

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 2014

1–5 International School on Mathematical Epidemiology-ISME 2014, Strathmore University, Nairobi, Kenya. (May 2014, p. 555)

Description: ISME 2014 is the first school of annual series of international graduate schools on Mathematical Modelling in Biology and Medicine organized by CARMS of Strathmore University, Kenya. The school will include lectures on mathematical epidemiology, and one of the most important aspects will be projects for groups of 4.6 participants, mixing scientific backgrounds and levels of experience, and focusing on real-world problems around which participants develop and analyze models. It will also incorporate several lectures on public-health topics with focus on those relevant to other events such as global spread, indigenous population's health, vector-borne diseases and integration of surveillance, statistical data analysis and dynamical modelling and simulations.

Information: <http://www.strathmore.edu/carms>.

1–12 Advanced School and Workshop on L-functions and modular forms, The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy. (Aug. 2014, p. 794)

Description: This two-week activity consists of a school on aspects of computational algebra and number theory with an emphasis on modular forms and L-functions in the first week and a more focused workshop on the same theme in the second week. The school is intended for advanced graduate students and young researchers. During the school there will be lectures on both theoretical and computational aspects of algebra and number theory, including a general introduction to scientific computing. The afternoons will be devoted to concrete hands-on computational projects. The workshop in the second week will also have a computational bent, being part

of the research project LMF: L-functions and Modular Forms (a six year Programme Grant from EPSRC, grant reference EP/K034383/1). The High Performance Computing staff at ICTP will take part of the workshop with the goal of helping the interested participants make the jump from desktops to bigger machines.

Information: <http://agenda.ictp.it/smr.php?2602>.

1–December 19 Trimester program on Non-commutative Geometry and its Applications, Hausdorff Research Institute for Mathematics, Bonn, Germany. (Nov. 2013, p. 1399)

Description: This two-week activity consists of a school on aspects of computational algebra and number theory with an emphasis on modular forms and L-functions in the first week and a more focused workshop on the same theme in the second week. The school is intended for advanced graduate students and young researchers. During the school there will be lectures on both theoretical and computational aspects of algebra and number theory, including a general introduction to scientific computing. The afternoons will be devoted to concrete hands-on computational projects. The workshop in the second week will also have a computational bent, being part of the research project LMF: L-functions and Modular Forms (a six year Programme Grant from EPSRC, grant reference EP/K034383/1). The High Performance Computing staff at ICTP will take part of the workshop with the goal of helping the interested participants make the jump from desktops to bigger machines.

Description: There will be four workshops during the trimester, a series of lecture courses aimed at postgraduate students and post-doctoral level researchers, and also a weekly seminar series on current research topics and a working seminar within that part of the program aimed at junior researchers.

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

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

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

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

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

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

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

Information: <http://www.him.uni-bonn.de/programs/future-programs/future-trimester-programs/non-commutative-geometry-2014/description/>.

2-5 Black-Box Global Optimization: Fast Algorithms and Engineering Applications (part of the CST2014 Conference), Hotel Royal Continental, Naples, Italy. (Mar. 2014, p. 315)

Description: The aim of this session is to create a multidisciplinary discussion platform focused on new theoretical, computational and applied results in solving black-box multiextremal optimization problems. In these problems, frequently encountered in engineering design, the objective function and constraints (if any) are multidimensional functions with unknown analytical representations often evaluated by performing computationally expensive simulations. Researchers from both theoretical and applied sciences are welcome to present their recent developments concerning this important class of optimization problems. To encourage young researchers to attend these conferences a 1000 Euro Young (35 years or younger) Researcher Best Paper Prize will be awarded to the best paper presented at the conferences.

Deadlines: Submission of one-page abstracts: December 5, 2013. Notification of acceptance: December 20, 2013. Payment of the regular registration fee: April 15, 2014

Information: <http://www.civil-comp.com/conf/cstect2014/cst2014-s23.htm>.

2-5 Introductory Workshop: Geometric Representation Theory, Mathematical Sciences Research Institute, Berkeley, California. (Sept. 2013, p. 1112)

Description: Geometric Representation Theory is a very active field, at the center of recent advances in Number Theory and Theoretical Physics. The principal goal of the Introductory Workshop will be to provide a gateway for graduate students and new post-docs to the rich and exciting, but potentially daunting, world of geometric representation theory. The aim is to explore some of the fundamental tools and ideas needed to work in the subject, helping build a cohort of young researchers versed in the geometric and physical sides of the Langlands philosophy.

Information: <http://www.msri.org/web/msri/scientific/workshops/all-workshops/show/-/event/Wm9804>.

2-5 NUMAN2014 Recent Approaches to Numerical Analysis: Theory, Methods and Applications, Chania, Crete, Greece. (Feb. 2014, p. 214)

Description: The themes of the conference are in the broad area of numerical analysis and applications, including numerical methods, algorithms and software; numerical and scientific computing; numerical methods and computational modeling; high-performance numerical computing. All areas of numerical analysis are considered, including numerical linear algebra; numerical solution of ODEs, PDEs and stochastic DEs. Several Workshops will be organized to highlight current mathematical, numerical and computational trends in areas of high scientific interest, including Mathematical Biology and Medicine; Environmental Science and Engineering; Multiphysics/Multidomain Problems. We invite interested researchers to submit one-page abstracts, for lecture or poster presentations, by April 23, 2014.

Information: <http://numan2014.amcl.tuc.gr>.

2-5 XXIII International Fall Workshop on Geometry and Physics, Faculty of Sciences of Granada University, Granada, Spain. (Aug. 2014, p. 794)

Description: The Fall Workshops on Geometry and Physics have been held yearly since 1992, and bring together Spanish and Portuguese geometers and physicists, along with an ever increasing number of participants from outside the Iberian peninsula.

Aim: The meetings aim to provide a forum for the exchange of ideas between researchers of different fields in differential geometry, applied mathematics and physics, and always include a substantial

number of enthusiastic young researchers amongst the participants. The Workshop is open to any topic in the interplay between geometry and physics, including classical theory of fields, control theory, integrable systems, Lie algebroids and mechanics, Lorentz geometry, mechanics of continuous media, poisson geometry, quantum gravity, quantum mechanics, relativity, Riemannian and pseudo-Riemannian geometry, string theory, supergravity and supersymmetry, and symplectic and contact geometry.

Deadline: For abstract submissions is May 31, 2014.

Information: <http://gigda.ugr.es/ifwgp2014/>.

2-7 12th AHA Conference-Algebraic Hyperstructures and its Applications, Democritus University of Thrace, School of Engineering, Department of Production and Management Engineering 67100, Xanthi, Greece International Algebraic Hyperstructures Association (IAHA). (Oct. 2013, p. 1204)

Description: The series of International Conferences on Algebraic Hyperstructures and Applications (AHA) aims at bringing together researchers and academics for the presentation and discussion of novel theories and applications of Algebraic Hyperstructures. The conference covers a broad spectrum of topics related to Algebraic Hyperstructures including (but not limited): Hypergroupoids, semi-hypergroups, hypergroups, hyperrings, hyperfields, hypervector spaces, hyperalgebras, hyperlattices, hv-structures, hv-matrices, hyperstructures associated with binary or n-ary relations, non-associative hyperstructures, join spaces, hyperstructures associated to geometric spaces, ordered hyperstructures, t-groupoids, partial semihypergroups, fuzzy algebraic hyperstructures, fuzzy/rough/soft sets and hyperstructures, cryptography, codes, assembly line design, graph and hypergraph theory, formal languages, automata, artificial intelligence, etc.

Information: <http://aha2014.pme.duth.gr>.

3-5 4th IMA Numerical Linear Algebra and Optimisation, University of Birmingham, Birmingham, United Kingdom. (Apr. 2014, p. 432)

Description: The success of modern methods 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 of common interest.

Information: http://www.ima.org.uk/conferences/conferences_calendar/4th_ima_conference_on_numerical_linear_algebra_and_optimisation.cfm.

3-5 International Workshop on Operator Theory 2014 (iWOP2014), Queen's University Belfast, Belfast, Northern Ireland. (Mar. 2014, p. 316)

Description: This meeting intends to bring together mathematicians working in the areas of Operator Theory on Banach and on Hilbert space. The program will consist of six one-hour plenary lectures by the main speakers and contributed talks by the participants.

Information: <http://iwop2014.martinmathieu.net/>.

3-5 Workshop on Finite Type Submanifolds, Istanbul Technical University, Istanbul, Turkey. (Jun/Jul. 2014, p. 660)

Description: We aim to discuss the recent process on the theory of submanifolds; in particular, finite type mappings and finite type submanifolds. We will have invited talks and also some short talks on this topic. The invited talks will last 30 minutes plus 10 minutes for question and discussion. Short talks will last 15 minutes plus 7 minutes for question and discussion. In general, we want the speaker to give more details than a 15 minute plus regular talk in a symposium, because the workshop is aiming for the participants who are related with this topic.

Information: <http://www.matmuh.itu.edu.tr/Icerik.aspx?sid=12826>.

5–6 Symposium on Trustworthy Global Computing, Rome, Italy. (Mar. 2014, p. 316)

Call for Papers: <http://www.cs.le.ac.uk/events/tgc2014/>. (co-located with Concur 2014). The Symposium on Trustworthy Global Computing is an international annual venue dedicated to secure and reliable computation in the so-called global computers, i.e., those computational abstractions emerging in large-scale infrastructures such as service-oriented architectures, autonomic systems, and cloud computing.

Highlights: Parallel submission to CONCUR 2014 allowed (see submission instructions below).

Keynote speakers: Véronique Cortier (CNRS, France) and Catuscia Palamidessi (INRIA Saclay and LIX, France).

Deadline for abstract submission: May 2, 2014. The TGC series focuses on providing frameworks, tools, algorithms, and protocols for rigorously designing, verifying, and implementing open-ended, large-scaled applications.

Information: <http://www.cs.le.ac.uk/events/tgc2014/>.

7–12 Workshop on “Exceptional Orthogonal Polynomials and Exact Solutions in Mathematical Physics”, Segovia, Spain. (Jun/Jul. 2014, p. 660)

Description: Exceptional orthogonal polynomials are dense families of Sturm-Liouville orthogonal polynomials with gaps in their degree sequence. They appear as eigenfunctions of rational extensions of exactly solvable potentials in quantum mechanics, and they are related to Darboux transformations and bispectrality in the theory of integrable systems. The past five years have seen a considerable activity in this field and we feel the time is ripe for bringing together many of the scientists who have contributed to this development, and others who might be interested in them.

