz (ETH, Zürich) and Shou-Wu Zhang (Columbia University and Princeton University).

Local committee: Pietro Corvaja (University of Udine), Roberto Dvornicich (University of Pisa), Umberto Zannier (Scuola Normale Superiore, ERC coordinator).

Attendance/Registration/Financial Support: Is free, but registration is required. To register please link to <http://www.crm.sns.it/event/242/registration.html>. Financial support is available for invited participants only.

Information: <http://www.crm.sns.it>; crm@sns.it; <http://www.crm.sns.it/event/242/>.

22-23 **AMS Eastern Section Meeting**, Rochester Institute of Technology, Rochester, New York. (Sept. 2011, p. 1187)

Information: <http://www.ams.org/meetings/sectional/sectional.html>.

24-27 **Eighth National Congress on Finite Element Method**, School of Mathematical Sciences, Nankai University, 94 Weijin Road, Nankai District, Tianjin 300071, China. (May 2012, p. 717)

Description: The Eighth National Congress on Finite Element Method will be held in Nankai University in Tianjin on September 24-27, 2012. This congress aims at providing a forum for computational mathematicians, scientists and engineers to meet and exchange ideas, research results and state-of-the-art themes and topics in

various scientific and engineering disciplines related to finite element methods.

Information: http://www.math.nankai.edu.cn/conference/fem8/8thfem_Eg/Home.

24–27 **56th Annual Meeting of the Australian Mathematical Society**, University of Ballarat, Mt. Helen Campus, Victoria, Australia. (Apr. 2012, p. 592)

Plenary Speakers: Henning Haahr Andersen (Aarhus University), Michel Brion (Université Joseph Fourier, Grenoble), Sidney A. Morris (University of Ballarat), Mary Myerscough (University of Sydney), Assaf Naor (Courant Institute of Mathematical Sciences, New York University), Narutaka Ozawa (Research Institute for Mathematical Sciences, Kyoto University), Aidan Sims (University of Wollongong), Kate Smith-Miles (Monash University), Fedor Sukochev (University of New South Wales), Benar F. Svaiter (Institute of Pure and Applied Mathematics, Rio de Janeiro), Neil Trudinger (Australian National University).

Information: <http://www.ballarat.edu.au/austms2012>.

24–28 **Mathematics and Physics of Moduli Spaces**, Heidelberg University, Germany. (May 2012, p. 717)

Description: The main thematic focus is higher Teichmüller spaces and the various contexts in which they arise in theoretical physics. The goal of this activity is to make recent developments accessible to both mathematicians and physicists. The program will consist of lecture series given by Vladimir Fock, Edward Frenkel, Sergei Gukov, Francois Labourie, Greg Moore (tbc) and Joerg Teschner and a few additional talks. There will be plenty of time for informal discussions. Young researchers can apply for financial support to attend the workshop at the webpage.

Information: <http://www.math.uni-heidelberg.de/MPMS/>.

26–29 **Tensors and Their Geometry in High Dimensions**, University of California, Berkeley, Berkeley, California.

Description: Berkeley RTG on Representation Theory, Geometry, and Combinatorics will host a workshop on “Tensors and Their Geometry in High Dimensions”, featuring Andrew Snowden, Jan Draisma, and Giorgio Ottaviani giving mini-courses. There will also be opportunities for some of the other participants to give related talks.

Information: For details visit: <http://math.berkeley.edu/~oeding/RTG/index.html>. There are no registration fees; however participants are kindly asked to register online. There may be some funding for young researchers.

October 2012

1–5 **New trends in Dynamical Systems**, Salou, Catalonia, Spain. (Feb. 2012, p. 340)

Goal: To show the recent developments in Dynamical Systems. Precisely, we will focus on Qualitative theory of differential equations, discrete dynamical systems (real and complex) and applications to Celestial mechanics.

Sessions: The conference will have about 30 plenary sessions (no parallel sessions) and a poster session. We plan about 150 participants.

Information: <http://www.gsd.uab.cat/ntds2012/index.php>.

1–April 30 **Semester on Curves, Codes, Cryptography**, Sabanci University, Istanbul, Turkey. (Feb. 2012, p. 340)

Description: A series of events (workshops, conferences, visits, talks) are organized at Sabanci University with the purpose of providing a platform to present state-of-the-art results as well as to discuss open problems on various topics including: Algebraic curves over finite fields (towers of function fields, modular towers, maximal curves), coding theory (list decoding, polar codes, algebraic coding), sequences over finite fields, pseudorandom sequences (measures of randomness, generation of pseudorandom numbers, complexity), functions over finite fields (polynomials, permutations, polynomial

systems, rational functions), exponential sums, cryptographically significant functions.

Supporter: This semester is supported by Sabanci University and TUBITAK.

Information: <http://sccc.sabanciuniv.edu>.

2–4 **SIAM Conference on Mathematics for Industry: Challenges and Frontiers (MI12)**, The Curtis, A Doubletree by Hilton, Denver, Colorado. (Aug. 2011, p. 1014)

Description: The SIAM conferences on Mathematics for Industry focus attention on the many and varied opportunities to promote applications of mathematics to industrial problems. From the start of planning for these conferences, the major objective has been the development and encouragement of industrial, government and academic collaboration. The format of this conference provides a forum for industrial and government engineers and scientists to communicate their needs, objectives and visions, to the broad mathematical community.

Information: <http://www.siam.org/meetings/mi12/>.

* 3–4 **National Seminar on Current Research and Developments in Mathematics and Computing (CRDMC-2012)**, Aliah University, Kolkata, India.

Description: The main objective of the seminar is to promote mathematical research and to focus on the recent developments in different areas of mathematics and its computational aspects. The conference will provide ideal platform for the young researchers throughout the country to interact with senior scientists, to exchange their views and ideas, also to make possible scientific collaboration with them. Another objective of the seminar is to highlight the works of S. Ramanujan in the context of present day research and developments in mathematics, especially in the field of number theory. The programme will consist of invited lectures by eminent mathematicians and scientists, contributed papers in various technical sessions.

Deadlines: Last date of receipt of abstract: July 31, 2012. Communication to selected candidates: August 15, 2012. Last date of receipt of full paper: August 20, 2012. A peer reviewed proceedings of the seminar will be published by a reputed publisher.

Information: http://www.aliah.ac.in/Math_Brochure.pdf.

3–6 **International Conference on Applied and Computational Mathematics (ICACM)**, Middle East Technical University (METU), Ankara, Turkey. (Oct. 2011, p. 1325)

Description: ICACM marks the 10th anniversary of the IAM at METU and aims to highlight the recent advances in applied and computational mathematics as well as to demonstrate their applicability in science, engineering and industry. In addition to the traditional and strong focus on applied and computational mathematics, the special emphasis will be given to information security and cryptology, financial mathematics, actuarial sciences, scientific computing and their applications. Furthermore, the proceedings of the conference will be published by the Journal of Computational and Applied Mathematics (JCAM) as a special issue.

Keynote talks: Will be given by Dr. Peter Deuffhard and Dr. Avner Friedman. The conference will welcome also the invited speakers, Dr. Marc Goovaerts, Dr. Gary McGuire, Dr. Florian Hess, Dr. Monique Jeanblanc, Dr. Jurgen Jost, Dr. Ralf Korn, Dr. Karl Kunisch, Dr. Bernt Oksendal, Dr. Krzysztof M. Ostaszewski, Dr. Monique Pontier, Dr. Bart Preneel, Dr. Halil Mete Soner, Dr. M. Grazia Speranza.

Information: <http://www.iam.metu.edu.tr/icacm/>.

5–7 **Yamabe Memorial Symposium (50th anniversary)**, University of Minnesota, Minneapolis, Minnesota.

Theme: “Geometry and Analysis”.

Speakers: The 8 confirmed speakers are: Huai-Dong Cao, Jean-Pierre Demailly, Benson Farb, Robert Hardt, Misha Kapovich, Conan Leung, Natasa Sesum, and Ben Weinkove.

Financial support: Has been provided by NSF to defray expenses for a number of participants. Highest preference will be given to younger scientists (grad students, postdocs, young faculty), but some funds will be reserved for more senior mathematicians. Applications from women and underrepresented minorities are especially encouraged. For more details and an application form, please consult our website.
Information: <http://www.math.umn.edu/yamabe/2012/>.

6–8 **The Legacy of Daniel Quillen: K-theory and Homotopical Algebra**, Massachusetts Institute of Technology, Cambridge, Massachusetts.

Description: This conference celebrates the many fundamental contributions of Daniel Quillen.

Speakers: Luchezar Avramov, Joachim Cuntz, Eric Friedlander, Tom Goodwillie, Lars Hesselholt, Michael Hopkins, Jean-Louis Loday, Christophe Soule, Dennis Sullivan, Douglas Ravenel, Ulrike Tillmann, Mathai Varghese.

Information: <http://math.mit.edu/quillen/>.

8–12 **ICERM Workshop: Uncertainty Quantification**, ICERM, Providence, Rhode Island. (Jan. 2012, p. 106)

Description: Rapid growth in computational resources has heightened the expectation that scientific knowledge can indeed be a driver for societal well-being and betterment. At the same time, our ability to measure the natural and social world around has significantly increased, aided by technological development in sensors, the Internet, and other modalities of communication. Science is thus faced, simultaneously, with a complex description of reality at an unprecedented resolution, and the possibility to describe this reality with mathematical models of increasing complexity. Probabilistic formulations of physical problems can be viewed as attempts to adapt rational procedures to this complexity, while tackling the conceptual challenges they inevitably present. As a testament to the significance of this confluence of mathematics, science, and technology, Uncertainty Quantification is arguably one of the fastest growing sub-disciplines in mechanics.

Information: <http://icerm.brown.edu/sp-f12-w2>.

8–12 **Workshop on geometry and statistics in bioimaging: Manifolds and stratified spaces**, Sandbjerg Estate, Sonderborg, Denmark.

Description: This workshop is dedicated to geometric and statistical modeling in biomedical image analysis. The workshop is a result of our desire to bring together researchers from biomedical image analysis, who have an interest in the underlying mathematical constructions, along with mathematicians who have an interest in the underlying practical problems.

Invited Speakers: Alfred Bruckstein, Technion, Israel Institute of Technology; James Damon, University of North Carolina, Chapel Hill; Herbet Edelsbrunner, Duke University and Institute of Science and Technology, Austria; Stephan Huckemann, Universität Göttingen; Sarang Joshi, University of Utah; Steve Marron, University of North Carolina; Peter W. Michor, Universität Wien; Ezra Miller, Duke University; David Mumford, Brown University; Megan Owen, University of Waterloo; Xavier Pennec, INRIA Sophia Antipolis; Steven W. Zucker, Yale University.

Information: <http://csgb.dk/activities/2012/geostat/>.

9–11 **Algerian-Turkish International Days on Mathematics 2012, "ATIM'2012"**, Badji Mokhtar Annaba University, Annaba, Algeria. (Apr. 2012, p. 593)

Aim: Of this conference is to provide a platform for scientific experts in mathematics to present their recent works, exchange ideas and new methods in this important area and to bring together mathematicians to improve collaboration between local and international participants. We are looking forward to meeting you in Annaba at ATIM'2012.

Organizers: Jointly organized by the Laboratory of Advanced Materials, Badji Mokhtar Annaba University and Fatih University, Istanbul, Turkey.

Information: <http://www.univ-annaba.org/ATIM2012/>.

11–13 **4th Berlin Workshop on Mathematical Finance for Young Researchers**, Humboldt Universitaet zu Berlin, Berlin, Germany.

Description: The 4th Berlin Workshop on Mathematical Finance for Young Researchers provides a forum for Ph.D. students, postdoctoral researchers and young faculty members from all over the world to discuss their research in an informal atmosphere.

Lectures: Keynote lectures will be given by Freddy Delbaen (Zurich) Rüdiger Frey (Vienna), Steven Shreve (Pittsburgh). We also invite up to 15 contributed papers from young researchers.

Accommodation and Support: Expenses for speakers will be covered. Very limited support for travel expenses may also be available upon request. The closing date for submissions to <http://finance@math.hu-berlin.de> is June 15th, 2012. Notification of acceptance will be sent by July 15, 2012.

Information: <http://www.qfl-berlin.com/workshop2012>.

12–14 **The International Workshop on Functional Analysis**, West University of Timisoara, Timisoara, Romania.

Description: This workshop is organized as part of the project "Cross-Border Research of Functional Analysis and Differential Equations" which is held under the framework of the Hungary-Romania Cross-Border Co-operation Programme 2007-2013 (<http://www.huro-cbc.eu>).

Topics: Include (but are not limited to): Operator theory, representation theory, differential equations, invariant subspaces, function theory, systems theory, optimization theory, differential geometry, spectral theory, wavelet analysis, Fourier analysis, mathematical physics, topological methods.

Deadline: For online registration is September 15, 2012. There will be no registration fee.

Information: <http://wfa.info.uvt.ro>.

13–14 **AMS Southeastern Section Meeting**, Tulane University, New Orleans, Louisiana. (Aug. 2011, p. 1014)

Information: <http://www.ams.org/meetings/sectional/sectional.html>.

15–19 **Higher Teichmüller-Thurston Theory**, Centre de recherches mathématiques, Montreal, Canada.

Overview: Higher Teichmüller-Thurston theory, among other things, deals with deformation spaces of locally homogeneous geometric structures on manifolds, representations of fundamental groups of surfaces, and flat connections. This workshop will focus on the side of the subject dealing with conformally flat Lorentzian metrics, geometric structures arising from Anosov representations, and the geometry of the Hitchin components which extends the Weil-Petersson geometry of Teichmüller space. In particular recent work on realizing Anosov representations as geometric structures on closed manifolds, the pressure metric on Hitchin representations, as well as tameness results for flat Lorentzian manifolds, will be among the topics discussed at the workshop.

Information: <http://www.crm.umontreal.ca/2012/Thurston12>.

15–19 **School on Conformal Blocks in ICMAT-Madrid**, Madrid, Spain.