Invited speakers: * to be confirmed: Alexander P. Veselov (Loughborough University, UK), Robert Milson (Dalhousie University, Canada), Antonio Durán (Universidad de Sevilla, Spain), Alexei Zhelezakov* (Donetsk Institute for Physics and Technology, Ukraine), Ryu Sasaki (Kyoto University, Japan), Luc Vinet (Centre de Recherches Mathématiques, Canada), Peter Clarkson (University of Kent, UK), Manuel Mañas (Universidad Complutense, Spain), Boris Shapiro* (Stockholm University, Sweden), Lance Littlejohn (Baylor University, United States).

Grants: There will be a limited number of grants for younger participants. Details on how to apply will be given in the website.

Information: Check the website below for detailed information on the scientific program, venue, sponsors, organizing committees, invited speakers, key dates and deadlines for abstract submissions is available, and will be updated in real time. <http://www.icmat.es/congresos/2014/xopconf/>.

8–11 CICAM 7, Seventh China-Italy Colloquium on Applied Mathematics, Palermo, Italy. (May 2014, p. 555)

Description: The Italian-Chinese Congress of Applied Mathematics was born in consequence of a long scientific collaboration between mathematicians at the University of Napoli, Catania, Bologna, Palermo and Torino and some universities of China. Over the years, there were two editions of the Conference in Napoli, three in China (Xian, Chonqing, Shanghai) and one in Catania. One of the main purposes of the conference is to strengthen and develop scientific cooperation between the research groups of Applied Mathematics, Physics and Biomathematics operating in Italy and China.

Information: <http://www.math.unipa.it/~cicam7>.

8–12 Workshop on Special Geometric Structures in Mathematics and Physics, University of Hamburg, Hamburg, Germany. (May 2014, p. 555)

Description: This 5-day workshop aims to bring together researchers in various fields of differential geometry with theoretical physicists. Each speaker will give two talks, one of which will be of a more

introductory nature, thus making the workshop accessible also for Ph.D. students.

Information: <http://www.math.uni-hamburg.de/sgeom/>.

8–17 CIMPA Research School on “Operator theory and the principles of quantum mechanics”, University Moulay Ismail, Meknes, Morocco. (Aug. 2014, p. 794)

Description: Linear Algebra and Operator Theory are powerful tools in the study of Quantum Mechanics. The main aim of this CIMPA research school is to introduce students, young researchers and all interested mathematicians having background in linear algebra and basic operator theory to the foundations of Quantum Mechanics and Quantum Information.

Information: <http://www.cimpa-ictpam.org/spip.php?article581>.

8–December 5 ICERM Semester Program: High-Dimensional Approximation, Brown University, Providence, Rhode Island. (May 2014, p. 555)

Description: This program addresses a broad spectrum of approximation problems, from the approximation of functions in norm, to numerical integration, to computing minima, with a focus on sharp error estimates. It will explore the rich connections to the theory of distributions of point-sets in both Euclidean settings and on manifolds and to the computational complexity of continuous problems. It will address the issues of design of algorithms and of numerical experiments. The program will attract researchers in approximation theory, compressed sensing, optimization theory, discrepancy theory, and information based complexity theory.

Information: <http://icerm.brown.edu/sp-f14/>.

8–December 12 Mathematics of Turbulence, Institute for Pure and Applied Mathematics (IPAM), UCLA, Los Angeles, California. (Oct. 2013, p. 1204)

Description: This IPAM program is centered on fundamental issues in mathematical fluid dynamics, scientific computation, and applications including rigorous and reliable mathematical estimates of physically important quantities for solutions of the partial differential equations that are believed, in many situations, to accurately model the essential physical phenomena. This program will bring together physicists, engineers, analysts, and applied mathematicians to share problems, insights, results and solutions. Enhancing communications across these traditional disciplinary boundaries is a central goal of the program. An application and registration form are available online.

Application deadline: June 8, 2014.

Information: <http://www.ipam.ucla.edu/programs/mt2014/>.

9–12 Summer School on Spectral Geometry, University of Göttingen, Göttingen, Germany. (Jun/Jul. 2014, p. 661)

Description: This school event is jointly organized by the Research Training Groups “Mathematical Structures in Modern Quantum Physics” (<http://www.uni-goettingen.de/en/139006.html>) in Göttingen and “Analysis, Geometry and String Theory” (<http://www.grk1463.uni-hannover.de>) in Hannover. It will give current and prospective Ph.D. students an introduction to the fascinating subject of spectral geometry, with an emphasis on microlocal techniques. A particular focus will be on parabolic and hyperbolic methods in spectral geometry, while also a discussion of analytic torsion and of spectral zeta functions is offered. Participants will have an opportunity to present a poster.

Funding: Is available to a limited number of Ph.D. students.

Information: <http://www.uni-math.gwdg.de/SpecGeo2014/>.

10–12 IMA Conference on Mathematical Modelling of Fluid Systems, University of Bath, United Kingdom. (May 2014, p. 555)

Description: As the most versatile medium for transmitting signals and power, fluids (gas or liquid) have wide usage in industry. Fluid

systems are used in machine tool applications, vehicle control systems, where high power to weight ratio, accuracy and quick response are required. Fluid systems for industrial processes often involve networks consisting of tanks, pipes, orifices, valves, pumps and other flow devices. It is important to develop a systematic method to mathematically model different types of fluid systems for safe and optimal operations.

Information: http://www.ima.org.uk/conferences/conferences_calendar/ima_conference_on_mathematical_modelling_of_fluid_systems.html

11-13 Second International Conference on Analysis and Applied Mathematics (ICAAM 2014), M. Auezov South Kazakhstan State University, Shymkent, Kazakhstan. (Apr. 2014, p. 432)

Aim: To bring mathematicians working in the area of analysis and applied mathematics together to share new trends of applications of mathematics. 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 the conference series 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://www.icaam-online.org/index/>.

14 Future Directions in Commutative Rings Inspired by the Work of Laszlo Fuchs, Tulane University, New Orleans, Louisiana. (Aug. 2014, p. 794)

Description: Laszlo Fuchs is an outstanding researcher and author, whose extraordinary productivity and influential monographs in the areas of abelian groups, ordered algebraic structures, rings, and modules, have directly impacted the growth and direction of research in these important areas of algebra for the past half century. He has published roughly 250 research papers, four very influential research monographs, and numerous lecture notes. This short conference will primarily focus on Prof. Fuchs' contributions to the theory of commutative rings, with some connections to non-commutative ring theory. His work in commutative rings accentuates the unifying nature of all his work in algebra, and is among his greatest contributions to the broader field. As impressive as his life's work is, Prof. Fuchs' most telling accomplishment has perhaps been his ability to help other researchers focus on the right problems.

14-18 Getting Started with PDE - Summer Workshop for Undergraduate and Graduate Students, Department of Mathematics, Technion - I.I.T., 32000 Haifa, Israel. (Jun/Jul. 2014, p. 661)

Description: The workshop's aim is to introduce undergraduate and graduate students in Mathematics, Science, and Engineering to a variety of subjects of current research in Partial Differential Equations and Applied Mathematics. The only required prerequisite is a basic undergraduate course in Partial Differential Equations. Four mini-courses will be given, by Xavier Cabre (Barcelona), Ross Pinsky (Technion), Jean-Michel Roquejoffre (Toulouse), and Koby Rubinstein (Technion). In addition, outreach lectures will be given by Ram Band (Technion), Haim Brezis (Rutgers University & Technion), Dan Mangoubi (Hebrew University), and Lenya Ryzhik (Stanford).

Information: http://www.math.technion.ac.il/cms/decade_2011-2020/year_2013-2014/PDE-workshop/.

15-19 AIM Workshop: Generalized persistence and applications, American Institute of Mathematics, Palo Alto, California. (Apr. 2014, p. 432)

Description: This workshop, sponsored by AIM and the NSF, will be devoted to generalizations of persistent homology with a particular emphasis on finding calculable algebraic invariants useful for applications.

Information: <http://aimath.org/workshops/upcoming/persistence>.

15-19 ICERM Semester Program Workshop: Information-Based Complexity and Stochastic Computation, Brown University, Providence, Rhode Island. (Jun/Jul. 2014, p. 661)

Description: Topics covered in the workshop will include: adaptive and nonlinear approximation for SPDEs, infinite-dimensional problems, inverse and ill-posed problems, quasi-Monte Carlo methods, PDEs with random coefficients, sparse/Smolyak grids, stochastic multi-level algorithms, SDEs and SPDEs with nonstandard coefficients, tractability of multivariate problems. This workshop will bring together researchers from these different fields. The goal is to explore connections, learn and share techniques, and build bridges.

Information: <http://icerm.brown.edu/sp-f14-w1/>.

*** 15-19 Summer School of Mathematics for Economics and Social Sciences,** Fondazione Conservatorio Santa Chiara, San Miniato, Italy.

Description: The School aims to improve the knowledge of mathematical methods among graduate students in economics and social sciences, with a focus on techniques which, albeit widespread in use, are not properly covered in typical graduate programs. The School is an interdisciplinary venue intended to foster the interaction of people coming from the communities of mathematical and social scientists. Topics: The Evolution of Games and Social Contacts: Preferences, Norms and Interactions. Participation subject to selection. 20-25 positions available.

Organizer: Centro di Ricerca Matematica Ennio De Giorgi, Pisa, Italy.

Board and support: Board and accommodation provided. On-line application: <http://www.crm.sns.it/event/304/financial.html>. Application deadline: August 1, 2014. Syllabus: Evolutionary dynamics, Norms, learning and evolution of preferences, Stochastic stability, Social networks and cooperation, Network games A working knowledge of high-level programming language (e.g. Mathematica, MATLAB, Octave) would be useful.

Information: <http://www.crm.sns.it/event/304/>.

15-19 Workshop 1: Ecology and Evolution of Cancer, Mathematical Biosciences, Institute The Ohio State University, Jennings Hall 3rd Floor, 1735 Neil Ave., Columbus, Ohio. (Jun/Jul. 2014, p. 661)

Description: This workshop will bring together cancer researchers and mathematical oncologists as well as ecologists with the aim of understanding how ecological principles can be used to understand cancer, how the mathematical tools used by theoretical ecologists could be used to gain new insights in cancer research and what principles of ecological management could be used to produce new therapies to treat cancer in the clinic.

Information: <http://mbi.osu.edu/event/?id=495>; phone: 614-292-3648.

17-20 Joint Meeting of the German Mathematical Society (DMV) and the Polish Mathematical Society (PTM), The Faculty of Mathematics and Computer Science of the Adam Mickiewicz University, Campus UAM, Morasko, 61-616 Poznań, Poland. (Jun/Jul. 2014, p. 661)

Description: The meeting is a joint initiative of the Polish Mathematical Society (Polskie Towarzystwo Matematyczne) and the German Mathematical Society (Deutsche Mathematiker-Vereinigung). Mathematicians from other countries are also cordially invited to participate. There are 10 plenary lectures, 38 thematic sessions, an open general session "Contributed Talks", and the poster session.

Plenary speakers: Zbigniew Błocki (UJ, Kraków), Joachim Escher (Univ. Hannover), Friedrich Götze (Univ. Bielefeld), Joachim Hilgert (Univ. Paderborn), Grzegorz Karch (Univ. Wrocław), Adrian Langer (Univ. Warszawa), Tomasz Schoen (UAM Poznań), Katrin Tent (Univ. Münster), Barbara Wohlmuth (Tech. Univ. München), Grzegorz Zwara (UMK, Toruń).

Information: For more information and for the program of the meeting as it becomes progressively available, please consult the web-page <http://dmv.ptm.org.pl/>.

17-20 Third International Conference of Numerical Analysis and Approximation Theory (NAAT2014), Babes - Bolyai University, Faculty of Mathematics and Computer Science, Department of Mathematics, Cluj-Napoca, Romania. (Apr. 2014, p. 432)

Description: The conference is an opportunity for meeting and sharing ideas among researchers whose interest lies in function approximation, linear approximation processes, numerical analysis, statistics, stochastic processes.

Confirmed keynote speakers: Francesco Altomare (University of Bari, Italy), Francisco - Javier Muoz - Delgado (University of Jaen, Spain), Gradimir Milovanović; (Mathematical Institute of the Serbian Academy of Sciences and Arts, Serbia), Maria Neuss - Radu (University of Erlangen-Nürenberg, Germany), Gregory M. Nielson (Arizona State University, USA), Iuliu Sorin Pop (Eindhoven University of Technology, Netherlands), Björn Schmalfuss (Friedrich-Schiller-University, Jena, Germany).

Information: <http://naat.math.ubbcluj.ro/>.

18-20 Riemann, Einstein and geometry, Institut de Recherche Mathématique Avancée, University of Strasbourg, France. (Oct. 2013, p. 1204)

Description: The conference is part of a series of bi-annual conferences "Encounter between Mathematicians and Theoretical Physicists" and it is addressed to a large audience.

Organizers: Althanase Papadopoulos (Strasbourg) and Sumio Yamada (Tokyo).

Invited speakers: Jean-Pierre Bourguignon (Paris), Mihalis Dafermos (Princeton), Erwann Delay (Avignon), Jacques Franchi (Strasbourg), Hubert Goenner (Göttingen), Eric Gourgoulhon (Observatoire de Paris), Oussama Hijazi (Nancy), Gerhard Huisken (Tübingen), Emmanuel Humbert (Tours), Marc Mars (Salamanca), Andre Neves (Imperial College, London), Richard Schoen (Stanford) and Tetsuya Shiromizu (Kyoto).

Language: English. Some of the talks will be survey talks intended for a general audience. Graduate students and young mathematicians are welcome.

Registration: Is required (and free of charge) at this link. Hotel booking can be asked for through the registration link. For practical and other questions please email the organizers: Althanase Papadopoulos, xemailathanase.papadopoulos@math.unistra.fr; Sumio Yamada, yamada@math.gakushuin.ac.jp.

Information: <http://www-irma.u-strasbg.fr/article1377.html>.

18-21 The 22-nd Conference on Applied and Industrial Mathematics CAIM 2014, University Vasile Alecsandri, Bacau, Romania. (Jun/Jul. 2014, p. 662)

Description: The sections of the conference are: Real, complex, functional and numerical analysis; partial differential equations with applications in mechanics, biology, etc.; ordinary differential equations, dynamical systems; probability theory, mathematical statistics, operation research; algebra, logic, geometry (with applications); mathematical modeling; computer science; education.

Information: http://www.romai.ro/conferintele_romai/caim2014_en.html.

* **19-21 Cincinnati Symposium on Probability Theory and Applications 2014**, University of Cincinnati, Cincinnati, Ohio.

Description: Symposium will focus on current research in limit theorems for dependent structures, specifically focusing on recent advances in martingale approximations, long-range dependence phenomena and infinite ergodic theory, and spectra of large random matrices. The Symposium will have seven hour-long talks and seven half-hour talks, as well as a poster session.

Information: <http://math.uc.edu/probability/>.

* **20 Conference on Credit Risk and Systemic Risk**, Boston University Mathematical Finance Program, Boston, Massachusetts.

Description: This event will bring together leading experts in the field. Presentations will provide perspective on issues pertaining to credit risk modeling and valuation, systemic risk and contagion, portfolio optimization with default, credit risk management and related computational and statistical methods.

Information: <http://www.bu.edu/mathfinanceconference/>.

20-21 Sectional Meeting, University of Wisconsin-Eau Claire, Eau Claire, Wisconsin. (Sept. 2013, p. 1112)

Description: 2014 Central Fall Section Meeting.

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

21-26 12th International Conference of The Mathematics Education into the 21st Century Project: The Future of Mathematics Education in a Connected World, Hunguest Hotel Sun Resort, Herceg Novi, Montenegro. (Dec. 2013, p. 1497)

Description: This long running series of conferences (since 1999) brings together many innovative movers and shakers from around the world, and is renowned for its friendly and productive atmosphere. We now welcome proposals for papers and workshops in all areas of innovation in mathematics, science, computing and statistics education. There will be four working days including a half day excursion to the nearby UNESCO World Heritage old town of Dubrovnik. The hotel is in a beautiful bay on the Balkan Adriatic coast and is easily accessible from Dubrovnik and Tivat airports.

Information: http://www.hunguesthotels.hu/en/hotel/herceg_novi/hunguest_hotel_sun_resort/.

22-25 5th International Workshop on Computational Topology in Image Context, Timisoara, Romania. (Jun/Jul. 2014, p. 662)

Description: The general aim of CTIC workshops is to gather researchers dealing with the study of topological invariants from the computational point of view, and/or who want to use topological information in image applications. The specific aim of CTIC 2014 is to focus on the interplay between various methods of image processing and in particular on multi-dimensional and multi-variate image processing and on the efficient application of these new techniques in medical imagery. The workshop intends to provide an opportunity for participants, from different fields related to computational geometry, discrete geometry, geometrical modeling, algebraic topology and image processing to exchange ideas.

Information: <http://ctic2014.synasc.ro/>.

* **22-25 International Conference on Applied and Geometrical Analysis**, Samarkand State University, Uzbekistan.

Conference organizers: 1. Samarkand State University, Uzbekistan; 2. National University of Uzbekistan, Tashkent, Uzbekistan; 3. Institute of Mathematics SB RAS, Novosibirsk, Russia; 4. Institute of Computational Mathematics and Mathematical Geophysics SB RAS, Novosibirsk, Russia; 5. Institute of Computational Technologies SB RAS, Novosibirsk, Russia National Research Novosibirsk State University, Russia; 6. Novosibirsk State Technical University, Russia. The Conference includes sightseeing Samarkand, also a trip to the city of Bukhara. Invited papers will be published in reputable peer-reviewed scientific journals. The conference abstracts will be published with ISBN assignment and registration system in RISC by the beginning of conference.

Languages: The working languages are English and Russian. The conference proceedings will be published in refereed journals worldwide.

Information: For registration visit: <http://conf.abs.uz>; email: azimkxon@gmail.com.

22-25 Workshop on Statistical Inference for Lévy Processes, Lorentz Center, Leiden, The Netherlands.

Invited speakers: Denis Belomestny; Loic Chaumont; José Manuel Corcuera; Valentine Genon-Catalot; Marc Hoffmann; Jean Jacod; Cécilia Mancini; Yuliya Mishura; Antonis Papapantoleon; Philip Protter; Markus Reiß; Viktor Todorov; Mathias Vetter.

Registration: There is no registration fee, but the number of participants is limited. For more information, particularities and registration, see the website.

Information: <http://tinyurl.com/ph86pbw>.

22–26 Boston University/Keio University workshop on Dynamical Systems, Boston University, Boston, Massachusetts. (Jun/Jul. 2014, p. 662)

Description: This is the fourth in a series of annual workshops run jointly by Boston University (US) and Keio University (Japan) and aimed at exposing young researchers to topics of interest in the two departments. This year's focus will be Dynamical Systems, and the talks will be accessible to graduate students in that area. Morning sessions will involve talks by faculty, and afternoon sessions will involve talks by graduate students and postdocs. NSF funding is available to partially support the participation of graduate students and those whose Ph.D. was awarded in 2011 or later.

Information: <http://math.bu.edu/keio2014/index.html>.

22–26 Logic and Applications - LAP 2014, Inter-University Center, Dubrovnik, Croatia. (Jun/Jul. 2014, p. 662)

Description: The conference brings together researchers from various fields of logic with applications in computer science.

Topics: Of interest include, but are not restricted to: Formal systems of classical and non-classical logic, category theory, proof theory, lambda calculus; type theory; process algebras and calculi; behavioural types, systems of reasoning in the presence of incomplete, imprecise and/or contradictory information, computational complexity, interactive theorem provers. Student sessions will be organized. The first conference Proof Systems: Sustavi dokazivanja was held in Dubrovnik on June 28, 2012, co-located with the conference LICS 2012. The second conference Logic and Applications 2013: LAP 2013 was held in Dubrovnik, September 16–20, 2013.

Information: <http://imft.ftn.uns.ac.rs/math/cms/LAP2014>.