Aim: The aim of the school is to report on recent progress made in the mathematical theory of Conformal Blocks and to give an introduction to the different areas where Conformal Blocks have emerged: Unitarity of the KZ/Hitchin connection, divisors over the moduli space of n -pointed rational curves, identification between the conformal field theory construction of: Topological Quantum Field Theory (tqft) and the tqft based on knot theory, toric algebras and combinatorics of the Verlinde formula.

Speakers: J. Andersen (Aarhus), P. Belkale (Chapel Hill), N. Fakhrudin (Mumbai), N. Giansiracusa (ZE. Looijenga (Utrecht), C. Manon (Berkeley), T. R. Ramadas (Trieste).

Organizing committee: L. Alvarez-Consul (ICMAT), M. Bolognesi (Rennes), T. L. Gomez (ICMAT), C. Pauly (ICMAT and Nice).

Accommodation/Funding: We can offer accommodation and travel reimbursement to a limited number of participants, depending on funding.

Contact: email: michele.bolognesi@univ-rennes1.fr.

Information: A detailed programme with the contents of the lectures will be available online shortly: <http://confblocks.sciencesconf.org>.

18 **2nd Annual Symposium on Large-Scale Inference**, AFI Silver Theatre and Cultural Center, Silver Spring, Maryland.

Description: Social & Scientific Systems, Inc. hosts its 2nd Annual Symposium on Large-Scale Inference.

Keynote Speaker: Dr. Carl N. Morris, Professor of Statistics, Harvard University.

Information: Please RSVP to: <http://LargeData@s-3.com>.

18-21 **First International Conference on Analysis and Applied Mathematics**, Gumushane University, Gumushane, Turkey.

Description: We are proud to announce the First International Conference on Analysis and Applied Mathematics. The aim of this conference is to bring together mathematicians working in the area of analysis and applied mathematics to share new trends of applications of math. In mathematics, the developments in the field of applied mathematics open new research areas in analysis and vice versa. That is why we plan to found a journal to provide a forum for researchers and scientists to communicate their recent developments and to present their original results in various fields of analysis and applied mathematics.

Information: <http://icaam2012.gumushane.edu.tr>.

20-21 **AMS Central Section Meeting**, University of Akron, Akron, Ohio. (Aug. 2011, p. 1014)

Information: <http://www.ams.org/meetings/sectional/sectional.html>.

22-26 **AIM Workshop: Lipschitz metric on Teichmüller space**, American Institute of Mathematics, Palo Alto, California. (May 2012, p. 717)

Description: This workshop, sponsored by AIM and the NSF, will be devoted to recent developments and new directions in Teichmüller theory from the point of view of Thurston's Lipschitz metric.

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

* 22-28 **Conference on Cycles, Calibrations and Nonlinear PDE**, Stony Brook University, Stony Brook, New York.

Description: This conference is being held in honor of Blaine Lawson's 70th birthday. The meeting will cover a wide range of topics centered around developments over the past decade or so in the geometry of cycles, calibrations and relations with nonlinear PDE and applications to physics. There will be an embedded workshop for younger participants. Funding is available to cover at least a portion of expenses, especially for junior participants. For further details, please consult the website of the conference.

Information: <http://www.math.sunysb.edu/~cycles2012>.

24-26 **DIMACS Workshop on Recent Work on Differential Privacy across Computer**, DIMACS Center, CoRE Building, Rutgers University, Piscataway, New Jersey.

Description: Presented under the auspices of the DIMACS Special Focus on Information Sharing and Dynamic Data Analysis and the DIMACS Special Focus on Cybersecurity. The last few years have seen an explosion of results concerning differential privacy across many distinct but overlapping communities: Theoretical Computer Science, Databases, Programming Languages,

Machine Learning, Data Mining, Security, and Cryptography. Each of these different areas has different priorities and techniques, and despite very similar interests, motivations, and choice of problems, it has become difficult to keep track of this large literature across so many different venues. The purpose of this workshop is to bring researchers in differential privacy across all of these communities together under one roof to discuss recent results and synchronize our understanding of the field. The first day of the workshop will include tutorials, representing a broad cross-section of research across fields. The remaining days will be devoted to talks on the exciting recent results in differential privacy across communities, discussion and formation of interesting open problems, and directions for potential inter-community collaborations.

Organizers: Aaron Roth, University of Pennsylvania; email: aaroth@cis.upenn.edu; Adam Smith, Pennsylvania State University; email: asmith@cse.psu.edu.

Information: email: workshop@dimacs.rutgers.edu; <http://dimacs.rutgers.edu/Workshops/Differential-Privacy/>.

24-26 **International Conference in Modeling Health Advances 2012**, San Francisco, California. (Mar. 2012, p. 456)

Description: The conference ICMHA'12 is held under the World Congress on Engineering and Computer Science WCECS 2012. The WCECS 2012 is organized by the International Association of Engineers (IAENG), a non-profit international association for the engineers and the computer scientists. The congress has the focus on the frontier topics in the theoretical and applied engineering and computer science subjects. The last IAENG conference attracted more than five hundred participants from over 30 countries. All submitted papers will be under peer review and accepted papers will be published in the conference proceeding (ISBN: 978-988-19251-6-9). The abstracts will be indexed and available at major academic databases.

Deadline: Draft Paper Submission Deadline: July 2, 2012.

Information: <http://www.iaeng.org/WCECS2012/ICMHA2012.html>.

24-26 **International Conference in Number Theory and Applications 2012 (ICNA 2012)**, Department of Mathematics, Faculty of Science, Kasetsart University, Bangkok, Thailand. (Apr. 2012, p. 593)

Aim: Providing a forum for researchers, teachers, students and people interested in Number Theory and Applications to present, exchange and get in touch with one another in a relaxed atmosphere. The academic program of the conference consists of invited lectures by leading mathematicians in the field of Number Theory and Applications and sessions for contributed talks, which will be included in a special issue of the *East-West Journal of Mathematics* after a peer review process. There will also be a social banquet (included in the registration fee) and a sight-seeing tour (not included in the registration fee).

Information: <http://maths.sci.ku.ac.th/icna2012>.

* 26-28 **History and Pedagogy of Mathematics (HPM) Americas Section 2012 West Coast Meeting**, University of California, Berkeley, California.

Description: Special features of this meeting include a rare book exhibit and a visit to the Lawrence Hall of Science. This is a first call for papers to be presented at the meeting. HPM seeks a variety of talks on relations between the history and pedagogy of mathematics. Talks will be about 30 minutes long. Because of time constraints, we cannot guarantee that all submissions for talks will be accepted. Priority will be given to speakers who have not spoken at recent HPM meetings. Prospective speakers should send a title and abstract, as well as their own contact information, to Kathy Clark at drkclark@gmail.com by September 26, 2012. Contact Amy Ackerberg-Hastings, aackerbe@verizon.net, for information on registration or visit the website.

Information: <http://www.hpm-americas.org>.

27–28 **AMS Western Section Meeting**, University of Arizona, Tucson, Arizona. (Aug. 2011, p. 1014)

Information: <http://www.ams.org/meetings/sectional/sectional.html>.

29–31 **The 17th edition of the Symposium on Solid and Physical Modeling**, University of Burgundy, Dijon, France. (May 2012, p. 717)

Description: The Symposium on Solid and Physical Modeling 2012 (SPM'2012) is organized in cooperation with SIAM and in cooperation with ACM SIGGRAPH (pending).

Focus: The focus of the conference is on the mathematical and computational issues that arise in generating, analyzing, and processing geometric information in applications such as: mechanical design, process planning, manufacturing, bio-medical, games, animation, geology, and virtual reality. The proceedings of SPM2012, including full papers and short papers, will be published as a special issue of the *Journal of Computer Aided Design* (Elsevier). Technical papers should present previously unpublished, original results that are not simultaneously submitted elsewhere. All papers will be rigorously peer-reviewed by members of the international program committee.

Important Dates: Abstracts Due: March 25, 2012. Paper Submissions Due: April 2, 2012.

Information: <http://spm12.u-bourgogne.fr>; <http://spm12.u-bourgogne.fr>.

29–November 2 **Cluster Algebras in Combinatorics, Algebra, and Geometry**, Mathematical Sciences Research Institute, Berkeley, California. (May 2012, p. 717)

Description: Cluster algebras provide a unifying algebraic/combinatorial framework for a wide variety of phenomena in settings as diverse as quiver representations, Teichmüller theory, Poisson geometry, Lie theory, discrete integrable systems, and polyhedral combinatorics. The workshop aims at presenting a broad view of the state-of-the-art understanding of the role of cluster algebras in all these areas, and their interactions with each other.

Information: <http://www.msri.org/web/msri/scientific/workshops/all-workshops/show/-/event/Wm570>

29–November 2 **ICERM Workshop: Monte Carlo Methods in the Physical and Biological Sciences**, ICERM, Providence, Rhode Island. (Jan. 2012, p. 106)

Description: Monte Carlo methods are one of the main tools used to study the properties of complex physical, chemical, and biological systems. Since their introduction in the late 1940s, these methods have undergone a remarkable expansion and are now used in many other fields, including statistical inference, engineering, and computer science. However, the design and theoretical understanding of Monte Carlo methods is still a challenging topic, especially for those problems where rare events play the key role in determining algorithm performance. The aim of the workshop is to bring together specialists in the application areas who understand the specific challenges posed by realistic problems and have developed sophisticated tools to tackle these problems, and mathematicians developing methods for algorithm analysis, abstraction, and optimization.

Information: <http://icerm.brown.edu/sp-f12-w3>.

November 2012

1–2 **Central and Eastern European Software Engineering Conference in Russia 2012**, Digital October Center, Moscow, Russia. (Apr. 2012, p. 593)

Description: Organized since 2005, CEE-SECR is the key annual software event in Central and Eastern Europe that is regularly attended by about 800 participants from local industry. The conference was initially positioned as a Russian event; however, it attracted speakers from 20 countries and regular attendees from even more places, so in 2009 the conference was repositioned as a CEE event. The conference employs a double-blind review process producing a high quality program with acceptance rate about 35%.

Keynote speakers: From previous conferences includes Jeff Sutherland, Bertrand Meyer, Bjarne Stroustrup, Thomas Erl, Grady Booch, Ivar Jacobson, Erich Gamma, Michael Cusumano, Larry Constantine, Lars Bak, Michael Fagan, Bill Hefley, Rick Kazman, Yuri Gurevich, Steve Masters, Mark Paulk and other software thought leaders as well as VP-s and Technical Fellows of major high-tech corporations.

Information: <http://www.cee-secr.org>.

1–3 **The 13th International Conference of Mathematics and its Applications ICMA2012**, Department of Mathematics, “Politehnica” University of Timisoara, City of Timisoara, Romania. (May 2012, p. 717)

Description: The aim of the conference is to bring together mathematicians, engineers, economists, physicians from all over the world, with research interests in mathematics or in its applications and to attract original papers.

Topics: Mathematical Analysis and Applications, Algebra and Geometry, Computer Algebra Systems in Research, Applied Mathematics in Engineering, and Economics Probability and Statistics, Applications in Health and Clinical Research.

Information: <http://www.mat.upt.ro/ICMA2012/index.htm>.

5–7 **Ramanujan 125**, University of Florida, Gainesville, Florida.

Description: A conference to commemorate the 125th anniversary of Ramanujan's birth. Topics of the conference include all areas of mathematics influenced by Ramanujan.

Confirmed plenary speakers: Include George Andrews, Bruce Berndt, Christian Krattenthaler, Gérald Tenenbaum and Doron Zeilberger. Please let us know as soon as possible if you intend to participate in or would like to speak at our conference. We have some funding available for speakers and junior participants. Requests will be considered and decisions made by June 1, 2012.

Information: <http://www.math.ufl.edu/~fgarvan/ramanujan125.html>.

7–9 **International Conference on Advancement of Science and Technology (iCAST 2012)**, Kuantan, Pahang, Malaysia.

Description: iCAST2012 aims to provide an international forum for researchers to present and discuss recent advances and new findings in mathematics and its applications. Moreover, it should accelerate the growth of mathematics and its applications and their benefits to the community at large. The theme of the conference is Contemporary Mathematics, Mathematical Physics and Their Applications.

Information: <http://iiu.edu.my/icast/2012/>.

9–10 **Blackwell Tapia Conference 2012**, Institute for Computational and Experimental Research in Mathematics (ICERM), 121 South Main Street, Providence, Rhode Island. (Feb. 2012, p. 340)

Description: This is the seventh in a series of biannual conferences honoring David Blackwell and Richard Tapia, two seminal figures who inspired a generation of African-American, Native American, and Latino/Latina students to pursue careers in mathematics. Carrying forward their work, this one-and-a-half-day conference will: Recognize and showcase mathematical excellence by minority researchers, recognize and disseminate successful efforts to address under-representation, inform students and mathematicians about career opportunities in mathematics, especially outside academia, provide networking opportunities for mathematical researchers at all points in the higher education/career trajectory. The conference will include a mix of activities including scientific talks; poster presentations; panel discussions; and ample opportunities for discussion and interaction.

Information: <http://icerm.brown.edu/blackwell-tapia-2012>.

12–14 **DIMACS Workshop on Information-Theoretic Network Security Program**, DIMACS Center, CoRE Building, Rutgers University, Piscataway, New Jersey.

Description: Presented under the auspices of the DIMACS Special Focus on Algorithmic Foundations of the Internet

and the DIMACS Special Focus on Cybersecurity. Information theoretic security has emerged as a promising new approach for achieving secure network communications at various protocol layers. In particular, it holds promise for wireless networks that have little or no infrastructure, possess limited computational resources, and are subject to dynamically changing environments. In recent years, this topic has been studied extensively for wireless networks with a view to providing guidelines for implementing associated techniques in current and future systems.

Information theoretic security has intriguing connections to important areas of research including cryptography, signal processing, networking, and quantum computation. Thus, advancement of information theoretic security will benefit substantially from interaction with researchers from these diverse communities. The Workshop will be a collective forum for researchers and practitioners in network security, from academia as well as industry, which seeks to motivate and explore interdisciplinary collaborations. The Workshop will consist of invited talks by leading researchers and practitioners, and invited poster presentations by postdoctoral researchers and graduate students, punctuated by adequate time for discussion. Topics will include information theoretic security, secure coding, cryptography, wireless network security, quantum approach to security, and security in practical networks. General participation in the Workshop is open subject to seating limitations.

Organizers: Yingbin Liang, Syracuse University; email: yliang06@syr.edu; Prakash Narayan, University of Maryland; email: prakash@umd.edu.

Information: email: workshop@dimacs.rutgers.edu; <http://dimacs.rutgers.edu/Workshops/NetworkSecurity/>.

12-16 **Mal'tsev Meeting**, Sobolev Institute of Mathematics SB RAS, Novosibirsk, Russia.

Organizers: Sobolev Institute of Mathematics and Novosibirsk State University. In 2012, the event is dedicated to Vladimir P. Shunkov (1932-2011). The programme committee is headed by Academician Yurii L. Ershov and Corresponding Member of RAS Sergei S. Goncharov. The topics of the conference include group theory, ring theory, model theory, universal algebra, mathematical logic, computability theory, theoretical computer science, and related areas of mathematics. The scientific programme of the conference will consist of invited talks and contributions in sections. Abstracts will be published electronically.

Information: <http://www.math.nsc.ru/conference/malmeet/12/index.html>.

12-March 3, 2013 **A fixed point theorem for Meir-Keeler contractions and its applications to integral equations in ordered modular function spaces**, Semnan University, Semnan, Iran.

Description: The Banach contraction mapping principle is one of the pivotal results of analysis. Generalization of the above principle has been a heavily investigated branch of research. In particular, Meir and Keeler present the following fixed point theorem: Theorem: Let (X, d) be a complete metric space and $T : X \rightarrow X$ an operator. Suppose that for every $\epsilon > 0$ there exists $\delta > 0$ such that for $x, y \in X$, $\epsilon < d(x, y) < \epsilon + \delta$, then $d(Tx, Ty) < \epsilon$. Then, T admits a unique fixed point Z and for any $x \in X$, the sequence $T^n x$ converges to Z . On the other hand, it is well known that one of the standard proofs of Banach's fixed point theorem is based on Cantor's theorem in complete metric spaces. In this paper we present a fixed point theorem of Meir-Keeler type in ordered modular space. As an application we study the existence and uniqueness of a solution for an integral equation of Lipschitz type in a Musielak-Orlicz space.

Information: <http://Semnan.ac.ir>.

15-17 **Fourth International Conference for Young mathematicians on Differential Equations and Its Applications dedicated to Ya.**

B. Lopatinskii, Donetsk National University, Universitetskaya str., 24, Donetsk, 83155, Ukraine.

Description: Conference sections: general theory of boundary value problems; nonlinear boundary value problems; operator methods; mathematical physics; ordinary differential equations and dynamic systems; applications of differential equations. The word "young" in the title means a general direction of the conference and its mathematical school form but doesn't mean any age limitations for the participants.

Official languages: English, Ukrainian, Russian.

Programm committee: B. V. Bazaliy, Yu. M. Berezanskii, V. P. Burskii, Ya. M. Dymarskii, G. Eskin, M. L. Gorbachuk, E. Ya. Khruslov, V. A. Ilyin, M. I. Ivanchov, N. D. Kopachevsky, A. M. Kovalev, A. A. Kovalevskii, A. I. Kozhanov, E. I. Moiseev, L. Nirenberg, B. Yo. Ptasnyh, V. V. Puhnamev, F. S. Rofe-Beketov, A. M. Samoilenko, A. P. Soldatov, V. I. Storozhev, N. N. Uraltseva, M. Yo. Vishik, A. E. Shishkov, V. V. Zharinov.

Information: <http://www.math.donnu.edu.ua/conference/?Lang=en>.

16-18 **Special Functions, Partial Differential Equations and Harmonic Analysis, a conference in honor of Calixto P. Calderón**, Roosevelt University, 425 Wabash Ave, Chicago, Illinois. (May 2012, p. 717)

Description: A group of friends of Calixto P. Calderón have decided to organize a conference to celebrate his research and academic achievements in his long academic career.

Confirmed main speakers: Carlos Kenig, University of Chicago; Mario Milman, Florida Atlantic University; Yoram Sagher, Florida Atlantic University; Ahmed Zayed, DePaul University; Marshall Ash, DePaul University; Alberto Torchinsky, Indiana University; Richard Wheeden, Rutgers University; Robert Fefferman, University of Chicago; Jeff Lewis, University of Illinois at Chicago; Richard Askey, University of Wisconsin; Rodolfo Torres, University of Kansas; James Moller, University of Illinois at Chicago; Alexandra Bellow, Northwestern University.

Information: <http://www.roosevelt.edu/calderon>.

17 **Info-Metrics and Nonparametric Inference**, University of California Riverside, Riverside, California. (Mar. 2012, p. 456)

Description: The one-day conference is organized jointly by the Info-Metrics Institute, American University, and the Department of Economics of University of California, Riverside. Interest in nonparametric estimation and inference goes back half a century but has rapidly increased recently (especially with recent advances in computing power) with many new directions of research that cover a vast range of applications in different disciplines. Ongoing research on information-theoretic estimation and inference methods is similarly inter-disciplinary, involving information theory, engineering, mathematical statistics, econometrics and the natural sciences. This one-day conference will explore recent advances in the area of nonparametric estimation and inference and in info-metrics, which may help current and future research combining nonparametric procedures with information-theoretic methods. For more information, please visit our Info-Metrics Institute web page.

Information: <http://www.american.edu/cas/economics/info-metrics/workshop/workshop-2012-november.cfm>.

19-20 **International Seminar on History of Mathematics and Celebration of National Mathematics Year 2012 to Commemorate 125th Birth Year of Srinivasa Ramanujan**, Department of Mathematics & Statistics, Ramjas College, Delhi University, North Campus, Delhi 110007, India.

Focus: The Seminar will cover all aspects of the history of mathematics and, in particular, the following areas: Life and Achievements of Srinivasa Ramanujan; History of Mathematics in Educational Curricula; Mathematics and Indigenous Cultures of the World; Historical Aspects of Modern Mathematics. The academic sessions will consist

of invited talks, panel discussions and paper presentations. The Ramjas Seminar shall be followed by an International Conference on History of Mathematics at MD University, Rohtak, on November 21–24, 2012, along with the Annual Meeting of ISHM. Details are available at <http://www.indianshm.com>.

Organizers: Indian Society for History of Mathematics and Ramjas College, Delhi.

Deadline/Registration: Abstracts pertaining to the above are invited by October 1, 2012. Registered participants will be provided with free Conference Kit and meals at the Seminar venue. Shared accommodations for the outstation participants will be arranged in the University guest-houses. Those interested in accommodations in city hotels on payment may request them. Cultural programs and sightseeing tours for the participants could be arranged to nearby tourist places and historical monuments.

Contacts: Dr. Man Mohan, Convenor ISHM 2012, Ramjas College, Delhi, India; email: manmohan@indianshm.com; <http://www.indianshm.com>.

19–21 **Adventures in Mathematical Physics/Aventures en Physique Mathématique (25^{èmes} Entretiens Jacques Cartier)**, Université Lyon 1, Villeurbanne, Rhône, France.

Description: Among the selected themes, integrability stands in a privileged position, due to its importance as well as in different branches of physics, particularly in statistical physics and in elementary particle physics, as in several domains of algebra and geometry. Let us mention, as examples, the importance of random matrix theory in integrable systems and also in inflationary cosmology; the relationship between matrix models and topological string amplitudes; the role of integrability for scattering amplitudes in super-symmetric gauge theories. These are some of the subjects which will be discussed in this colloquium, in addition to other fields such as, in condensed matter physics, the algebraic field theoretical treatment of quantum wires, a subject directly related to nano-sciences; combinatory problems in connection with integrable models; the relevance of solitons in fluid dynamics (tsunamis) and, last but not least, the mathematical approach of tiling in biology.

Information: <http://math.univ-lyon1.fr/~roger/>.

28–30 **ICERM Workshop: Performance Analysis of Monte Carlo Methods**, ICERM, Providence, Rhode Island.

Description: Monte Carlo methods have become increasingly important in Engineering and the Sciences. These application areas have posed challenges and opportunities in the analysis of modern Monte Carlo algorithms. The workshop's main focus is on: a) the mathematical techniques and aspects that have been key in the analysis of these algorithms, and b) the identification of techniques that are likely to play a role in future analysis.

Information: <http://icerm.brown.edu/sp-f12-w4>.

29–December 1 **2012 Third International Conference on Emerging Applications of Information Technology (EAIT 2012)**, Indian Statistical Institute, Kolkata, India. (May 2012, p. 717)

Description: The Computer Society of India (CSI) has been instrumental in guiding the Indian IT industry since its formative years. The mission of CSI is to facilitate research, knowledge sharing, learning and career enhancement for all categories of IT professionals, while simultaneously inspiring and nurturing new entrants into the industry and helping them to integrate into the IT community. Encouraged by the earlier events, EAIT 2006 (proceedings published by Elsevier) and EAIT 2011 (proceedings published by IEEE CS and Xplore), CSI Kolkata Chapter is organizing the Third International Conference on Emerging Applications of Information Technology (EAIT 2012). The event will be comprised of Pre-Conference Tutorials, plenary sessions, invited lectures by eminent speakers of international repute, session papers and panel discussions. Detailed call

for papers can be found at: <https://sites.google.com/site/csieait2012/cfp>.

Information: <http://sites.google.com/site/csieait2012>.

December 2012

* 2–5 **Inaugural meeting of the Australian and New Zealand Association of Mathematical Physics (ANZAMP)**, Cumberland resort, Lorne, Victoria, Australia.

Description: ANZAMP is a special interest group of the Australian Mathematical Society. It was founded in 2011 for the promotion and extension of mathematical physics in Australia and New Zealand wherever appropriate; and in particular, encourage the interaction between mathematical physicists and workers in fields where mathematical physics is relevant. This is ANZAMP's inaugural annual meeting.

Confirmed speakers: Debra Bernhardt (University of Queensland, Brisbane), Paul Fendley (University of Virginia, Charlottesville), Jarmo Hietarinta (University of Turku), Andrei Okounkov (Columbia University, New York), Todd Oliynyk (Monash University, Melbourne), Arkady Tseytlin (Imperial College, London).

Information: <http://www.anzamp.austms.org.au/meetings/2012/>.

3–7 **Combinatorial Commutative Algebra and Applications**, Mathematical Sciences Research Institute, Berkeley, California. (May 2012, p. 718)

Description: This workshop on Combinatorial Commutative Algebra aims to bring together researchers studying toric algebra and degenerations, simplicial objects such as monomial ideals and Stanley-Reisner rings, and their connections to tropical geometry, algebraic statistics, Hilbert schemes, D-modules, and hypergeometric functions.

Information: <http://www.msri.org/web/msri/scientific/workshops/programmatic-workshops/show/-/event/Wm571>.

3–16 **ICTS Program: Groups, Geometry and Dynamics**, CEMS, Kurmaun University, Almora, Uttarakhand, India.

Description: This program will be organized around the areas of Geometry and Dynamics, which encompasses a large portion of Group Theory (finite or otherwise) in its proximity. The program will have two components: (i) Advanced School, Dec. 3–12, 2012; (ii) Discussion Meeting, Dec. 13–16, 2012.

Topics: The list of topics in the advanced school includes Lorentzian geometry, Real and complex Kleinian groups, Geometry of negatively curved spaces, Arithmetic of hyperbolic manifolds, Flows on homogeneous spaces, Discrete subgroups of Lie groups. The discussion meeting will lead to the frontier of current research and trends in the fields mentioned above. The lectures on the final day of the program will be centered around the areas which are influenced by Ravi Kulkarni's ideas, and are still very much active and important in the context of modern mathematics.

Deadline: The deadline for filling up application form for the program is July 31, 2012.

Information: <http://www.icts.res.in/program/GGD2012>.

3–20 **ICTS Program: Winter School on Stochastic Analysis and Control of Fluid Flow**, School of Mathematics, Indian Institute of Science Education and Research, Thiruvananthapuram, Kerala, India.

Description: The aim of the school is to make students and researchers across various organizations working in fluid flow problems well acquainted with the basic and advanced topics in control of partial differential equations (PDEs) arising from fluid dynamics with special emphasis on Navier-Stokes equations in both deterministic and stochastic settings. In the first week, introductory topics from Navier-Stokes equations, stochastic analysis and control of PDEs will be introduced. This would help in building the background for the advanced topics to be covered later on. In the following two weeks, solvability, control and large deviations of Navier-Stokes equations in

both deterministic and stochastic settings will be covered. Topics on stochastic Navier-Stokes equations and stochastic Landau-Lifschitz-Gilbert equation on manifolds will also be covered using tools from differential geometry and stochastic analysis.

Information: <http://www.icts.res.in/program/control2012>.

*4-6 **New Zealand Mathematical Society Colloquium**, Massey University, Palmerston North, New Zealand.

Description: The annual Colloquium brings together the mathematical community of New Zealand while welcoming overseas visitors to join us. Time will be dedicated to the discussion of all aspects of pure and applied mathematics and statistics. Talks will be given by internationally recognized leaders in the field and also by emerging researchers and postgraduate students.

Plenary Speakers: Astrid an Huef, Functional Analysis, Otago; Bill Barton, Mathematics Education, Auckland; John Sader, Continuum Mechanics & Nanoscience, Melbourne & Caltech; Kate Smith-Miles, Neural networks, combinatorial optimization, and data mining, Monash; Ilze Ziedins, Stochastic networks, Auckland.

Information: <http://nzmathsoc.org.nz/colloquium>.

7-9 **International Conference on Frontiers of Mathematical Sciences with Applications (ICFMSA-2012)**, Calcutta Mathematical Society, Kolkata, India.

Theme: Theme of ICFMSA-2012; algebra and applications, analysis and applications, geometry and applications, logic and applications, continuum mechanics, mathematical physics, mathematical modelling, optimization techniques, nonlinear systems and dynamics, time series analysis and applications, image processing and pattern recognition, applicable mathematics in engineering sciences and technology, probability, statistics and stochastic processes and applications, numerical methods and applications, soft computing and applications.