22–26 Workshop on Tensor Valuations in Stochastic Geometry and Imaging, Sandbjerg Estate, Soenderborg, Denmark. (Aug. 2014, p. 794)

Description: This workshop is dedicated to the mathematical theory and the application of tensor valuations in stochastic geometry and imaging. The workshop is a result of our desire to bring together researchers from stochastic geometry and imaging, who have an interest in the underlying mathematical theory of tensor valuations, along with mathematicians who have an interest in the (potential) application areas of tensor valuations. Also in recent years, there have been very important advances in the mathematical theory of tensor valuations, for instance, concerning the algebraic structure of tensor valuations and the characterization of local tensor measures. At the same time, tensor valuations are starting to be used in a number of research areas, primarily with the purpose of quantifying the morphology and anisotropy of complex spatial structures. At the workshop, overview lectures will be given by experts in the field. The workshop will also have shorter research talks.

Information: <http://csgb.dk/activities/2014/tensor/>.

22–30 Summer school and conference on Finsler geometry and its applications, University of the Aegean, Island of Samos, Greece. (Jun/Jul. 2014, p. 662)

Description: Summer school and conference on Finsler geometry and its applications, including metric geometry and Teichmüller theory. Ph.D. students and young researchers are welcome. There will be a series of courses given by Norbert A'Campo (Basel), Dimitri Burago (Penn State), Yuri Burago (Moscow), Bill Goldman (Maryland), Olivier Guichard (Strasbourg), Viktor Schroeder (Zürich), and Sumio Yamada (Tokyo). There will also be talks by other participants.

Registration: There is no registration fee and the organizers will help in finding lodging in Samos during the conference. To register, contact the organizers A. Papadopoulos and G. Tsapogas, email:

papadop@math.unistra.fr and email: georgios.tsapogas@gmail.com.

Information: <http://myria.math.aegean.gr/conferences/finsler14/>.

23–25 3rd International Conference on Mathematical Applications in Engineering 2014, Kuala Lumpur, Malaysia. (Mar. 2014, p. 316)

Description: We are pleased to invite you and all your colleagues to participate in our great event, the 3rd International Conference on Mathematical Applications in Engineering 2014 (ICMAE.14).

Main objective: Of organizing this conference is to provide an international technical forum for engineers, academicians, scientists and researchers to present results of ongoing research in the field of Mathematical Applications in Engineering. The primary focus of the conference is to create an effective medium for institutions and industries to share ideas, innovations and problem solving techniques. For your information the past two conferences (ICMAE 2010, ICMAE2012) were sponsored by many good scientific journals and selected papers were published in those journals, which we are planning to do this time as well.

Information: <http://www.ium.edu.my/icmae/14/>.

*** 25 International Workshop on Nonlinear Analysis and Applications to Economics (Dedicated to Professor Dušan Repovš on his 60th birthday)**, Department of Mathematics, University of Craiova, Romania.

Description: Nonlinear Analysis is nowadays one of the most collaborative and active scientific research fields as it has been increasingly involving the participation of experts from other disciplines. The aim of this Workshop on Applied Nonlinear Analysis is to present some successful achievements in this rapidly collaborative field, in strong relationship with relevant models in economics. The workshop is dedicated to Professor Dušan Repovš (University of Ljubljana) on his 60th birthday and for his honorary degree of Doctor Honoris Causa of the University of Craiova.

Invited Speakers: Massimiliano Ferrara (Univ. of Reggio Calabria), Giovanni Molica Bisci (Univ. of Reggio Calabria), Raffaella Servadei (Univ. of Calabria), Nicu Marcu (Univ. of Craiova).

Local Organizer: Vicentiu Radulescu.

Information: <http://www.math.ucv.ro/~repovs2014>.

26–28 Entropy and Singular Solutions for Conservation Laws; Pressureless Gas Dynamics and Other Applications, West Virginia University, Morgantown, West Virginia. (Aug. 2014, p. 794)

Description: For most of the significant equations of mathematical physics, it is impossible to show the existence of classical solutions even starting out from smooth initial values. On the other hand, if we consider distributional weak solutions, they fail to be unique. To overcome this obstacle, we use the entropy criterion as one of the admissibility criteria compatible with the Second Law of Thermodynamics, to help us single out a unique physically meaningful solution. Recently, the entropy criterion has also been used in connection with systems of pressureless gases to ensure uniqueness of solutions. This arises as a consequence of a deeper connection between scalar Conservation Laws (with rather general flux functions) and Pressureless Gas systems. Despite classical results on existence, uniqueness and stability of entropy solutions for Conservation Laws, there are applications that require the accommodation of more general, uncommon flux functions.

Information: <http://math.wvu.edu/entropy2014/>.

29–October 1 MBI Boot Camp: How to Simulate and Analyze Your Cancer Models with COPASI, Mathematical Biosciences Institute, The Ohio State University, Jennings Hall 3rd Floor, 1735 Neil Ave., Columbus, Ohio. (Jun/Jul. 2014, p. 662)

Description: Mathematical models typically start out in simple form. One writes down a few differential equations, estimates the parameters, explores the output, and checks to see if it can predict behavior reasonably well. After that, the process begins to take on

a life of its own. Since the model is greatly abstracted and simplified, it captures some aspects of the system, but fails in others, so new variables and more inputs are added. Alternative mechanisms are investigated. At some point, the question arises: How can one tell if this is a good model?

Aim: The aim of this bootcamp is to provide tools that provide good cancer models. We will frame the question in a way that respects both the biology and the underlying mathematics. Two organizers of the bootcamp, Pedro Mendes and Stefan Hoops, have spent the last twenty years creating a bridge between these paradigms, in the form of a software package called COPASI (COmplex PAthway Simulator). COPASI is a simulation software that allows one to translate the biochemical interactions between species into dynamical systems represented by the sets of either stochastic or deterministic equations. COPASI developers have created a user-friendly graphical interface, which can help researchers to apply sophisticated analytical tools to their models. This workshop provides an introduction to the ease and power of the software.

Information: <http://mbi.osu.edu/event/?id=757>; phone: 614-292-3648.

29-October 3 AIM Workshop: Quantum curves, Hitchin systems, and the Eynard-Orantin theory, American Institute of Mathematics, Palo Alto, California. (May 2014, p. 555)

Description: This workshop, sponsored by AIM and the NSF, will be devoted to establishing a mathematical theory of quantum curves.

Information: <http://aimath.org/workshops/upcoming/quantumcurves>.

29-October 3 ICERM Semester Program Workshop: Approximation, Integration, and Optimization, Brown University, Providence, Rhode Island. (Jun/Jul. 2014, p. 662)

Description: The workshop is devoted to the following problem of fundamental importance throughout science and engineering: how to approximate, integrate, or optimize multivariate functions. The workshop will bring together leading experts in approximation, compressed sensing and optimization.

Information: <http://icerm.brown.edu/sp-f14-w2/>.

29-October 3 International Conference on Numerical and Mathematical Modeling of Flow and Transport in Porous Media, Centre for Advanced Academic Studies (CAAS), 20000 Dubrovnik, Croatia. (Jan. 2014, p. 92)

Description: The aim of the conference is to bring together researchers, scientists, engineers, and students to exchange and share their experiences, new ideas, and research results about modeling, analysis and simulation of flow and transport in porous media and application to problems including subsurface hydrology, petroleum exploration, contaminant remediation, carbon sequestration and nuclear waste storage.

Information: <http://www.caas.unizg.hr/>; <http://nm2porousmedia.math.pmf.unizg.hr/index.html>.

October 2014

5-11 International Conference on Algebraic Methods in Dynamical Systems (Conference in honour of the 60th birthday of Juan J. Morales-Ruiz), Universidad del Norte, Barranquilla, Colombia. (Jan. 2014, p. 92)

Main topics: Linear Differential Galois Theory, Non-linear Differential Galois Theory, Difference Galois Theory, Integrability of Dynamical Systems, Integrability of Partial Differential Equations, Integrability in Quantum Mechanics, Painlevé Transcendents.

Scientific committee: Jean-Pierre Ramis, President (Université Paul Sabatier, France), José Manuel Aroca (Universidad de Valladolid, Spain), Andrzej Maciejewski (University of Zielona Góra, Poland), Hiroshi Umemura (Nagoya University, Japan), and Alexander Veselov (Loughborough University, United Kingdom).

Organizing committee: Primitivo Acosta-Humánez (Universidad del Norte, Colombia), David Blázquez-Sanz (Universidad Nacional de Colombia, seccional Medellín), Camilo Sanabria (Universidad de los Andes, Colombia), and Sergi Simón (University of Portsmouth, United Kingdom).

Information: <http://www.scm.org.co/eventos/AMDS2014/>; <http://www.scm.org.co/eventos/AMDS2014/>; email: amds.bcn@gmail.com; +575 3 509 509 ext. 4844.

6-9 Methods of Noncommutative Geometry in Analysis and Topology, Leibniz University Hannover, Hannover, Germany. (Jun/Jul. 2014, p. 663)

Description: The event will gather experts in the noncommutative geometry community, with Kasparov's bivariant K-theory as the unifying theme. A focal point of the workshop will be the Baum-Connes conjecture, which for three decades has been a central problem in this field, bringing together geometry, topology, and analysis. This has led to both new fundamental ideas as well as interactions with other fields of mathematics. Notable applications encompass index theory, mathematical physics, dynamical systems and the classification of C*-algebras. There will be a poster session to promote the interaction between junior researchers and experts in the field.

Information: <http://www.math-conf.uni-hannover.de/methodsncg14/de/>.

9-10 The Eighth International Conference on Provable Security (ProvSec 2014), The University of Hong Kong, Hong Kong. (Aug. 2014, p. 794)

Description: Provable security is an important research area in modern cryptography. Cryptographic primitives or protocols without a rigorous proof cannot be regarded as secure in practice. In fact, there are many schemes that were originally thought of as secure but eventually broken, which clearly indicates the need of formal security assurance. With provable security, we are confident in using cryptographic schemes and protocols in various real-world applications. Meanwhile, schemes with provable security sometimes give only theoretical feasibility rather than a practical construction, and correctness of the proofs may be difficult to verify. ProvSec conference thus provides a platform for researchers, scholars and practitioners to exchange new ideas for solving these problems in the provable security area.

Information: <http://home.ie.cuhk.edu.hk/~provsec14>.

***9-10 International Conference on Quantitative Finance, Insurance and Risk-Management In honor of Profs. Michel Crouhy and Nicole El Karoui,** Marrakech, Morocco.

Description: This Conference is in honor of Professors Michel Crouhy and Nicole El Karoui, two of the foremost contributors to quantitative finance and risk-management, and examples of honorable scientists and very devoted researchers.

12-14 Information Security, the Seventeenth International Conference (ISC 2014), The University of Hong Kong, Hong Kong. (Aug. 2014, p. 794)

Description: The Information Security Conference (ISC) is an annual international conference covering research in theory and applications of Information Security. ISC aims to attract high quality papers in all technical aspects of information security.

Information: <http://isc14.ie.cuhk.edu.hk>.

13-17 AIM Workshop: Positivity, graphical models, and modeling of complex multivariate dependencies, American Institute of Mathematics, Palo Alto, California. (Apr. 2014, p. 432)

Description: This workshop, sponsored by AIM and the NSF, will be devoted to studying functions that preserve Loewner properties on (distinguished submanifolds of) the cone of positive semidefinite matrices.

Information: <http://aimath.org/workshops/upcoming/modelmultivar>.

13-17 **Fundamental Groups and Periods**, Institute for Advanced Study, Princeton, New Jersey. (Aug. 2014, p. 794)

Description: A workshop held as part of the yearlong program "Topology of Algebraic Varieties" at the Institute for Advanced Study. It is largely a mystery which groups can be the fundamental group of a smooth complex projective varieties. Hodge theory gives many restrictions on the possible fundamental groups, but there is a big gap between the known examples and the known restrictions. One goal of the workshop is to present the latest work on the possible fundamental groups of algebraic varieties. A second theme is the study of periods, the numbers obtained as integrals of algebraic functions. Multiple zeta values are special periods which are intimately related with the category of mixed Tate motives over the integers.

Information: <http://www.topalg2014.org/home/activities/workshop-1>.

13-17 **MBI Workshop 2: Metastasis and Angiogenesis**, Mathematical Biosciences Institute, The Ohio State University, Jennings Hall 3rd Floor, 1735 Neil Ave., Columbus, Ohio. (Jun/Jul. 2014, p 663)

Description: This workshop will address the mathematical and computational issues that arise from models of angiogenesis and metastasis. Such models are frequently hybrid models, that describe cells (either those building the vessel or those involved in metastasis) at a detailed level that treats their biochemical and mechanical responses to their environment, and couple this cell-based description with partial differential equations that describe the mechanics of the surrounding tissue and the reaction and transport of growth factors and chemotactic signals. Major topics to be treated are how to model the movement of single cells through the extracellular matrix, how to describe in sufficient detail the process by which new vessels grow toward a tumor, how to cope with the computational problems raised by such hybrid models, and what the implications are for our understanding of the underlying basic science and how that understanding can be translated into improved therapeutic regimens.

Information: <http://mbi.osu.edu/event/?id=496>; phone: 614-292-3648.

* 16-18 **International Conference on Special Functions & Applications - ICSFA 2014**, Thapar University, Patiala, India.

Description: ICSFA 2014 is XIII Annual Conference of the Society for Special Functions and their Applications (SSFA) hosted by School of Mathematics and Computer Applications, Thapar University. The Conference will provide a common platform for interaction, exchange of ideas and latest developments in the field of Special Functions and various related fields of mathematical sciences. The day-to-day activities during the conference are designed to be interactive, involving sessions like plenary lectures, invited talks and paper presentation sessions, covering a wide range of topics including Special Functions, Lie Theory, Orthogonal Polynomials, Fractional Calculus, Number Theory, Combinatorics, q-theory, etc.

Information: <http://www.ssfaindia.webs.com/conf.htm>.

17-19 **Conference "Inverse Problems and Spectral Theory" in honor of the 65th anniversary of Peter Kuchment**, Texas A&M University, College Station, Texas. (Aug. 2014, p. 795)

Description: The conference will feature 40-minute talks by invited speakers and a poster session for contributed presentations. A limited amount of financial support for travel is available on a competitive basis. Strong preference will be given to young researchers (less than 5 years after Ph.D.), postdoctoral fellows, and graduate students. Women and members of underrepresented groups are especially encouraged to apply. Further information and updates about the conference are available at: <http://www.math.tamu.edu/~berko/ipst/index.html>.

Information: <http://www.math.tamu.edu/~berko/ipst/index.html>.

17-19 **Georgia Algebraic Geometry Symposium 2014**, University of Georgia, Athens, Georgia. (Jun/Jul. 2014, p. 663)

Description: General conference on the latest topics in algebraic geometry.

Funding: Is available for graduate students and young researchers.

Speakers: Ana-Maria Castravet (Ohio), Christopher Hacon (Utah), Jun-Muk Hwang (KIAS, Seoul), Robert Lazarsfeld (Stony Brook), Diane Maclagan (Warwick, UK), Davesh Maulik (Columbia), Mircea Mustata (Michigan), Karl Schwede (Penn State).

Information: <http://gags.torsor.org/conf2014/>.

* 17-19 **Informal Analysis and Probability Seminar**, University of Michigan, Ann Arbor, Michigan.

Description: This conference will feature lecture series by Olivier Guédon (Concentration Phenomena in High-Dimensional Analysis) and Fedor Nazarov (The Logarithmic Bound for the Average Number of Real Zeros of Random Polynomials with I.I.D. Coefficients). The lectures are designed to be accessible to graduate students. The conference is being co-organized by the Analysis/Probability group at the University of Michigan, and the Analysis group at Kent State University.

Information: For registration and further information regarding funding, see: <http://dept.math.lsa.umich.edu/conferences/informalAnalysis/>.

17-19 **Yamabe Memorial Symposium 2014: Current Topics in the Geometry of 3-Manifolds**, School of Mathematics, University of Minnesota, Minneapolis, Minnesota 55455 (Jun/Jul. 2014, p. 663)

Description: The eight speakers will be: Ian Agol, UC Berkeley; Mladen Bestvina, Utah; Jeremy Kahn, CUNY-German Center; Ursula Hammenstaedt, Bonn; Ciprian Manolescu, UCLA; Mahan Mj, RKM Vivekananda University, India; Vlad Markovic, Cambridge; Stefano Vidussi, UCRiverside.

Sponsor: The Symposium is sponsored by NSF with additional support from the UMN School of Math. and the Yamabe endowment.

Financial support: Is available, especially for grad students, postdocs, and young researchers. An application/registration form is on the Symposium website. Applicants who are members of the GEAR Network (see <http://math.illinois.edu/GEAR/GEARNodes.pdf>) or are grad students or postdocs associated with GEAR members may be able to use GEAR resources to facilitate Symposium attendance. For information see: <http://gear/math.illinois.edu/programs>.

Deadline: For applications for Symposium funding is Wednesday August 6, 2014. Later applications will be considered if funds allow. But all interested mathematician are invited to attend.

Information: <http://www.math.umn.edu/yamabe/>.

18-19 **Sectional Meeting**, Dalhousie University, Halifax, Canada. (Sept. 2013, p. 1112)

Description: 2014 Fall Eastern Sectional Meeting.

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

20-24 **Autumn school on nonlinear geometry of Banach spaces and applications**, Métabief, France. (Mar. 2014, p. 317)

Description: In the framework of the special trimester "Geometric and non-commutative methods in functional analysis" at Université Franche-Comté (Besançon, France) we organize this "Autumn school on nonlinear geometry of Banach spaces and applications" in the nearby village of Métabief in the Jura mountains. The school will propose 5 short courses delivered by mathematicians working in this domain. We hope to bring together researchers and students with common interest in the field. There will be many opportunities for informal discussions.

Information: <http://trimestres-lmb.univ-fcomte.fr/fa>.

22-24 **International Conference in Modeling Health Advances 2014**, UC Berkeley, San Francisco Bay Area, California. (Apr. 2014, p. 432)

Description: The purpose of this conference is to bring all the people working in the area of epidemiology under one roof and

encourage mutual interaction. The conference ICMHA'14 is held under the World Congress on Engineering and Computer Science WCECS 2014. The WCECS 2014 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 has 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: 978-988-19252-0-6). 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*.
Information: <http://www.iaeng.org/WCECS2014/ICMHA2014.html>.

22-24 28th Midwest Conference on Combinatorics and Combinatorial Computing, University of Nevada, Las Vegas (UNLV), Las Vegas, Nevada. (Feb. 2014, p. 214)

Description: The Midwest Conferences on Combinatorics and Combinatorial Computing (MCCCC) are of small size (50 to 70 participants) and have been growing slowly. Papers cover a spectrum of pure and applied combinatorics, including graph theory, design theory, enumeration, and combinatorial computing. For 28th MCCCC, the invited speakers are: Brian Alspach; Saad El-Zanati; Futaba Fujie-Okamoto; Joseph Gallian; Margaret Readdy; Ian Wanless. Contributed papers (15-20 minutes talks) are very welcomed.

Information: <http://www.mcccc.info>.

23-25 The Tenth Mississippi State Conference on Differential Equations & Computational Simulations, Mississippi State University, Starkville, Mississippi. (Jun/Jul. 2014, p. 663)

Description: This interdisciplinary conference will provide a joint forum where mathematicians, scientists and engineers from industries, federal laboratories and academia can exchange research and development ideas. An overall goal of this conference is to promote research and education in mathematical and computational analysis of theoretical and applied differential equations. In addition to the ten principal lectures, there will be sessions for twenty minute contributed talks. This conference is dedicated to Ratnasingham Shivaji in celebration of his 60th birthday, his outstanding contributions to differential equations, and his service to Mississippi State University. Conference participants are encouraged to submit full length manuscripts after the conference. Reviewed manuscripts will be published as a special issue of the *Electronic Journal of Differential Equations*.

Deadline: For pre-registration and abstract submission is September 5, 2014.

Information: <http://www.ccs.msstate.edu/deconf/de2014/>.