Registration: Fees: Rs.1000 (for Indian), USD 200 (for non-Indians). Send the Title of presentation and abstract to cmsconf@gmail.com. Last date for submission: September 30, 2012. Notification of Acceptance: October 15, 2012. Contact persons: Prof. U. C. De, Secretary; Dr. Sanjay Sen, Jt Convenor; Dr. Ranajit Dhar, Jt Convenor; Dr. Koushik Ghosh, Jt Convenor. For any query please send email to: cmsconf@gmail.com.

Information: <http://www.calmathsoc.org/downloads/ICFMSA-2012.pdf>.

10-14 **AIM Workshop: Log minimal model program for moduli spaces**, American Institute of Mathematics, Palo Alto, California. (May 2012, p. 718)

Description: This workshop, sponsored by AIM and the NSF, will be devoted to applications of the minimal model program (MMP) to the study of geometry of moduli spaces of algebraic varieties.

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

10-14 **36ACCMCC—The 36th Australasian Conference on Combinatorial Mathematics and Combinatorial Computing**, University of New South Wales, Sydney, Australia. (Feb. 2012, p. 340)

Description: Annual conference of the Combinatorial Mathematics Society of Australia.

Information: <http://conferences.science.unsw.edu.au/36accmcc/>.

10-14 **Reproducibility in Computational and Experimental Mathematics**, Institute for Computational and Experimental Research in Mathematics (ICERM), Providence, Rhode Island.

Description: The purpose of this workshop is to discuss aspects of reproducibility most relevant to the mathematical sciences among researchers from pure and applied mathematics from academics and other settings, together with interested parties from funding agencies, national laboratories, professional societies, and publishers. This will be a working workshop, with relatively few talks and

dedicated time for breakout group discussions on the current state of the art and the tools, policies, and infrastructure that are needed to improve the situation. The groups will be charged with developing guides to current best practices and/or white papers on desirable advances.

Information: <http://icerm.brown.edu/tw12-5-rcem>.

10-21 **VI-MSS Event: Winter School and Conference on Computational Aspects of Neural Engineering**, Bangalore, India.

Description: We are pleased to announce the first joint IMI-ICERM Winter School on Computational Aspects of Neural Engineering. The course is directed at graduate students, postdoctoral fellows, and other researchers from the physical sciences (e.g., physics, mathematics, computer science, engineering) and the life sciences (e.g., neuroscience, biology, physiology). The course will offer participants the opportunity to learn about the foundations of neural engineering and brain-computer interfacing, and develop their skills in computational analysis of neural data for the control of external devices.

Topics: Will range from primers on neuroscience, signal processing, and machine learning to brain-computer interfacing based on multi neuronal activity, electrocorticography (ECoG), and electroencephalography (EEG). The course will consist of 3 hours of lectures each morning, followed by a 3-hour MATLAB-based computer laboratory in the afternoon. Participants will pair up for these laboratories, and an effort will be made to pair someone from the life sciences with someone from the physical sciences. All classes and laboratories will be held on the campus of the Indian Institute of Science (IISc).

This program is part of the IISc Mathematics Initiative (IMI) at the Indian Institute of Science and the VIMSS program at ICERM.

Information: <http://icerm.brown.edu/vi-mss>.

15-16 **2nd International Conference on Mathematical Sciences and Applications**, India International Centre, 40, Max Mueller Marg, Lodhi Estate, New Delhi-110 003, India.

Description: A premier forum for the presentation of new advances and research results in all areas of Mathematical Sciences and Applications. ICMSA-2012 will bring together leading researchers, engineers and scientists in the domain of interest from around the world. Leading mathematicians around the world shall deliver keynote addresses and chair sessions.

Topics: Of interest for submission include, but are not limited to: Algebra, algebraic topology, advanced calculus, advanced numerical methods, artificial neural networks, calculus and trigonometry, complex analysis, computational fluid dynamics, etc.

Directions: Nearest Metro Stations: "Khan Market" & "Jor Bagh" Map: IIC at Google Maps.

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

16-22 **Commutative Rings, Integer-Valued Polynomials and Polynomial Functions**, Graz University of Technology, Graz, Austria. (Nov. 2011, p. 1495)

Confirmed speakers: Jean-Luc Chabert, Sarah Glaz, Byung Gyun Kang, Alan Loper, Irena Swanson.

Description: The conference will be preceded by different mini-courses, December 16-18, 2012, taught by the main speakers of the conference.

Information: Contact: email: commring@tugraz.at; <http://integer-valued.org/conf2012/>.

17-20 **9th IMA International Conference on Mathematics in Signal Processing**, Austin Court, Birmingham, United Kingdom. (Nov. 2011, p. 1495)

Description: Signal processing constitutes an important area for the application of mathematical concepts and techniques fuelled, for example, by developments in mobile communications, multimedia systems and digital TV. The subject is still advancing rapidly in areas such as non-linear/non-Gaussian/non-stationary signal processing, compressive sampling, digital communication systems, iterative estimation (e.g., turbo codes), blind deconvolution/signal separation and

broadband systems. The last IMA conference on this subject was held in December 2008 and in response to popular demand, the next one will be held in December 2012. The aim of the conference is to bring together mathematicians, statisticians, and engineers with a view to exploring recent developments and identifying fruitful avenues for further research. It is hoped that the meeting will help to attract more mathematicians into this important and challenging field.

Information: http://www.ima.org.uk/conferences/conferences_calendar/mathematics_in_signal_processing.cfm.

17-21 **AIM Workshop: Rational Catalan Combinatorics**, American Institute of Mathematics, Palo Alto, California. (May 2012, p. 718)

Description: This workshop, sponsored by AIM and the NSF, will be devoted to understanding the interaction between new developments in algebra and combinatorics. In particular, it will focus on combinatorial objects counted by generalizations of Catalan numbers and their interaction with the representation theory of Cherednik algebras.

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

17-21 **International Conference on the Theory, Methods and Applications of Nonlinear Equations**, Department of Mathematics, Texas A&M University-Kingsville, Kingsville, Texas. (Feb. 2012, p. 340)

Description: The main aim of the conference is to promote, encourage, and bring together researchers in the fields of ordinary differential equations, partial differential equations, functional equations, fractional differential equations, Delay-differential equations, integral equations, integrodifferential equations, stochastic differential equations, impulsive differential equations, operator equations, difference equations and dynamic equations on time scales. A special emphasis will be on the applications of Nonlinear Equations. It is anticipated that the conference will attract about 400 participants with 9 plenary speakers (50 minutes), 50 main speakers (40 minutes), and 300 lectures (20 minutes). It will be a mathematically enriching and socially exciting event.

Information: http://www.tamuk.edu/artsci/math/conference_2012/about.html.

21-23 **6th International Conference of IMBIC on "Mathematical Sciences for Advancement of Science and Technology" (MSAST 2012)**, Salt Lake City, Kolkata, West Bengal, India.

Description: The main objective of the conference is to bring specialized topics in mathematics, statistics, computer science, information technology, bioinformatics and closely related interdisciplinary areas to the forefront. Original full papers are invited. All papers are to be screened and accepted papers will be published in the proceedings, except for a few full selective papers of high quality which may be published in the highly acclaimed series of monographs of IMBIC in Volume 2 (2013).

Contact: All correspondence in respect to the conference is to be addressed to Dr. Avishek Adhikari, Convenor MSAST 2012 & Secretary, IMBIC; email: msast.paper@gmail.com; http://www.isical.ac.in/~avishek_r/.

Information: <http://imbic.org/forthcoming.html>.

22-24 **The International Congress on Science and Technology**, Allahabad, U.P., India. (Apr. 2012, p. 593)

Focus: The conference has the focus on the current trends on frontier topics of the science and technology (Applied Engineering) subjects. The ICST conferences serve as good platforms for our members and the entire science and technological community to meet with each other and to exchange ideas.

Organizer: The CWS, a non-profit society for the scientists and the technocrats.

Deadline: Submission of abstracts with full-length paper to complexgeometry18@yahoo.com with a cc: to ss123a@rediffmail.com: July 25, 2012.

Information: <http://sites.google.com/site/intcongressonsciandtech/>.

26-January 1 **International Conference: Mathematical Science and Applications**, Abu Dhabi University, College of Arts and Science, Department of Applied Sciences and Mathematics, Abu Dhabi, United Arab Emirates.

Aim: The main aim of the conference is to promote, encourage, and bring together researchers in the different fields of Mathematics. We are pleased to invite you to give a lecture in the forthcoming International Conference on Mathematical Science and Applications, December 26-31, 2012, Abu Dhabi University. A special emphasis will be on the applications of Mathematical Sciences and Applied Mathematics. Organizing Committee will make it a mathematically enriching and socially exciting event. The aim of the conference is discussing the latest developments and researches in the field of Mathematical Sciences and its applications. The conference is broad-based that covers all branches of mathematics and interdisciplinary researches. ICMSA 2012 is a peer-reviewed conference.

Information: Please visit: <http://www.adu.ac.ae/en/section/international-conference-mathematical-sciences-and-applications>.

27-29 **International Conference on Mathematics, Trends and Development (ICMTD12)**, Cairo, Egypt.

Organizer: Egyptian Mathematical Society.

Topics: Topology and Application, ODE Theory and Techniques, Quantum Computation, Quantum Information, Data Security, Data Mining, Functional Analysis, Geometry and Application, Related Topics, Related Topics, Modelling.

Information: <http://etms-eg.org/>.

27-30 **Eighth International Triennial Calcutta Symposium on Probability and Statistics**, Department of Statistics, Calcutta University, Kolkata, West Bengal, India. (Nov. 2011, p. 1495)

Description: The Eighth International Triennial Calcutta Symposium following the foot steps of the previous seven symposia held in the years 1991, 1994, 1997, 2000, 2003, 2006 and 2009 plans to bring together researchers engaged in theoretical, methodological, and applied aspects of Statistics and Probability on a common platform to exchange ideas and facilitate discussions. A fairly large number of eminent researchers from all over the world are expected to attend. The symposium will feature invited and contributory sessions on theoretical and applied statistics and probability. There will also be poster sessions for students and young researchers. As in the past, a special session on Design of Experiments and Related Combinatorial Aspects will be organized in the memory of Prof. Raj Chandra Bose.

Information: <http://triennial.calcuttastatisticalassociation.org/sympBrochure.php>.

28-31 **International Conference on Mathematical Sciences (ICMS2012)**, Shri Shivaji Education Society's Science College, Nagpur, Maharashtra, India.

Description: We have the honour to inform you that Science College, Nagpur, affiliated to R.T.M. Nagpur University, Nagpur, is a premier institution of Central India. It is celebrating the 125th Birth Anniversary of great mathematician Srinivasa Ramanujam, declared as a "National Mathematical Year" by the government of India. To commemorate this occasion we are holding an International Conference on Mathematical Sciences, from December 28-31, 2012. The academicians round the globe are being invited to participate. It is our sincere wish that you come and participate in the academic community gathering on this occasion. It shall be our privilege to make your stay at Nagpur comfortable and the expenses towards your stay and local hospitality shall be our responsibility. We shall

feel obliged if you inform us of your consent and the title of your Invited Talk/Paper presentation and your food preferences.

Information: <http://www.icms2012.org>.

31-January 11 **Recent Advances in Operator Theory and Operator Algebras**, Indian Statistical Institute, Bangalore, India.

Description: Focusing on the general theme of operator theory, operator algebras and function theory. There will be a one-week workshop December 31, 2012–January 5, 2013, followed by a conference January 7, 2013–January 11, 2013. The purpose of the workshop is to bring experts and students as well as researchers together to discuss the most recent developments in certain topics in those areas. The conference will concentrate on recent developments in Operator Theory, Operator Algebras and related fields.

Information: <http://www.isibang.ac.in/~jay/rota.html>.

January 2013

1–9 **VI-MSS Event: Workshop and Conference on Limit Theorems in Probability**, Bangalore, India.

Description: Ever since Jakob Bernoulli proved the law of large numbers for Bernoulli random variables in 1713, the subject of limit theorems has been a driving force for the development of probability theory as a whole. The elucidation of different flavours of laws of large number, central limit theorems and laws of iterated logarithm, their extensions to Markov chains or sums of weakly dependent or stationary processes, limit theorems for Banach space valued random variables, etc., have given rise to a rich theory as well as the basic tools for tackling any problem involving randomness. Today, 300 years after the landmark result of Bernoulli, it is fruitful to look back at the way in which the search for limit theorems has shaped the subject. It is also fruitful to consider how the emphasis has evolved over time from simple limit theorems to getting bounds on the rates of convergence or obtaining inequalities, which are of more immediate relevance in applications to nite samples. The current workshop and conference will focus on some of these topics, and also more broadly on issues of current interest in probability theory. The workshop will consist of five short courses on a variety of topics, aimed at the level of graduate students but also of potential interest to researchers in probability and related fields. The conference following the workshop will have lectures on recent developments in various relevant fields of probability.

Information: <http://icerm.brown.edu/vi-mss>.

6–8 **ACM-SIAM Symposium on Discrete Algorithms (SODA13)**, Astor Crowne Plaza Hotel, New Orleans, Louisiana. (Apr. 2012, p. 593)

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/da13/>.

7–12 **Iwasawa Theory, Representations, and the p-adic Langlands Program**, University of Münster, Münster, Germany. (Jan. 2012, p. 106)

Description: A conference in honour of Peter Schneider's 60th birthday.

Information: <http://wwwmath.uni-muenster.de/sfb878/activities/>.

14–18 **AIM Workshop: Modeling problems related to our environment**, American Institute of Mathematics, Palo Alto, California.

Description: This workshop, sponsored by AIM and the NSF, will bring together mathematicians, graduate students, and industry and

public agency representatives to work on mathematical modeling problems related to the planet Earth.

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

14-May 24 **Noncommutative Algebraic Geometry and Representation Theory**, Mathematical Sciences Research Institute, Berkeley, California. (Oct. 2011, p. 1325)

Description: Over the last few decades noncommutative algebraic geometry (in its many forms) has become increasingly important, both within noncommutative algebra/representation theory, as well as having significant applications to algebraic geometry and other neighbouring areas. The goal of this program is to explore and expand upon these subjects and their interactions. Topics of particular interest include noncommutative projective algebraic geometry, noncommutative resolutions of (commutative or noncommutative) singularities, Calabi-Yau algebras, deformation theory and Poisson structures, as well as the interplay of these subjects with the algebras appearing in representation theory—like enveloping algebras, symplectic reflection algebras and the many guises of Hecke algebras.

Information: <http://www.msri.org/web/msri/scientific/programs/show/-/event/Pm145>.

* 17–19 **Mathematics of Planet Earth 2013 - Pan-Canadian Thematic Program - Disease Dynamics 2013: Immunization, a True Multi-Scale Problem**, PIMS, Vancouver, British Columbia, Canada.

Description: Recent debates surrounding the HPV vaccine and the rush to develop and distribute a vaccine during the 2009 influenza pandemic are reminders of the important role immunization plays in our fight against infectious diseases. This workshop will provide a forum for presentation of leading-edge research in applied mathematics focused on infectious disease dynamics, with emphasis on vaccine development and use to halt or mitigate the impact of diseases, in particular HIV/HPV/influenza. By facilitating interactions between scientists from a variety of disciplines (epidemiology/ immunology/ mathematics), we aim to bring a broad perspective to the role of immunization at population and host levels.

Information: http://www.crm.umontreal.ca/act/theme/theme_2013_1_en/disease_dynamics13_e.php.

* 21–25 **AIM Workshop: Online databases - from L-functions to combinatorics**, International Centre for Mathematical Sciences Edinburgh, Scotland, United Kingdom.

Description: This workshop, sponsored by AIM, ICMS, and the NSF, will be devoted to the development of new software tools for handling mathematical databases. These tools will assist mathematicians in the integration, display, distribution, maintenance and investigation of mathematical data.

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

24–25 **Connections for Women: Noncommutative Algebraic Geometry and Representation Theory**, Mathematical Sciences Research Institute, Berkeley, California. (Aug. 2011, p. 1014)

Description: The Connections for Women workshop associated with the MSRI program in noncommutative algebraic geometry and representation theory is intended to bring together women who are working in these areas in all stages of their careers. As the first event in the semester, this workshop will feature a “tapas menu” of current research and open questions: light but intriguing tastes, designed to encourage further exploration and interest. Talks will be aimed at a fairly general audience and will cover diverse topics within the theme of the program. In addition, there will be a poster session for graduate students and recent Ph.D. recipients and a panel discussion on career issues, as well as free time for informal discussion.

Information: <http://www.msri.org/web/msri/scientific/workshops/all-workshops/show/-/event/Wm9061>.

28-February 1 **Introductory Workshop: Noncommutative Algebraic Geometry and Representation Theory**, Mathematical Sciences Research Institute, Berkeley, California. (Aug. 2011, p. 1014)

Description: This workshop will provide several short lecture series consisting of two or three lectures each to introduce postdocs, graduate students and non-experts to some of the major themes of the conference. While the precise topics may change to reflect developments in the area, it is likely that we will run mini-series in the following subjects: noncommutative algebraic geometry; D-module theory; derived categories; noncommutative resolutions of singularities; deformation-quantization; symplectic reflection algebras; growth functions of infinite dimensional algebras.

Information: <http://www.msri.org/web/msri/scientific/workshops/all-workshops/show/-/event/Wm9062>.

28-May 3 **ICERM Semester Program: Automorphic Forms, Combinatorial Representation Theory and Multiple Dirichlet Series**, ICERM, Providence, Rhode Island. (Jan. 2012, p. 106)

Description: This program will explore this interface between automorphic forms and combinatorial representation theory, and will develop computational tools for facilitating investigations. On the automorphic side, Whittaker functions on p-adic groups and their covers are the fundamental objects. Whittaker functions and their relatives are expressible in terms of combinatorial structures on the associated L-group, its flag variety, or Schubert varieties. In the combinatorial theory crystal graphs, Demazure characters, the Schubert calculus and Kazhdan-Lusztig theory all enter.

Information: <http://icerm.brown.edu/sp-s13>.

February 2013

4-8 **AIM Workshop: Stochastics in geophysical fluid dynamics**, American Institute of Mathematics, Palo Alto, California.

Description: This workshop, sponsored by AIM and the NSF, will be devoted to the mathematical foundations, physical underpinnings and applications of large scale stochastic models for climate and weather.

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

4-8 **The Second Biennial International Group Theory Conference**, Dogus University, Istanbul, Turkey.

Description: We would like to announce herewith the second of the Biennial International Group Theory Conferences hosted every other year by the countries Malaysia, Turkey and Iran successively. The conference 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. This series of conferences is considered as an important means to bring together young group theorists and graduate students with the leading experts of the world and help them to get acquainted with relevant and actual theories, problems and methods of their research area.

Information: Please contact: 2big@dogus.edu.tr; <http://istanbulgroup2013.dogus.edu.tr>.

5-7 **International Conference on Mathematical Sciences and Statistics (ICMSS2013)**, Kuala Lumpur, Malaysia.

Description: ICMSS2013 is organized by the Department of Mathematics, Faculty of Science, Universiti Putra Malaysia. All papers will be peer-reviewed and selected for publication in the American Institute of Physics (AIP) Conference Proceedings which will appear in major databases like SCOPUS and ISI and selected papers will be published in a special issue of *Malaysian Journal of Mathematical Sciences* (indexed by SCOPUS) or *Discovering Mathematics (Menemui Matematik)* indexed by Zentralblatt Math. ICMSS2013 Secretariat International Conference on Mathematical Sciences and Statistics (ICMSS2013).

Information: <http://math.upm.edu.my/icmss2013>; Phone: +603 89466812; email: icmss2013@yahoo.com.

* 6-8 **Mathematics of Planet Earth 2013 - Pan-Canadian Thematic Program - Models and Methods in Ecology and Epidemiology**, CRM, Montréal, Canada.

Description: In epidemiology and ecology, models are typically developed along one of two directions: directly from available data, incorporating as much empirical records as possible, or conceptually as dynamical systems, incorporating data via estimation of parameters. The means of investigation for these model classes are quite distinct, and an important methodological problem is the reconciliation of a priori method-independent issues when they are described in different terms.

Information: http://www.crm.umontreal.ca/act/theme/theme_2013_1_en/epidemiology13_e.php.

11-15 **ICERM Workshop: Sage Days: Multiple Dirichlet Series, Combinatorics, and Representation Theory**, ICERM, Providence, Rhode Island.

Description: This workshop will bring together experienced Sage and Sage-Combinat developers and experts of multiple Dirichlet series and computational algebraic combinatorics. Like every workshop in the Sage Days series, it will welcome whoever wants to discover Sage, learn more about it, or contribute to it. This workshop will focus on Sage training and on the design and planning of new computational features of central interest for the semester, around Weyl groups, Hecke algebras and their representations, crystals, posets, combinatorial data visualization, etc. The workshop will consist of mathematical presentations, presentations on Sage and coding sprints. The mathematical presentations will include talks introducing the relevant mathematics for the entire audience and more advanced talks for interested participants. The Sage presentations will begin with introductory tutorials and progress to more advanced topics, including software development in Sage.

Information: <http://icerm.brown.edu/sp-s13-w1>.

20-22 **DIMACS Workshop on Energy Infrastructure: Designing for Stability and Resilience**, DIMACS Center, CoRE Building, Rutgers University, Piscataway, New Jersey.

Description: Presented under the auspices of the Special Focus on Energy and Algorithms. The operation of modern power grids presents challenges and opportunities that are best met with appropriate technical methodology; it is clear that future grids will rely, to a much greater degree than is common today, on extensive sensorization and algorithmic machinery to guide both strategic planning and real-time operation. Although there is significant sophistication already present today, substantial innovative work remains to fulfill the promise implicit in mathematical methodologies. This workshop will focus on three themes of particular importance: AC power flow analysis and optimization, uncertainty mitigation, and power markets. All presentations will be by faculty and industry experts.

Organizers: Daniel Bienstock, Columbia University; email: dano@columbia.edu, Steven Low, Caltech; email: slow@caltech.edu.

Information: email: workshop@dimacs.rutgers.edu; <http://dimacs.rutgers.edu/Workshops/Infrastructure/>.

25-March 1 **AIM Workshop - Brauer groups and obstruction problems: Moduli spaces and arithmetic**, American Institute of Mathematics, Palo Alto, California.

Description: This workshop, sponsored by AIM and the NSF, will be devoted to studying elements of the Brauer group from both an arithmetic perspective and a Hodge-theoretic and derived categorical perspective.

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

March 2013

1-3 **2013 Spring Southeastern Section Meeting**, University of Mississippi, Oxford, Mississippi.

Information: <http://www.ams.org/meetings/sectional/sectional.html>.

4-8 **ICERM Workshop: Whittaker Functions, Schubert Calculus and Crystals**, ICERM, Providence, Rhode Island.

Description: Schubert calculus is the modern approach to classical problems in enumerative algebraic geometry, specifically on flag varieties and their many generalizations. Crystals are combinatorial tools based on quantum groups which arise in the study of representations of Lie algebras. Whittaker functions are special functions on Lie groups or p-adic groups, for example $GL(n, F)$, where F might be the real or complex numbers, or a p-adic field. The area of intersection between these three topics is combinatorial representation theory. Common tools such as Demazure operators, the Bruhat partial order, and Macdonald polynomials appear in all three areas. Some connections between these three areas are quite new. This workshop will explore these connections.

Information: <http://icerm.brown.edu/sp-s13-w2>.

11-14 **Interactions between Analysis and Geometry**, Institute for Pure and Applied Mathematics (IPAM), UCLA, Los Angeles, California. (Oct. 2011, p. 1325)

Description: Within mathematics, as within science in general, there is a need for greater communication between workers from different research specialties. The purpose of this program is to promote the interaction between two core areas of mathematics—analysis and geometry. Geometers can give analysts new perspectives and focus for their research; geometers can benefit from an exchange of ideas with analysts by becoming more familiar with the powerful tools of their field. An application is available online. 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/iag2013/>.

13-15 **IAENG International Conference on Operations Research 2013 (ICOR'13)**, Royal Garden Hotel, Hong Kong, China.

Description: The conference ICOR'13 is held under the International MultiConference of Engineers and Computer Scientists 2013. The IMECS 2013 is organized by the International Association of Engineers (IAENG). The IMECS conferences serve as good platforms for our members and the entire engineering community to meet with each other and to exchange ideas. All submitted papers will be under peer review and accepted papers will be published in the conference proceeding (ISBN: 978-988-19251-8-3). The abstracts will be indexed and available at major academic databases. The accepted papers will also be considered for publication in the special issues of the journal *Engineering Letters*, in IAENG journals and in edited books.

Deadline: Manuscript Submission: December 8, 2012.

Information: <http://www.iaeng.org/IMECS2013/ICOR2013.html>.

* 18-22 **84th Annual Meeting of GAMM (The International Association of Applied Mathematics and Mechanics)**, University of Novi Sad, Novi Sad, Serbia.

Description: The GAMM e.V. cordially invites you to its 84th Annual Scientific Conference in Novi Sad, Serbia, March 18-22, 2013. Scientific Program consists of honorary Ludwig Prandtl Memorial lecture, v. Misses lecture(s), 10 plenary lectures, 6 minisymposia, 6 young researchers' minisymposia, 24 parallel contributed sections and a public lecture.

Information: <http://www.dmi.uns.ac.rs/gamm2013>.

20-22 **17th International Conference on Discrete Geometry for Computer Imagery (DGCI 2013)**, Escuela Tecnica Superior de Ingenieria Informatica, Univ. de Sevilla, Seville, Spain.

Aim: Of the DGCI conference is to gather researchers in discrete models, discrete geometry and topology, with applications in image analysis and image synthesis.

Topics: Of interest include (but are not limited to): Models for discrete geometry, discrete and combinatorial topology, geometric transforms, discrete shape representation, recognition and analysis, discrete tomography, morphological analysis, discrete modelling and visualization, discrete and combinatorial tools for image segmentation and analysis. Publication of the conference proceedings will be in LNCS by Springer-Verlag.

Submissions: Must be in electronic form (PDF or PS) and should be uploaded through the DGCI 2013 website. Submissions will be peer-reviewed by at least 2 qualified reviewers.

Important Dates: Full paper submission: July 2, 2012. Full paper notification: November 5, 2012. Camera-ready submission: December 5, 2012.

Information: <http://dgci2013.us.es/>.

25-27 **7th IMA Conference on Quantitative Modelling in the Management of Health and Social Care**, Central London College, London, United Kingdom.

Description: The aim of the conference is to bring together health care managers, clinicians, management consultants, and mathematicians, operational researchers, statisticians, health economists, computer scientists, etc. from across the world with a view to bridging the gap between the respective communities and to exploring recent developments and identifying fruitful avenues for further research.

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

25-29 **AIM Workshop: Mathematical problems arising from biochemical reaction networks**, American Institute of Mathematics, Palo Alto, California.

Description: This workshop, sponsored by AIM and the NSF, will be devoted to the mathematical analysis of biochemical reaction networks arising in systems biology, in particular, in classes of nonlinear dynamical systems that arise from biologically relevant networks of chemical reactions, parametrized by rate constants that are usually unknown and difficult to measure.

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

April 2013

6-7 **2013 Spring Eastern Sectional Meeting**, Boston College, Chestnut Hill, Massachusetts.

Information: <http://www.ams.org/meetings/sectional/sectional.html>.