23-26 Ahlfors-Bers Colloquium VI, Yale University, New Haven, Connecticut. (Oct. 2013, p. 1204)

Description: This conference is the sixth in a series of triennial colloquia devoted to the mathematical legacy of Lars Ahlfors and Lipman Bers. The core heritage is in geometric function theory, quasiconformal mapping, Teichmüller theory and Kleinian groups, hyperbolic manifolds, and partial differential equations including Schramm/Stochastic-Loewner-Evolution/Equations. Today we see the influence of Ahlfors and Bers on algebraic geometry, mathematical physics, dynamics, probability, geometric group theory, number theory and topology.

25-26 Sectional Meeting, San Francisco State University, San Francisco, California. (Sept. 2013, p. 1112)

Description: 2014 Fall Western Section Meeting.

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

27-31 AIM Workshop: Configuration spaces of linkages, American Institute of Mathematics, Palo Alto, California. (Apr. 2014, p. 433)

Description: This workshop, sponsored by AIM and the NSF, will be devoted to the mathematical study of configuration spaces of linkages consisting of rigid bars connected by revolute joints embedded in an ambient space of fixed dimension.

Information: <http://aimath.org/workshops/upcoming/linkages>.

27-31 Conference on Geometric Functional Analysis and its Applications, Université de Franche-Comté, Besann, France. (Mar. 2014, p. 316)

Description: To bring together researchers and students with common interest in this field. The conference will propose many plenary lectures and the participants will have the opportunity to deliver a short talk.

Information: <http://trimestres-lmb.univ-fcomte.fr/fa>.

27-31 ICERM Semester Program Workshop: Discrepancy Theory, Brown University, Providence, Rhode Island. (Jun/Jul. 2014, p. 663)

Description: The participants of this workshop will share a wide range of views on topics related to discrepancy with an eye towards the recent developments in the subject. The workshop will bring together different communities working on various aspects of discrepancy theory. The exchange of ideas and approaches, the cross-fertilization of viewpoints, sharing the visions of near and far term goals of the field will be the highlight of the conference.

Information: <http://icerm.brown.edu/sp-f14-w3/>.

November 2014

1-December 31 Scalar Curvature in Manifold Topology and Conformal Geometry, Institute for Mathematical Sciences, National University of Singapore, Singapore. (Jun/Jul. 2014, p. 664)

Description: The purpose of the program is to bring together researchers working on the areas to communicate ideas and dig out the connections as well as stimulate possible research collaboration. Activities 1. Workshop on Positive Curvature and Index Theory: November 17-21, 2014 2. Workshop on Partial Differential Equation and its Applications: December 8-12, 2014. 3. Winter School on Scalar Curvature and Related Problems: December 16-19, 2014. There will be four mini-courses. 4. Public Lecture.

Information: <http://www2.ims.nus.edu.sg/Programs/014scalar/index.php>.

2-3 5th International Conference on Mathematics and Natural Sciences 2014, Institut Teknologi Bandung, Bandung, Indonesia. (Aug. 2014, p. 795)

Description: The 5th International Conference on Mathematics and Natural Sciences (ICMNS) is organized jointly by Faculty of Mathematics and Natural Sciences (FMIPA), School of Life Sciences and Technology, and School of Pharmacy at Institut Teknologi Bandung, Indonesia.

Aim: The main aim of this conference is to promote multi- and interdisciplinary researches in sciences and related technology and its applications. The scope of the conference is in the fields of, but not limited to: food sciences, health and medical sciences, biosciences and biotechnology, environmental sciences, pharmaceutical sciences, physical sciences, material sciences, mathematics and its applications, computer science and computational science, earth and space sciences, sustainable energy. Accepted papers will be published in the American Institute of Physics (AIP) Conference Proceedings (indexed by SCOPUS).

Information: <http://icmns.fmipa.itb.ac.id/pages/home.php>.

3-7 AIM Workshop: Combinatorics and complexity of Kronecker coefficients, American Institute of Mathematics, Palo Alto, California. (Apr. 2014, p. 433)

Description: This workshop, sponsored by AIM and the NSF, will be devoted to the study of Kronecker coefficients which describe the

decomposition of tensor products of irreducible representations of a symmetric group into irreducible representations.

Information: <http://aimath.org/workshops/upcoming/kroncoeff>.

3–7 MBI Current Topic Workshop on Axonal Transport and Neuronal Mechanics, Mathematical Biosciences Institute, The Ohio State University, Jennings Hall 3rd Floor, 1735 Neil Ave., Columbus, Ohio. (Apr. 2014, p. 433)

Description: The goal of this workshop is to bring together leading cell biologists, engineers, physicists, and mathematicians to openly discuss exciting new findings, long-standing questions, and the future of our field. The timeliness of this meeting and its relevance to the mission of the MBI is most evident from three recent reviews by the organizers (Bressloff and Newby, 2013; Franze et al., 2013; Suter and Miller, 2011). In brief these reviews discuss the emerging role of forces in axonal elongation, mathematical models that have been developed to study the contribution of axonal transport to elongation, and the importance of developing mathematical models to study neuromechanics.

Information: <http://mbi.osu.edu/event/?id=817>; phone: 614-292-3648.

5–8 Fifth Ya.B. Lopatinskii International Conference of Young Scientists on Differential Equations and Its Applications, Donetsk National University, Donetsk, Ukraine. (Mar. 2014, p. 316)

Description: This is bringing together young and some venerable researchers in above areas in order to get acquainted, to communicate and to understand what directions are actual and perspective. The word “young” in the title means a general direction of the conference but doesn’t mean any age limitations for participants.

Main topics: General theory of boundary-value problems for partial differential equations (PDE), investigation of boundary-value problems for special classes of PDE, nonlinear boundary-value problems, operator methods in the theory of PDE, mathematical physics, ordinary differential equations and dynamical systems, applications of PDE.

Information: <http://math.donnu.edu.ua/en-us/science/conferences/ICL2014>.

6–9 International Conference on Recent Advances in Pure and Applied Mathematics (ICRAPAM 2014), Club Sera Hotel, Antalya, Turkey. (Jun/Jul. 2014, p. 664)

Description: ICRAPAM 2014 is an international forum for mathematicians, scientists and engineers to present their latest research and development results in all areas of Pure and Applied Mathematics and their possible advanced applications in real life. The Conference has a distinguished Organizing Committee and Scientific Committee with extensive academic qualifications, ensuring that the conference maintains high scientific standards and has a broad international coverage. All the papers are subject to rigorous peer-review by at least two members of scientific committee or additional reviewers. The technical program will consist of keynote speakers by eminent specialists, oral presentation of the contributed papers and posters of the work-in-progress. Full versions of the accepted abstracts will be published in the journals listed on the conference website.

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

8–9 Sectional Meeting, University of North Carolina, Greensboro, North Carolina. (Sept. 2013, p. 1112)

Description: 2014 Fall Southeastern Section Meeting.

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

9–14 LISA ‘14: 28th Large Installation System Administration Conference, Sheraton Seattle Hotel, Seattle, Washington. (Jun/Jul 2014, p. 664)

Description: USENIX’s Large Installation System Administration (LISA) conference — now in its 28th year — is the premier meeting place for professionals who make computing work across a variety

of industries. If you’re an IT operations professional, site-reliability engineer, system administrator, architect, software engineer, researcher, or otherwise involved in ensuring that IT services are effectively delivered to others — this is your conference, and we’d love to have you here.

Information: <http://www.usenix.org/conference/lisa14>.

11–January 25 Inverse Moment Problems: The Crossroads of Analysis, Algebra, Discrete Geometry and Combinatorics, Institute for Mathematical Sciences, National University of Singapore, Singapore. (Sept. 2013, p. 1112)

Description: Applications of moments of measures in polynomial optimization led to a number of breakthroughs in optimization and real algebraic geometry, as well as to better understanding of ways to encode measures. Other similar threads are recently seen in the theory of integration on polytopes and counting of integer points in polytopes, as well as in quantum computing. The aim of the program is to further investigate relations between these topics and inverse moment problems, i.e., questions of reconstructing measures from a set of its moments, which are traditionally attacked by purely analytic tools. Activities will include two 4–5 day research conferences, one quantum computing workshop, and one graduate student winter school/workshops.

Information: <http://www2.ims.nus.edu.sg/Programs/014inverse/index.php>.

13–15 SIAM Conference on Financial Mathematics and Engineering (FM14), The Palmer House, A Hilton Hotel, Chicago, Illinois. (May 2014, p. 555)

Description: The Activity Group on Financial Mathematics and Engineering focuses on research and practice in financial mathematics, computation, and engineering. Its goals are to foster collaborations among mathematical scientists, statisticians, computer scientists, computational scientists, and researchers and practitioners in finance and economics, and to foster collaborations in the use of mathematical and computational tools in quantitative finance in the public and private sector. The activity group promotes and facilitates the development of financial mathematics and engineering as an academic discipline.

Information: <http://www.siam.org/meetings/fm14/>.

14–15 Blackwell-Tapia Conference and Awards Ceremony, Institute for Pure and Applied Mathematics (IPAM), UCLA, Los Angeles, California. (Aug. 2014, p. 795)

Description: IPAM is honored to host the 2014 Blackwell-Tapia Conference and Awards Ceremony. The conference and prize honors 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. The conference will offer a mix of activities including scientific talks, poster presentations, panel discussions, ample opportunities for discussion and interaction, and the awarding of the Blackwell-Tapia Prize. Participants will come from all career stages and will represent institutions of all sizes across the country.

Support: Applications for travel support are due September 15, 2014. Please consult the webpage for more information.

Information: <http://www.ipam.ucla.edu/programs/BTAP2014/>.

14–17 Conference on Mathematics and its Applications-2014, Kuwait University, Kuwait City, Kuwait. (May 2014, p. 555)

Description: The Conference on Mathematics and its Applications-2014 (CMA-2014) is broad-based spanning Algebra, Analysis, Discrete Mathematics, and Inverse Problems and Imaging.

Aim: Is to highlight the latest advances in different areas of mathematics and emphasize their applications to other disciplines. The conference will gather renowned scholars in mathematics from around the world and provide a forum to exchange ideas and discuss

research findings, as well as to form new inter-disciplinary connections among the participants.

Information: <http://cma2014.science.ku.edu.kw>.

17-21 AIM Workshop: Bounded gaps between primes, American Institute of Mathematics, Palo Alto, California. (May 2014, p. 556)

Description: This workshop, sponsored by AIM and the NSF, will focus on the remarkable progress made in the last year on gaps between prime numbers.

Information: <http://aimath.org/workshops/upcoming/primegaps2>.

17-21 Categorical Structures in Harmonic Analysis, Mathematical Sciences Research Institute, Berkeley, California. (Jun/Jul 2014, p. 664)

Description: The workshop will focus on the role of categorical structures in number theory and harmonic analysis, with an emphasis on the setting of the Langlands program. Celebrated examples of this theme range from Lusztig's character sheaves to Ngo's proof of the Fundamental Lemma. The workshop will be a forum for researchers from a diverse collection of fields to compare problems and strategies for solutions.

Information: <http://www.msri.org/workshops/708>.

17-21 MBI Workshop on Cancer and the Immune System, Mathematical Biosciences Institute, The Ohio State University, Jennings Hall 3rd Floor, 1735 Neil Ave., Columbus, Ohio. (Jun/Jul. 2014, p. 664)

Description: The present workshop will bring together cancer biologists and mathematical modelers to review the state of present knowledge and explore future directions. It will also provide an environment that will encourage communication and new contacts among the biologists and mathematicians. Formal lecture and informal discussions will articulate future directions where mathematical models can significantly enhance understanding of the complex relations between tumor cells and the immune cells, and suggest novel approaches to therapy.

Information: <http://mbi.osu.edu/event/?id=498>; phone: 614-292-3648.

24-26 The 3rd International Conference on Complex Dynamical Systems and Their Applications: New Mathematical Concepts and Applications in Life Sciences, TOBB University of Economics and Technology University (TOBB ETU), Ankara, Turkey. (Aug. 2014, p. 795)

Description: Within CDSC 2014 we will honor Professor Marat Akhmet on the occasion of his 60th birthday. The aims of this conference are to promote, encourage and bring together researchers in the different research areas (Mathematics, Engineering, Medicine, Physics, Biology, etc.), and to unite our energy and possibilities in this direction. Also, we aim to establish a platform at which the novel research ideas of this area will be shared. CDSC became a regular annual organization since 2012.

Information: <http://cdss2014.org/>.

24-28 IV International scientific conference of students and young scientists "Theoretical and Applied Aspects of Cybernetics" (TAAC-2014), Cybernetics Faculty of Taras Shevchenko National University of Kyiv, Kyiv, Ukraine. (Aug. 2014, p. 795)

Description: The scientific program of the conference includes the following sections: Computer science, applied mathematics, artificial intelligence, software engineering. Before today three International Conferences of Students and Young Scientists Theoretical and Applied Aspects of Cybernetics were held at the Faculty of Cybernetics of Taras Shevchenko National University of Kyiv in 2011, 2012, and 2013. Participants from more than 40 universities and 5 research institutes of Ukraine, Russia, Belorussia, Kazakhstan, Poland, Latvia, Lithuania, Estonia, Hungary, Slovakia, Czech Republic, Romania, Moldova, Turkey, Great Britain, Bulgaria, Georgia, Finland, and India attended these conferences.

Information: <http://taac.org.ua>.

26-29 International Congress on Music and Mathematics, University of Guadalajara, Puerto Vallarta, Mexico. (May 2014, p. 556)

Description: In the context of the 20th anniversary of the University Center for Exact Sciences and Engineering (CUCET-UdeG, Mexico), and the 40th anniversary of the National Center for Music Research, Documentation and Information (CENIDIM-INBA, Mexico), this Congress will focus on the relationship between music and mathematics, both applied and pure, understood as systems, techniques, technologies, theories, and creative work. International and interdisciplinary contributions are highly appreciated. The Congress will examine the essentials of analogous thought and its meaning and functioning in the broadest sense of abstract forms in music. A wider view on music and mathematics will be also considered. The venue will bring together scholars, researchers, students and artists from many disciplines, converging within the announced topics. We welcome innovative and unexpected proposals on topics that address diverse aspects of music and mathematics.

Information: <http://icmm.cucei.udg.mx/>.

26-30 The 19th Asian Technology Conference in Mathematics (ATCM 2014), State University of Yogyakarta, Yogyakarta, Indonesia. (Mar. 2014, p. 316)

Description: The ATCM 2014 is an international conference to be held in Mumbai, India, that will continue addressing technology-based issues in all Mathematical Sciences. Thanks to advanced technological tools such as computer algebra systems (CAS), interactive and dynamic geometry, and hand-held devices, the effectiveness of our teaching and learning, and the horizon of our research in mathematics and its applications continue to grow rapidly. The aim of this conference is to provide a forum for educators, researchers, teachers and experts in exchanging information regarding enhancing technology to enrich mathematics learning, teaching and research at all levels. English is the official language of the conference. ATCM averagely attracts 300 participants representing over 30 countries around the world. Be sure to submit your abstracts or full papers in time.

Information: <http://atcm.mathandtech.org>.

27-29 Annual meeting of the French research network (GdR) in Noncommutative Geometry, Besancon, France. (Mar. 2014, p. 317)

Description: This 3-day workshop is an annual meeting of the French Non-commutative Geometry network, with international participation. The topics include also quantum groups, geometric group theory, operator algebras, operator spaces. The workshop is a part of a trimester in Functional Analysis of the University of Franche-Comte (Besann). The trimester includes also other events, in particular a School on Operator Spaces, Non-commutative Probability and Quantum Groups (December 1-12, Metabief, close to Besann) and a conference on Operator spaces and Quantum Probability (December 15-19, Besann).

Information: <http://trimestres-lmb.univ-fcomte.fr/Noncommutative-Geometry-meeting.html>.

December 2014

1-5 AIM Workshop: Beyond Kadison-Singer - paving and consequences, American Institute of Mathematics, Palo Alto, California. (Jun/Jul. 2014, p. 664)

Description: This workshop, sponsored by AIM and the NSF, will be devoted to broadening the recent proof of the Kadison-Singer Problem and to exploring its consequences.

Information: <http://aimath.org/workshops/upcoming/beyondks>.

1-5 38th Australasian Conference on Combinatorial Mathematics and Combinatorial Computing (ACMCC), Victoria University of Wellington, Wellington, New Zealand. (Mar. 2014, p. 317)

Description: Contributed talks will be sought from all areas of discrete and combinatorial mathematics and related areas of computer science.

Invited speakers: Mike Atkinson (University of Otago); Simeon Ball (Universitat Politècnica de Catalunya); Alice Devillers (University of Western Australia); Jaroslav Nesetril (Charles University); Sergey Norin (McGill University); James Oxley (Louisiana State University); Andrew Thomason (University of Cambridge); Mark Wilson (University of Auckland); Stefan van Zwam (Princeton University).

Queries: Should be sent to the head of the organising committee, Dillon Mayhew (dillon.mayhew@mcs.victoria.ac.nz).

Information: <http://mcs.victoria.ac.nz/Events/38ACCMCC>.

1–5 Automorphic forms, Shimura varieties, Galois representations and L-functions, Mathematical Sciences Research Institute, Berkeley, California. (Jun/Jul. 2014, p. 664)

Description: L-functions attached to Galois representations coming from algebraic geometry contain subtle arithmetic information (conjectures of Birch and Swinnerton-Dyer, Deligne, Beilinson, Bloch and Kato, Fontaine and Perrin-Riou). Langlands has predicted the existence of a correspondence relating these L-functions to L-functions of automorphic forms which are much better understood. The workshop will focus on recent developments related to Langlands correspondence (construction of Galois representations attached to automorphic forms via the cohomology of Shimura varieties, modularity of Galois representations...) and arithmetic of special values of L-functions. It will be dedicated to Michael Harris as a tribute to his enormous influence on the themes of the workshop.

Information: <http://www.msri.org/workshops/719>.

1–5 International Conference on Applied Mathematics — in honour of Professor Roderick S. C. Wong's 70th Birthday, City University of Hong Kong, Tat Chee Avenue, Kowloon Tong, Hong Kong. (May 2014, p. 556)

Description: The objectives of the conference are to review and discuss some of the latest trends in various fields of applied mathematics. In particular, with a special emphasis on asymptotic and special functions, partial differential equations, computational mathematics, approximation theory, mathematical physics, mathematical biology and financial mathematics. The conference is dedicated to Professor Roderick in recognition of his mathematical achievements and his contributions in the mathematical society. During the conference, the William Benter Prize in Applied Mathematics 2014 will be awarded, and the recipient will give a plenary lecture. The aim of the Prize is to recognize outstanding mathematical contributions that have had a direct and fundamental impact on scientific, business, finance and engineering applications.

Information: <http://www6.cityu.edu.hk/rcms/icam2014/index.htm>.

1–5 (NEW DATE) International Conference on Pure and Applied Mathematics, Goroka 2014: ICPAM-GOROKA (2014), University of Goroka, Goroka, Eastern Highlands Province, Papua, New Guinea.

Description: ICPAM-GOROKA 2014, aims at bringing together experts in different fields of pure and applied mathematics, as well as researchers, undergraduates and postgraduate students from around the world to discuss mathematical questions, exchange high level knowledge of methods and investigate diverse applications of Pure and Applied Mathematics to astronomy, biology, business, banking, chemistry, computer science, education, engineering, geosciences, health care, medicine, physics, security, the military, etc. Academia and industries are invited to participate.

Information: <http://icpam-goroka2014.blogspot.com>.

1–12 Winter School on Operator Spaces, Non-commutative Probability and Quantum Groups, Métébief, France. (Feb. 2014, p. 214)

Description: This two-week school will include 6 courses on quantum groups, operator spaces and non-commutative probability.

The venue is located in a village in Jura mountains, France, close to the Swiss border. This school is a part of a trimester in Functional Analysis of the University of Franche-Comte (Besançon). The trimester includes also other events, in particular a workshop on Non-commutative Geometry (November 27–29, Besançon) and a conference on Operator spaces and Quantum Probability (December 15–19, Besançon).

Information: <http://trimestres-lmb.univ-fcomte.fr/Christmas-School.html>.