* 8-9 **IMA Mathematics in Finance**, Edinburgh Conference Centre, Heriot-Watt University, Edinburgh, United Kingdom

Description: One persistent theme in the history of mathematics is the close relationship between the subject and finance. From the Babylonians, through Fibonacci and then Stevin, Pascal, Fermat, Huygens, Bernoulli and Bachelier the development of mathematics has often been based on solving problems in finance. The series of financial crises following 2007 have highlighted the need for novel mathematics to address the increasingly complex problems of finance. The IMA Conference on Mathematics in Finance has been organised in conjunction with the Bank of England, now responsible for financial stability in the UK, and with reference to the Department for Business Innovation and Skills Foresight project on the Future of Computer Trading in Financial Markets. The aim is to encourage mathematicians, from a wide range of backgrounds, to address important societal issues in relation to the operation of modern markets.

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

8-10 **Fourteenth International Conference on Numerical Combustion (NC13)**, Holiday Inn Riverwalk, San Antonio, Texas.

Description: Advances in computational algorithms, hardware, and software continue to have a revolutionary impact on the combustion sciences and permit the examination of scientific and engineering problems of increasing complexity. Detailed combustion simulations and models are now being considered as part of integrated system applications. The International Conference on Numerical Combustion will focus on the integration of theory, modeling, and numerical implementation in the study of basic combustion physics and technological applications. The distinct questions and challenges found in combustion and phase transitions arise from the multiplicity of length and time scales defined by the chemical, geometric, and flow ingredients. Physically descriptive, efficient, and accurate numerical modeling of complex phenomena and the design and implementation of complex, integrated simulation are the challenges to be addressed at this conference.

Information: <http://www.siam.org/meetings/nc13/>.

* 8-12 **AIM Workshop: Geometric perspectives in mathematical quantum field theory**, American Institute of Mathematics, Palo Alto, California.

Description: This workshop, sponsored by AIM and the NSF, will be devoted to mathematical challenges in quantum field theory.

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

8-12 **Interactions between Noncommutative Algebra, Representation Theory, and Algebraic Geometry**, Mathematical Sciences Research Institute, Berkeley, California. (Aug. 2011, p. 1014)

Description: In recent years there have been increasing interactions between noncommutative algebra/representation theory on the one hand and algebraic geometry on the other. This workshop would aim to examine these interactions and, as importantly, to encourage the interactions between the three areas. The precise topics will become more precise nearer the time, but will certainly include: Noncommutative algebraic geometry; noncommutative resolutions of singularities and Calabi-Yau algebras; symplectic reflection and related algebras; D-module theory; deformation-quantization.

Information: <http://www.msri.org/web/msri/scientific/workshops/all-workshops/show/-/event/Wm9063>.

13-14 **2013 Spring Western Section Meeting**, University of Colorado Boulder, Boulder, Colorado.

Information: <http://www.ams.org/meetings/sectional/sectional.html>.

13-14 **3rd IIMA International Conference on Advanced Data Analysis, Business Analytics and Intelligence**, Indian Institute of Management, Ahmedabad, India. (Apr. 2012, p. 593)

Description: Indian Institute of Management Ahmedabad is happy to announce the 3rd international conference dedicated to advanced data analysis, business analytics and business intelligence. The objectives of the conference are to facilitate sharing of: a) Research based knowledge related to advanced data analysis, business analytics and business intelligence among academicians and practitioners, b) Case studies and novel business applications of tools and techniques of advanced data analysis, business analytics and business intelligence among academicians and practitioners. Papers are invited from academicians and practitioners on any topic mentioned in the list of conference topics and related areas. Applications, case studies, review and discussion papers on these topics and related areas are also welcome.

Information: <http://www.iimahd.ernet.in/icadabai2013/>.

15-19 **ICERM Workshop: Combinatorics, Multiple Dirichlet Series and Analytic Number Theory**, ICERM, Providence, Rhode Island.

Description: Recent years have seen a flurry of activity in the field of Weyl group multiple Dirichlet series. Surprising and unexpected connections between these multiple Dirichlet series and several different fields of mathematics have emerged. This workshop will survey recent results and set the stage for future developments which

further interrelate analytic number theory, automorphic forms and combinatorial representation theory. Particular focus will be given to applications of Weyl group multiple Dirichlet series to the following areas: Average value and nonvanishing results for families of L-functions, Periods of automorphic forms, Connections between characters sums over function fields and characters of affine root systems, Metaplectic Casselman-Shalika formulae and deformations of the Weyl character formula.

Information: <http://icerm.brown.edu/sp-s13-w3>.

27-28 **2013 Spring Central Section Meeting**, Iowa State University, Ames, Iowa.

Visit <http://www.ams.org/meetings/sectional/sectional.html>.

* 29-May 1 **Mathematics of Planet Earth 2013. Establishing the Scientific Foundation for Quantitative Public Health Decision-Making: Linking surveillance, disease modeling, and simulation** Fields Institute, Toronto, Canada.

Description: Science informed public health policy relies on the interactive interplay among surveillance systems, data analysis, mathematical modeling, and simulation. The effectiveness of modeling epidemiological characteristics and interventions depends on the accuracy of model parameterization, which requires an understanding of the underlying epidemiological processes and statistical analysis of available population and disease data collected through surveillance data. On the other hand, the requirement of model parameters and features of disease specific data combined provide challenges and opportunities to develop statistical techniques which in turn can contribute to the design and improvement of surveillance.

Information: http://www.fields.utoronto.ca/programs/scientific/12-13/public_health/.

May 2013

* 5-9 **Mathematics of Planet Earth 2013 - Pan-Canadian Thematic Program - Major and Neglected Diseases in Africa**, Ottawa, Canada.

Description: Africa counts 54 countries and 15% of the world population, however, the combined GDP of African countries represented in 2003 just over 3% of the world's GDP. From a demographic perspective, Africa is characterized by an over-representation of youths (40% of the population under 15), and a life expectancy below 65 years (e.g., 31.6 years in Botswana) compared to 82.6 years in Japan. Several factors contribute to this low life expectancy (e.g., poverty, inadequate health care systems) but the main reason is the compounding of these factors with the effect of several major infectious diseases and some less known ones that are plaguing the continent.

Information: http://www.crm.umontreal.ca/act/theme/theme_2013_1_en/africa13_e.php.

6-10 **AIM Workshop: Algorithms for lattices and algebraic automorphic forms**, American Institute of Mathematics, Palo Alto, California.

Description: This workshop, sponsored by AIM and the NSF, will be devoted to explicit methods for algebraic modular forms.

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

6-10 **The Commutative Algebra of Singularities in Birational Geometry: Multiplier Ideals, Jets, Valuations, and Positive Characteristic Methods**, Mathematical Sciences Research Institute, Berkeley, California.

Description: The workshop will examine the interplay between measures of singularities coming both from characteristic p methods of commutative algebra, and invariants of singularities coming from birational algebraic geometry. There is a long history of this interaction which arises via the "reduction to characteristic p " procedure. It is only in the last few years, however, that very concrete objects from both areas, namely generalized test ideals from commutative algebra and multiplier ideals from birational geometry, have been

shown to be intimately connected. This workshop will explore this connection, as well as other topics used to study singularities such as jets schemes and valuations.

Information: <http://www.msri.org/web/msri/scientific/workshops/all-workshops/show/-/event/Wm9000>.

* 12-17 **Mathematics of Planet Earth 2013 - Pan-Canadian Thematic Program- Impact of climate change on biological invasions and population distributions**, BIRS, Banff, Canada.

Description: The issues outlined are broad and important, but initially progress must be made on more specific questions that can be defined in ways amenable to mathematical treatments. The purpose of this BIRS workshop is to generate, develop and apply new tools for the analysis of invasions and population distributions under environmental change.

Information: <http://www.birs.ca/events/2013/5-day-workshops/13w5095>.

13-17 **AIM Workshop: Nonhomogeneous boundary-value problems for nonlinear waves**, American Institute of Mathematics, Palo Alto, California.

Description: This workshop, sponsored by AIM and the NSF, will be concerned with boundary-value problems for nonlinear dispersive evolution equations and systems.

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

19-23 **SIAM Conference on Applications of Dynamical Systems (DS13)**, Snowbird Ski and Summer Resort, Snowbird, Utah. (Oct. 2011, p. 1326)

Description: The application of dynamical systems theory to areas outside of mathematics continues to be a vibrant, exciting and fruitful endeavor. These application areas are diverse and multidisciplinary, ranging over all areas of applied science and engineering, including biology, chemistry, physics, finance, and industrial applied mathematics. This conference strives to achieve a blend of application-oriented material and the mathematics that informs and supports it. The goals of the meeting are a cross-fertilization of ideas from different application areas, and increased communication between the mathematicians who develop dynamical systems techniques and applied scientists who use them.

Information: <http://www.siam.org/meetings/ds13/>.

* 19-25 **15th International Conference on Functional Equations and Inequalities**, Ustron (near the borders with the Czech Republic and Slovakia), Poland.

Description: The International Conference on Functional Equations and Inequalities - ICFEI has been organized by the Department of Mathematics of the Pedagogical University in 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.

Information: <http://mat.up.krakow.pl/icfei/15ICFEI/>.

* 19-27 **Mathematics of Planet Earth 2013 - Pan-Canadian Thematic Program - Summer School on Mathematics of Infectious Disease**, York University, Toronto, Canada.

Description: The summer school will include lectures on mathematical epidemiology, and one of the most important aspects will be projects for groups of 4-6 students, mixing scientific backgrounds and levels of experience, and focusing on real-world problems around which students develop and analyze models. It will also incorporate several lectures on public-health topics with focus on those relevant to other events of MPE2013 such as global spread, Indigenous populations health, vector-borne diseases and integration of surveillance, statistical data analysis and dynamical modelling and simulations.

Information: <http://www.fields.utoronto.ca/programs/scientific/12-13/infectious/>.

* 25-27 **10th HSTAM International Congress on Mechanics**, Technical University of Crete, Chania, Crete, Greece.

Description: The Hellenic Society for Theoretical and Applied Mechanics <http://hstam.ntua.gr/announcements.html> in cooperation with the Technical University of Crete (<http://www.tuc.gr>) organizes the 10th HSTAM International Congress on Mechanics to be held in Chania from May 25-27, 2013.

Important dates: Submission of abstract (300 words) by December 1, 2012. Preliminary acceptance based on abstract by January 5, 2013. Submission of full paper by February 28, 2013. Final acceptance by March 15, 2013. Submission of abstracts and final papers will be done only electronically via the Congress email: 10hstam@dpem.tuc.gr. The Congress Co-chairmen are Professor Dimitrios E. Beskos, University of Patras, Greece President of HSTAM; Professor Georgios E. Stavroulakis, Technical University of Crete, Chania, Greece.

Information: <http://www.10hstam.tuc.gr>.

26-30 **The 19th International Conference on Difference Equations and Applications**, Sultan Qaboos University, Muscat, Oman.

Purpose: Of the conference is to bring together experts and novices in the theory and applications of difference equations and discrete dynamical systems.

Theme: The main theme of the conference will be the applications of difference equations to mathematical sciences, and in particular, mathematical biology, ecology and epidemiology.

Plenary speakers: Are experts chosen from areas of difference equations and discrete dynamical systems. Contributed talks in all areas of difference equations and their applications are welcomed.

Organizer: The conference is organized by the Department of Mathematics and Statistics under the auspices of the International Society of Difference Equations (ISDE).

Information: <http://www.squ.edu.om/Portals/87/Conference/Conference2013/index.htm>.

June 2013

* 3-7 **MEGA 2013: Effective Methods in Algebraic Geometry**, Goethe University, Frankfurt am Main, Germany.

Description: MEGA is a series of biennial international conferences which is devoted to computational and application aspects of Algebraic Geometry and related topics. MEGA 2013 is the twelfth conference in the series. It will comprise invited talks, regular talks (based on a competitive submission process), software presentations, as well as a poster session.

Executive committee: Alin Bostan, Wolfram Decker, Alicia Dickstein, Jan Draisma, Christian Haase, Bernard Mourrain (chair), Tomas Recio, Thorsten Theobald.

Invited speakers: Lucia Caporaso, Felipe Cucker, Bas Edixhoven, Benjamin Nill, Giorgio Ottaviani, Frank-Olaf Schreyer, Markus Schweighofer, Seth Sullivant, Rekha Thomas.

Information: <http://www.math.uni-frankfurt.de/mega2013/>.

3-28 **Focus Program on Noncommutative Geometry and Quantum Groups**, Fields Institute for Research in Mathematical Sciences, Toronto, Ontario, Canada.

Description: Weeks 1, 2, and 3 will be devoted to short courses and seminars on the topics of noncommutative geometry and dynamical systems, quantum groups and Hopf cyclic homology, and connections between noncommutative geometry and index theory, geometry, and mathematical physics. The last week will be devoted to a capstone conference in honor of the 75th birthday of Marc Rieffel of the University of California, Berkeley, who has been one of the most influential mathematicians in the world in the area of noncommutative geometry and quantum groups.

Information: <http://www.fields.utoronto.ca/programs/scientific/12-13/quantumgroups/>.

4-14 **Conference on Nonlinear Mathematical Physics: Twenty Years of JNMP**, The Sophus Lie Conference Center, Nordfjordeid, Norway.

Description: The conference is a celebration of the twentieth anniversary of the *Journal of Nonlinear Mathematical Physics* (JNMP), which is published jointly by World Scientific and Atlantis Press.

Aim: To bring together experts and young scientists in the area of Mathematical Physics that concern Nonlinear Problems in Physics and Mathematics.

Main topic: The main topic is centered around the scope of JNMP: continuous and discrete integrable systems including ultradiscrete systems, nonlinear differential and difference equations, applications of Lie transformation groups and Lie algebras, nonlocal transformations and symmetries, differential-geometric aspects of integrable systems, classical and quantum groups, super geometry and super integrable systems.

Information: <http://staff.www.ltu.se/~johfab/jnmp/index.html>.

* 5-9 **4th Novi Sad Algebraic Conference-NSAC 2013**, Department of Mathematics and Informatics, Faculty of Science, University of Novi Sad, Novi Sad, Serbia.

Description: The NSAC is a series of conferences organised every four years at the Department of Mathematics and Informatics, Faculty of Science, University of Novi Sad, with particular emphasis to areas of algebra and related fields that have been cultivated by researchers from Novi Sad.

Main topics: Universal algebra, lattice theory, and their applications in computer science (in particular, in CSP's); semigroups, automata, groups, and their interactions; model theory, set theory, connections between algebra, logic, and combinatorics.

Aim: To promote the recent research results and trends in these areas.

Information: <http://sites.dmi.rs/events/2013/nsac2013>.

10-14 **ApplMath13, 8th Conference on Applied Mathematics and Scientific Computing**, Sibenik, Croatia.

Description: The aim of the Conference is the exchange of ideas, methods and problems between various disciplines of applied mathematics. Nonmathematicians using mathematics as a tool are also encouraged to take part in the Conference. The first seven conferences had a strong international flavor. The first two were held in Dubrovnik in 1999 (ApplMath99), 2001 (AMSC2001), the next three on Brijuni in 2003 (ApplMath03), 2005 (ApplMath05) and 2007 (ApplMath07); then in Zadar (ApplMath09), and the last one in Trogir (ApplMath11). Each one had a special topic, see the related web sites. Proceedings have been published by Dept. of Mathematics, Univ. of Zagreb (ApplMath99), by Kluwer publishers (AMSC2001), by Springer (ApplMath03), Annali dell'Università di Ferrara (ApplMath05, ApplMath07), and accepted papers from the ApplMath09 and ApplMath11 appeared in Mathematical Communications.

Information: <http://applmath13.math.hr/>.

10-14 **Computational Methods and Function Theory 2013**, Shantou University, Shantou, Guangdong, China.

Description: The general theme of the meeting concerns various aspects of interaction of complex variables and scientific computation, including related topics from function theory, approximation theory and numerical analysis. Another important aspect of the CMFT meetings, previously held in Valparaiso 1989, Penang 1994, Nicosia 1997, Aveiro 2001, Joensuu 2005 and Ankara 2009, is to promote the creation and maintenance of contacts with scientists from diverse cultures.

International Organizing Committee: Ilpo Laine (University of Eastern Finland); Stephan Ruscheweyh (Universität Würzburg, Germany); Edward B. Saff (Vanderbilt University, USA); Yuefei Wang (AMSS, Chinese Academy of Sciences, China); Hasi Wulan (Shantou University, China).

Information: email: ptli@stu.edu.cn; <http://math.stu.edu.cn/cmft/index.asp>.

17-21 **AIM Workshop: Exponential random network models**, American Institute of Mathematics, Palo Alto, California.

Description: This workshop, sponsored by AIM and the NSF, will bring practicing social scientists and statisticians, who study exponential random graph models, into contact with an emerging group of mathematicians who use a variety of new tools, including graph limit theory and tools from statistical mechanics such as spin glasses.

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

* 21-24 **"Experimental and Theoretical Methods in Algebra, Geometry and Topology"**. Held in honor of Alexandru Dimca and Stefan Papadima on the occasion of their 60th birthdays, Mangalia (near Constanta), Romania.

Description: The international conference having as topic "Experimental and Theoretical Methods in Algebra, Geometry and Topology" will be organized by Ovidius University of Constanta in cooperation with the Institute of Mathematics "Simion Stoilow" of the Romanian Academy and the Romanian Mathematical Society. We would like to mention that in 2013 the Joint International Meeting of the AMS and the Romanian Mathematical Society will take place in Romania as well, between June 27-30, at Alba Iulia.

Information: <http://math.univ-ovidius.ro/Conference/ETMAGT60/GeneralInfo.htm>.

28-30 **First International Conference on Smarandache Multispace and Multistructure**, Academy of Mathematics and Systems, Chinese Academy of Sciences, Beijing 100190, People's Republic of China.

Description: The notion of multispace was introduced by F. Smarandache in 1969 under his idea of hybrid mathematics: combining different fields into a unifying field, which is closer to our real life, since we don't have a homogeneous space, but many heterogeneous ones. Today, this idea is widely accepted by the world of sciences. S-Multispace is a qualitative notion and includes both metric and non-metric spaces. It is believed that the smarandache multispace with its multistructure is the best candidate for 21st century Theory of Everything in any domain. It unifies many knowledge fields. In a general definition, a smarandache multi-space is a finite or infinite (countable or uncountable) union of many spaces that have various structures. The spaces may overlap. A such multispace can be used, for example, in physics for the Unified Field Theory that tries to unite the gravitational, electromagnetic, weak and strong interactions. Other applications: multi-groups, multi-rings, geometric multispace.

Information: <http://fs.gallup.unm.edu/multispace.htm>.

July 2013

1-5 **Erdős Centennial**, Budapest, Hungary.

Description: The Hungarian Academy of Sciences, the Alfréd Rényi Mathematical Institute of the Hungarian Academy of Sciences, the Eötvös Loránd University and the János Bolyai Mathematical Society announce that a conference dedicated to the 100th anniversary of Paul Erdős will be held in Budapest, Hungary.

Topics: Include all basic fields that Paul Erdős contributed to: Number theory, analysis, combinatorics, probability theory and set theory, among others. The emphasis will be on the recent developments in these areas, initiated or inspired by his mathematical legacy.

Information: <http://www.renyi.hu/conferences/erdos100/index.html>.

1-5 **International conference on Sampling Theory and Applications 2013**, Jacobs University, Bremen, Germany.

Description: SampTA 2013 is the 10th International Conference on Sampling Theory and Applications. SampTA takes place every two years, the previous locations were Riga (Latvia), Aveiro (Portugal), Loen (Norway), Orlando (USA), Strobl (Austria), Samsun (Turkey),

Thessaloniki (Greece), Marseille (France), and, most recently, in Singapore. SampTA conferences bring together mathematicians and engineers interested in sampling theory and its applications to related fields (such as signal and image processing, coding theory, control theory, complex analysis, harmonic analysis, differential equations) to exchange recent advances and to discuss open problems. SampTA 2013 will feature plenary lectures, special sessions on selected topics such as frame theory, compressed sensing, sampling and communications, quantization, super resolution imaging, and general sessions on sampling and its applications. Paper submissions on any aspect of sampling theory and applications are welcome.

Information: <http://www.jacobs-university.de/sampta>.

8-10 **SIAM Conference on Control and Its Applications (CT13)**, Town and Country Resort and Convention Center, San Diego, California.

Description: The field of control theory is central to a wide range of aerospace, industrial, automotive and advanced technological systems and increasingly recognized as fundamental for emerging fields ranging from nanotechnology to cell regulation. Moreover, in addition to its traditional ubiquity in process regulation for the physical sciences and engineering, control concepts now pervade the biological, computer, and social sciences. This conference will showcase a wide range of topics in control and systems theory. The topics and applications include real-time optimization and data assimilation, cellular and biological regulation, control of hybrid systems, numerical methods for control and optimization, control techniques for financial mathematics, cooperative control for unmanned autonomous vehicles, differential games, biomedical control, risk sensitive control and filtering, control of smart systems, flow control and quantum control.

Information: <http://www.siam.org/meetings/ct13/>.

8-12 **AIM Workshop: Generalizations of chip-firing and the critical group**, American Institute of Mathematics, Palo Alto, California.

Description: This workshop, sponsored by AIM and the NSF, will center around the abelian sandpile model and related chip-firing games on graphs, including generalizations to higher dimension, abelian networks, and pattern formation.

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

* 8-12 **Mathematics of Planet Earth 2013 - Pan-Canadian Thematic Program - Climate Change and the Ecology of Vector-borne Diseases**, Fields Institute, CDM, Toronto, Canada.

Description: Climate change is a significant and emerging threat to public health, and changes the way we must look at protecting vulnerable populations. Infectious diseases, especially vector-borne diseases (VBD) are the ones in which the pathogenic microorganism is transmitted from an infected individual to another by an arthropod or other agent, sometimes with other animals serving as intermediary hosts. According to the WHO, nearly half the world's population is infected by vector-borne diseases, resulting in high morbidity and mortality. Important determinants of VBD transmission include: (i) vector survival and reproduction, (ii) the vector's biting rate, and (iii) the pathogen's incubation rate within the vector organism.

Information: http://www.crm.umontreal.ca/act/theme/theme_2013_1_en/vector_borne13_e.php.

20-25 **European Meeting of Statisticians**, Eotvos Lorand University, Budapest, Hungary.

Description: The European Meeting of Statisticians is uniquely the broadest and most prestigious regular meeting of the profession in Europe, having long history and well established traditions. Two distinguishing features of the current occasion are worth being emphasized, however. Beyond providing a natural forum for exchange of ideas for European statisticians and probabilists, particular organisational effort has been made to represent both traditional and newly emerging ties of the European professionals with the whole

World. Hence, we expect colleagues from India, China, South-East Asia, the Middle-East, North- and Latin-America to participate in greater than usual number. It is also the ambition of the organisers to stimulate the inseminating tie between probability and statistics by a balanced representation of intertwined topics of both disciplines. The year 2013 itself provides the framework as it brings a number of celebrating anniversaries of probability theory and statistics.

Information: <http://www.ems2013.eu>.

* 22-25 **MIP2013: Mixed Integer Programming Workshop**, University of Wisconsin-Madison, Madison, Wisconsin.

Description: The Mixed Integer Programming (MIP) workshop series is designed to bring together the integer programming research community in an annual meeting. MIP 2013 will be the tenth workshop in the series.

* 22-26 **Mathematics of Planet Earth 2013 - Pan-Canadian Thematic Program - Biodiversity in a Changing World**, CRM, Cambam, Montréal, Canada.

Description: Biodiversity describes the manifestations of life through its many forms at the molecular level and across ecosystems. Biodiversity has always been the main topic of study for ecologists and evolutionary biologists since it remains a paradox within a number of theoretical paradigms.

Information: http://www.crm.umontreal.ca/act/theme/theme_2013_1_en/changing_world13_e.php

29-August 2 **36th Conference on Stochastic Processes and their Applications**, Boulder, Colorado.

Information: <http://math.colorado.edu/spa2013/>; email: brian.rider@colorado.edu.

August 2013

3-11 **Groups St. Andrews 2013**, University of St. Andrews, St. Andrews, Fife, Scotland, UK.

Description: This conference, the ninth in the series of Groups St. Andrews conferences, will be organized along similar lines to previous events in this series. The conference aims to cover all aspects of group theory, and to be accessible to postgraduate students, postdoctoral fellows, and researchers in all areas of group theory.

Speakers: The principal speakers will each deliver a short lecture course: Emmanuel Breuillard (Université Paris-Sud 11), Martin Liebeck (Imperial College, University of London), Alan Reid (University of Texas), Karen Vogtmann (Cornell University). The one-hour speakers are: Inna Capdeboscq (University of Warwick), Radha Kessar (University of Aberdeen), Markus Lohrey (Universität Leipzig), Derek Robinson (University of Illinois at Urbana-Champaign), Christopher Voll (University of Bielefeld). There will be further plenary talks, the opportunity for contributed talks, and an extensive social programme. The webpage for expressions of interest is now open.

Information: <http://www.groupsstandrews.org/2013/index.shtml>.

5-9 **1st Mathematical Congress of the Americas**, Guanajuato, Mexico.

Description: The goals of the Mathematical Congress of the Americas are to highlight the excellence of mathematical achievements in the Americas within the context of the international arena and to foster the scientific integration of all the mathematical communities in the continents. It is anticipated that the MCA will take place every 4 years starting in 2013.

Information: <http://www.mca2013.org>.

5-9 **XXII Rolf Nevanlinna Colloquium**, Helsinki, Finland. (Aug. 2011, p. 1014)

Description: For further information, please contact Kirsi Peltonen, Aalto University; email: kirsi.peltonen@tkk.fi.

19-December 20 **Mathematical General Relativity**, Mathematical Sciences Research Institute, Berkeley, California.

Description: The study of Einstein's general relativistic gravitational field equation, which has for many years played a crucial role in the modeling of physical cosmology and astrophysical phenomena, is increasingly a source for interesting and challenging problems in geometric analysis and PDE. This semester-long program aims to bring together researchers working in mathematical relativity, differential geometry, and PDE who wish to explore this rapidly growing area of mathematics.

Information: <http://www.msri.org/web/msri/scientific/programs/show/-/event/Pm8946>.

19-December 20 **Optimal Transport: Geometry and Dynamics**, Mathematical Sciences Research Institute, Berkeley, California.

Description: In the past two decades, the theory of optimal transportation has emerged as a fertile field of inquiry, and a diverse tool for exploring applications within and beyond mathematics. This transformation occurred partly because long-standing issues could finally be resolved, but also because unexpected connections emerged which linked these questions to classical problems in geometry, partial differential equations, nonlinear dynamics, natural sciences, design problems and economics. The aim of this program will be to gather experts in optimal transport and areas of potential application to catalyze new investigations, disseminate progress, and invigorate ongoing exploration.

Information: <http://www.msri.org/web/msri/scientific/programs/show/-/event/Pm8952>.

20-May 24 **Commutative Algebra Program**, Mathematical Sciences Research Institute, Berkeley, California.

Description: Commutative algebra was born in the 19th century from algebraic geometry, invariant theory, and number theory. Today it is a mature field with activity on many fronts. The year-long program will highlight exciting recent developments in core areas such as free resolutions, homological and representation theoretic aspects, Rees algebras and integral closure, tight closure and singularities, and birational geometry. In addition, it will feature the important links to other areas such as algebraic topology, combinatorics, mathematical physics, noncommutative geometry, representation theory, singularity theory, and statistics. The program will reflect the wealth of interconnections suggested by these fields, and will introduce young researchers to these diverse areas.

Information: <http://www.msri.org/web/msri/scientific/programs/show/-/event/Pm142>.

22-23 **Connections for Women on Optimal Transport: Geometry and Dynamics**, Mathematical Sciences Research Institute, Berkeley, California.

Description: This two-day event aims to connect women graduate students and beginning researchers with more established female researchers who use optimal transportation in their work and can serve as professional contacts and potential role-models. As such, it will showcase a selection of lectures featuring female scientists, both established leaders and emerging researchers. These lectures will be interspersed with networking and social events such as lunch or tea-time discussions led by successful researchers about (a) the particular opportunities and challenges facing women in science, including practical topics such as work-life balance and choosing a mentor, and (b) promising new directions in optimal transportation and related topics. Junior participants will be paired with more senior researchers in mentoring groups, and all participants will be encouraged to stay for the Introductory Workshop the following week, where they will have the opportunity to propose a short research communication.

Information: <http://www.msri.org/web/msri/scientific/workshops/all-workshops/show/-/event/Wm9225>.

* 26-30 **International Conference AMMCS-2013 (Applied Mathematics, Modeling and Computational Science)**, Waterloo, Ontario, Canada.

Description: AMMCS-2013 is an interdisciplinary international conference in a series of AMMCS meetings held in Waterloo, Ontario, Canada. The series aims at promoting interdisciplinary research and collaboration involving mathematical and computational sciences, and highlighting recent advances in Applied Mathematics, Modeling and Computational Science (AMMCS). In 2013 the conference will be held in the last week of August (August 26-30, 2013). The conference provides a unique opportunity for in-depth technical discussions and exchange of ideas in all areas involving mathematical and computational sciences, modeling and simulation, as well as their applications in natural and social sciences, engineering and technology, industry and finance.

Information: <http://www.ammcs2013.wlu.ca>.

26-30 **Introductory Workshop on Optimal Transport: Geometry and Dynamics**, Mathematical Sciences Research Institute, Berkeley, California.

Description: The workshop is intended to give an overview of the research landscape surrounding optimal transportation, including its connections to geometry, design applications, and fully nonlinear partial differential equations. As such, it will feature some survey lectures or minicourses by distinguished visitors and/or a few of the organizers of the theme semester, amounting to a kind of summer school. These will be complemented by a sampling of research lectures and short presentations from a spectrum of invited guests and other participants, including some who attended the previous week's *Connections for Women* workshop.

Information: <http://www.msri.org/web/msri/scientific/workshops/all-workshops/show/-/event/Wm9226>.

September 2013

1-August 31, 2014 **Call for Research Programmes 2013-2014**, Centre de Recerca Matemàtica, Bellaterra, Barcelona, Spain.

Description: The Centre de Recerca Matemàtica (CRM) invites proposals for Research Programmes for the academic year 2013-2014. CRM Research Programmes consist of periods ranging between two to five months of intensive research in a given area of mathematics and its applications. Researchers from different institutions are brought together to work on open problems and to analyse the state and perspectives of their area.

Deadline: The deadline for submission of proposals is November 18, 2011.

Information: Guidelines and application instructions can be found at http://www.crm.cat/CALLS/CALLS_RESEARCH_PROGRAMS/Call_Research_Program_1314.htm.

3-4 **Connections for Women: Mathematical General Relativity**, Mathematical Sciences Research Institute, Berkeley, California.

Description: Ever since the epic work of Yvonne Choquet-Bruhat on the well-posedness of Einstein's equations initiated the mathematical study of general relativity, women have played an important role in many areas of mathematical relativity. In this workshop, some of the leading women researchers in mathematical relativity present their work.

Information: <http://www.msri.org/web/msri/scientific/workshops/programmatic-workshops/show/-/event/Wm9551>.

9-13 **Introductory Workshop: Mathematical General Relativity**, Mathematical Sciences Research Institute, Berkeley, California.

Description: Mathematical relativity is a very widely ranging area of mathematical study, spanning differential geometry, elliptic and hyperbolic PDE, and dynamical systems. We introduce in this workshop some of the leading areas of current interest, with a special focus on those areas which are related to the geometry and physics

of the initial data of general relativity, and those which primarily involve Riemannian geometry and elliptic PDE.

Information: <http://www.msri.org/web/msri/scientific/workshops/programmatic-workshops/show/-/event/Wm9552>.

9–December 6 **ICERM Semester Program on “Low-Dimensional Topology, Geometry, and Dynamics”**, Institute for Computational and Experimental Research in Mathematics (ICERM), Providence, Rhode Island.

Description: The program focuses on the recent impact of computation and experiment on the study of the pure mathematics sides of topology, geometry, and dynamics. Specific areas include 3-dimensional topology, the study of locally symmetric spaces, low-dimensional dynamics, and geometric group theory. Included are areas where computation has not yet had an impact, but might do so in the near future.

Information: <http://icerm.brown.edu/sp-f13>.

11–13 **14th IMA Conference on Mathematics of Surfaces**, University of Birmingham, United Kingdom.

Description: Computer-based methods for the capture, construction, representation, fitting, interrogation and manipulation of complicated surfaces have led to a wide interest in, and need for, the mathematics of surfaces and related curves. Many applications require the use of surface descriptions, especially in such fields as computer aided design and manufacturing, computer graphics and computer vision. The description of surfaces is also of interest in geographic information systems, multimedia, and many other areas of science and medicine. This diversity and the wide range of applicability of the subject have already enabled the IMA to hold thirteen very successful international conferences in the Mathematics of Surfaces series. Several international authorities are being invited to present papers. The Institute of Mathematics and its Applications is a not-for-profit organisation registered as a charity in the UK.

Information: http://www.ima.org.uk/conferences/conferences_calendar/14th_mathematics_of_surfaces.cfm.

* 28–29 **Mathematics of Planet Earth 2013 - Pan-Canadian Thematic Program - Mathematical Modeling of Indigenous Population Health**, BIRS, Banff, Canada.

Description: In Canada, the 2009 influenza H1N1 pandemic disproportionately affected Indigenous populations with severe disease outcomes often necessitating hospitalization and intensive care unit admission. The maintenance of surge capacity for the healthcare was seriously challenged in many several geographic areas, including northern remote communities and First Nation reserves. The reasons for this disproportionate impact are not well understood, but important factors may include the prevalence of pre-disposing health conditions, limited access to healthcare, and environmental and demographic characteristics including the transportation network. Same factors apply to other diseases and hence the inequity issues arise from many other diseases and settings.

Information: http://www.crm.umontreal.ca/act/theme/theme_2013_1_en/indigenous_population13_e.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.

October 2013

5–6 **2013 Fall Southeastern Section Meeting**, University of Louisville, Louisville, Kentucky.

Information: <http://www.ams.org/meetings/sectional/sectional.html>.

12–13 **2013 Eastern Sectional Meeting**, Temple University, Philadelphia, Pennsylvania.

Information: <http://www.ams.org/meetings/sectional/sectional.html>.

14–18 **Fluid Mechanics, Hamiltonian Dynamics, and Numerical Aspects of Optimal Transportation**, Mathematical Sciences Research Institute, Berkeley, California.

Description: The workshop will be devoted to emerging approaches to fluid mechanical, geophysical and kinetic theoretical flows based on optimal transportation. It will also explore numerical approaches to optimal transportation problems.

Information: <http://www.msri.org/web/msri/scientific/workshops/all-workshops/show/-/event/Wm9227>.

18–20 **2013 Fall Central Section Meeting**, Washington University, St. Louis, Missouri.

Information: <http://www.ams.org/meetings/sectional/sectional.html>.

* 21–25 **Mathematics of Planet Earth 2013 - Pan-Canadian Thematic Program - Sustainability of Aquatic Ecosystem Networks**, AARMS, Fredericton, New Brunswick, Canada.

Description: The Canadian landscape is dotted with thousands of lakes, mighty rivers and uncountable streams run through it, and three oceans border it. For many decades, Canadians have taken clean and available water for granted: for transport and hydro-power, for consumption and recreation. But the impact of human activities is clearly visible: many rivers are polluted and their flow regime altered; algal blooms destroy lake ecosystems; invasive species threaten native species assemblages, oceans are overfished. Many initiatives are under way to understand and manage aquatic ecosystems in a sustainable way.

Information: http://www.crm.umontreal.ca/act/theme/theme_2013_1_en/ecosystem_network13_e.php

November 2013

2–3 **2013 Western Fall Section Meeting**, University of California Riverside, Riverside, California.

Information: <http://www.ams.org/meetings/sectional/sectional.html>.

* 10–15 **Mathematics of Planet Earth 2013 - Pan-Canadian Thematic Program - Current Challenges for Mathematical Modelling of Cyclic Populations**, BIRS, Banff, Canada.

Description: We propose to bring together ecologists and mathematicians with expertise in cyclic populations to discuss recent advances in our theoretical understanding of the causes and implications of population cycles from both the ecological and mathematical points of view.

Information: <http://www.birs.ca/events/2013/5-day-workshops/13w5151>.

18–22 **Evolution Problems in General Relativity**, Mathematical Sciences Research Institute, Berkeley, California.

Description: With cosmic censorship, the formation of black holes, and the stability of Kerr black holes as focus problems, the study of the evolution of solutions of Einstein’s equations has made dramatic progress in recent years. In this workshop, we highlight some of this recent development, and examine the major areas in which future progress is likely.

Information: <http://www.msri.org/web/msri/scientific/workshops/programmatic-workshops/show/-/event/Wm9554>.

26–28 **International Conference on Pure and Applied Mathematics, ICPAM-LAE 2013**, Png University of Technology, Lae, Morobe Province, Papua New Guinea.

Description: The objective of the ICPAM-LAE, 2013 is to bring together international team of mathematicians that will contribute to

the development of Pure and Applied Mathematics in Papua New Guinea. The conference aims at bringing together experts, who are already practicing in different fields of pure and applied mathematics, as well as researchers, undergraduates and postgraduate students from around the globe to discuss mathematical questions, exchange high level knowledge of methods and investigate diverse applications of Pure and Applied Mathematics to domains such as astronomy, biology, education, engineering, geosciences, security, health care, medicine etc. Academia and industries are invited to participate. Mathematics Educationists are also welcome.

Information: Please contact: journal@cms.unitech.ac.pg; <http://www.unitech.ac.pg/>.

January 2014

20–May 23 **Model Theory and Number Theory**, Mathematical Sciences Research Institute, Berkeley, California.

Description: The program aims to further the flourishing interaction between model theory and other parts of mathematics, especially number theory and arithmetic geometry. At present the model theoretical tools in use arise primarily from geometric stability theory and o-minimality. Current areas of lively interaction include motivic integration, valued fields, diophantine geometry, and algebraic dynamics.

Information: <http://www.msri.org/web/msri/scientific/programs/show/-/event/Pm146>.

23–24 **Connections for Women: Algebraic Topology**, Mathematical Sciences Research Institute, Berkeley, California.

Description: This two-day workshop will consist of short courses given by prominent female mathematicians in the field. These introductory courses will be appropriate for graduate students, post-docs, and researchers in related areas. The workshop will also include a panel discussion featuring successful women at various stages in their mathematical careers.

Information: <http://www.msri.org/web/msri/scientific/workshops/programmatic-workshops/show/-/event/Wm9545>

27–31 **Introductory Workshop: Algebraic Topology**, Mathematical Sciences Research Institute, Berkeley, California.

Description: Algebraic topology is a rich, vibrant field with close connections to many branches of mathematics. This workshop will describe the state of the field, focusing on major programs, open problems, exciting new tools, and cutting edge techniques.

Information: <http://www.msri.org/web/msri/scientific/workshops/programmatic-workshops/show/-/event/Wm9546>.

February 2014

10–11 **Connections for Women: Model Theory and its interactions with number theory and algebraic geometry**, Mathematical Sciences Research Institute, Berkeley, California.

Description: The development of model theory has always been influenced by its potential applications. Recent years have seen a remarkable flowering of that development, with many exciting applications of model theory in number theory and algebraic geometry. The introductory workshop will aim to increase these interactions by exposing the techniques of model theory to the number theorists and algebraic geometers, and the problems of number theory and algebraic geometry to the model theorists. The Connections for Women workshop will focus on presenting current research on the borders of these subjects, with particular emphasis on the contributions of women. In addition, there will be some social occasions to allow young women and men to make connections with established researchers, and a panel discussion addressing the challenges faced by all young researchers, but especially by women, in establishing a career in mathematics.

Information: email: chris@msri.org; <http://www.msri.org/web/msri/scientific/workshops/all-workshops/show/-/event/Wm9548>.

April 2014

7–11 **Reimagining the Foundations of Algebraic Topology**, Mathematical Sciences Research Institute, Berkeley, California.

Description: Recent innovations in higher category theory have unlocked the potential to reimagine the basic tools and constructions in algebraic topology. This workshop will explore the interplay between these higher and ∞ -categorical techniques with classical algebraic topology, playing each off of the other and returning the field to conceptual, geometrical intuition.

Information: <http://www.msri.org/web/msri/scientific/workshops/programmatic-workshops/show/-/event/Wm9550>.

May 2014

12–14 **SIAM Conference on Imaging Science (IS14)**, Hong Kong Baptist University, Hong Kong, China.

Description: The interdisciplinary field of imaging science is experiencing tremendous growth. New devices capable of imaging objects and structures from nanoscale to the astronomical scale are continuously being developed and improved, and as result, the reach of science and medicine has been extended in exciting and unexpected ways. The impact of this technology has been to generate new challenges associated with the problems of formation, acquisition, compression, transmission, and analysis of images. By their very nature, these challenges cut across the disciplines of physics, engineering, mathematics, biology, medicine, and statistics. While the primary purpose of this conference is to focus on mathematical issues, the other facets of imaging, such as biomedical and engineering aspects, for example, will also play an important role.

Information: <http://www.siam.org/meetings/is14/>.

12–16 **Model Theory in Geometry and Arithmetic**, Mathematical Sciences Research Institute, Berkeley, California.

Description: The workshop will feature talks in a range of topics where model theory interacts with other parts of mathematics, especially number theory and arithmetic geometry, including: motivic integration, algebraic dynamics, diophantine geometry, and valued fields.

Information: <http://www.msri.org/web/msri/scientific/workshops/programmatic-workshops/show/-/event/Wm9547>.

June 2014

29–July 3 **26th International Conference on Formal Power Series and Algebraic Combinatorics (FPSAC)**, DePaul University, Chicago, Illinois.

Topics: Include all aspects of combinatorics and their relations with other parts of mathematics, physics, computer science, and biology. The conference will include invited lectures, contributed presentations, poster sessions, and software demonstrations. There will be no parallel sessions.

Information: <http://sites.google.com/site/fpsac2014/>.