6–31 The Info-Metrics Annual Prize in Memory of Halbert L. White Jr., Washington, DC. (Feb. 2014, p. 214)

Description: The Info-Metrics Institute is pleased to announce the creation of the Halbert L. White Jr. prize in memory of one of the Institute's founding board members who passed away on March 31, 2012. The prize is intended to reward outstanding academic research by an early career scholar in the field of info-metrics and carries an award of \$2000 to be conferred either to an individual or shared among joint recipients. A maximum of one prize will be awarded each year. The award ceremony will occur at the first Info-Metrics meeting (conference or workshop) following the announcement of the award recipient. The annual Info-Metrics prize will be given for the best recent published work, in any academic discipline, that is deemed likely to bring important advances to multiple academic disciplines in the area of info-metrics (the science and practice of inference and quantitative information processing). The first prize will be given in 2014.

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

8–10 IMA Conference on Game Theory and its Applications, St. Anne's College, Oxford, United Kingdom. (Jun/Jul 2014, p. 665)

Topics: Include the following and are invited to be presented in oral and poster sessions: Search Games with Human and Animal Agents; Equilibrium Computation; Game Theory for Sustainability; Game Theory and Cyber-Security; Game Theory for Auctions and Markets; Gameification.

Call for Papers: Papers will be accepted for the conference based on a 500-word abstract for oral or poster presentation. Abstracts should be submitted by Friday, September 5, 2014 by e-mail to: conferences@ima.org.uk. Successful authors will be notified by Friday, September 26, 2014. Please state whether your title is intended for oral or poster presentation.

Organizing Committee: Rahul Savani (University of Liverpool)-Chair; Steve Alpern (Warwick University), Co-chair; Dragan Pleskonjic (GTECH); Gopal Ramchurn (University of Southampton).

Information: http://ima.org.uk/conferences/conferences_calendar/game_theory_and_its_applications.html.

8–12 AIM Workshop: Transversality in contact homology, American Institute of Mathematics, Palo Alto, California. (May 2014, p. 556)

Description: This workshop, sponsored by AIM and the NSF, will bring together specialists in symplectic and contact topology with the goals of clarifying the gaps in current arguments concerning the definition of contact homology and of moving forward to fill these gaps and build precise foundations for the cylindrical, linearized, local, and possibly other versions of contact homology.

Information: <http://aimath.org/workshops/upcoming/transcontacthom>.

8–12 8th Australia – New Zealand Mathematics Convention, University of Melbourne, Melbourne, Australia. (Apr. 2014, p. 433)

Description: The Australia – New Zealand Mathematics Convention is held every six years. It is the combined meeting of the Australian and New Zealand Mathematical Societies and it will also include the 2014 annual meeting of ANZAMP - the Australian and New Zealand Association of Mathematical Physics.

Information: <http://www.austms2014.ms.unimelb.edu.au>.

9–10 First call for the training programme “Collaborative Mathematical Research”, Centre de Recerca Matemàtica, Bellaterra, Barcelona, Spain. (Mar. 2014, p. 317)

Description: First call for the training programme “Collaborative Mathematical Research”.

Information: <http://www.crm.cat/en/ResearchTraining/CollabMathResearch/Pages/Description.aspx>.

9–19 Recent Advances in Operator Theory and Operator Algebras-2014, Bangalore, India. (Dec. 2013, p. 1497)

Description: This conference is a continuation of the earlier conferences and workshops on operator theory and operator algebras held in Indian Statistical Institute, Bangalore. The main goal of the workshop and the conference is to bring together the leading worldwide experts and young researchers, including postdocs and advanced doctoral students working in operator theory, operator algebra and related topics. The topics of interest include, but are not limited to: operator algebras, operator theory, function theory, multivariable operator theory, free probability, groups and dynamical system. The meeting will start with a workshop December 9–13, 2014, followed by a conference December 15–19, 2014. The purpose of the workshop is to bring experts and students as well as researchers together to discuss the most recent developments

Information: <http://www.isibang.ac.in/~jay/OTOA2014/OTOA14/OTOA14.html>.

9–20 Vertex algebras, W-algebras, and applications, Centro di Ricerca Matematica Ennio De Giorgi, Pisa, Italy. (Jun/Jul. 2014, p. 665)

Description: In Winter 2014–2015, a trimester on “Perspectives in Lie Theory” will be held at Centro de Giorgi. The first session of this trimester will be devoted to “Vertex algebras, W-algebras, and applications”. This session will include a seminar, time for discussions and collaboration, and three minicourses held by Tomoyuki Arakawa (Kyoto University), Victor Kac (MIT), and Fedy Malikov (University of Southern California). <http://www.crm.sns.it/event/293/>. More information can be found at: <http://www.crm.sns.it/event/293/activities.html#title>.

10–12 I Brazilian Congress of Young Researchers in Pure and Applied Mathematics, Mathematics and Statistics Institute, University of São Paulo, São Paulo, Brazil. (Aug. 2014, p. 795)

Description: In Brazil, due to its continental dimensions with several universities distant from major research centers, many new Ph.D. graduates join these universities and end up distancing themselves from their original research groups. This often hinders the development of their research and, consequently, their ongoing professional career. For this reason, young researchers decided to create an appropriate framework to share research results, thus giving rise to “I Brazilian Congress of Young Researchers in Pure and Applied Mathematics”.

Information: <http://jovens.ime.usp.br/jovens/en>.

11–20 Foundations of Computational Mathematics Conference, Universidad de la República, Montevideo, Uruguay. (Feb. 2014, p. 214)

Description: The conference, organized by the Society for Foundations of Computational Mathematics, is eighth in a sequence that commenced with the Park City, Rio de Janeiro, Oxford, Minneapolis, Santander, Hong Kong and Budapest FoCM meetings. The conference format consists of plenary invited lectures in the mornings and theme-centered parallel workshops in the afternoons. Each workshop extends over three days and the conference will consist of three periods, comprises of different themes. We encourage the participants to attend the full conference.

Information: http://www.fing.edu.uy/~jana/www2/focm_2014.html.

15–17 10th IMA International Conference on Mathematics in Signal Processing, Austin Court, Birmingham, United Kingdom. (Jun/Jul. 2014, p. 665)

Description: Signal processing constitutes an important area for the application of mathematical concepts and techniques fuelled, for example, by developments in mobile communications, networks, multimedia system, genomics and bioengineering, neural signal processing, and big data processing. The subject is still advancing rapidly in areas such as non-linear signal processing and systems, compressive sampling, digital communication systems, iterative estimation, blind deconvolution/signal separation, broadband systems, compressed sensing and novel sampling schemes. 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/>.

16–17 1st International Conference on Security Standardisation Research, Royal Holloway, University of London (RHUL), Egham Hill, Egham, United Kingdom. (Jun/Jul. 2014, p. 665)

Description: Over the last two decades a very wide range of standards have been developed covering a wide range of aspects of cyber security. These documents have been published by national and international formal standardisation bodies, as well as by industry consortia. Many of these standards have become very widely used. Despite their wide use, there will always be a need to revise existing security standards and to add new standards to cover new domains. The purpose of this conference is to discuss the many research problems deriving from studies of existing standards, the development of revisions to existing standards, and the exploration of completely new areas of standardisation. This conference is intended to cover the full spectrum of research on security standard.

Information: <http://www.ssr2014.com>.

19–21 International Conference on Current Developments in Mathematics and Mathematical Sciences (ICCDMMS-2014), Calcutta Mathematical Society, AE-374, Sector-1, Salt Lake City, Kolkata-700064 West Bengal, India. (Apr. 2014, p. 433)

Description: The main objective of ICCDMMS-2014 is to promote mathematical research and to focus the recent advances in mathematics and mathematical sciences along with their applications. The conference aims to provide an ideal platform for the young researchers throughout the world to interact with senior scientists, to exchange their views and ideas and to initiate possible scientific collaboration in different domains.

Talks: The programme will consist of plenary invited talks as well as contributed presentations. Thrust areas of ICCDMMS-2014: i) Algebra, ii) Analysis, iii) Geometry and Topology, iv) Continuum Mechanics, v) Mathematical and Theoretical Physics, vi) Financial Mathematics, vii) Complex Phenomena and Dynamical Systems, viii) Space Research and Atmospheric Sciences, ix) Stochastic Processes, x) Numerical Techniques and Simulations, xi) Soft Computing, xii) Number Theory, xiii) Information Theory, xiv) General Relativity and Cosmology.

Information: Contact email: cmsconf@gmail.com; Contact No.: +91-33-2337 8882; <http://www.calmathsoc.org/>.

19–21 2014 Fourth International Conference on Emerging Applications of Information Technology (EAIT 2014), Indian Statistical Institute, Kolkata, India. (May 2014, p. 556)

Description: Encouraged by the earlier responses and keeping the tradition CSI Kolkata Chapter is organizing EAIT 2014 during Dec 19–21, 2014. The event will comprise of Pre-Conference Tutorials, plenary sessions, invited lectures by eminent speakers of international repute, session papers and panel discussions. Original unpublished contributions are solicited for presentation at EAIT 2014. Papers cannot be submitted in parallel to any other conference or journal.

Topics: Of interest include but are not limited to: Image Processing, Computer Vision and Pattern Recognition; Machine Learning, Data

Mining and Computational Life Sciences; Management of Data including Big Data and Analytics; Distributed and Mobile Systems including Grid and Cloud infrastructure; Information Security and Privacy. Please check conference website for more details and updates.

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

* 19–21 **Workshop on Mathematical Biology and Nonlinear Analysis**, The University of Miami, Coral Gables, Florida.

Description: This workshop will highlight how methods and ideas from nonlinear analysis have been applied to problems arising in ecology, epidemiology, evolution, and other areas of biology, and how questions from biology have in turn motivated new research into nonlinear problems in dynamical systems, control theory, partial differential equations, and other areas.

Plenary speakers: William Fagan, Suzanne Lenhart, Simon Levin, Paul Rabinowitz, and Hal Smith. There will be special sessions on mathematical biology, nonlinear analysis, and reaction-diffusion equations and dynamical systems. Special session presentations are by invitation only, but all interested researchers are welcome to register and attend the workshop. We particularly encourage graduate students, recent Ph.D.'s and members of underrepresented groups to participate.

Funding: We anticipate a small amount of funding to support travel for young researchers who do not have their own travel funds; email: wmbna@math.miami.edu.

Information: <http://math.miami.edu/wmbna>.

21–23 **8th International Conference of IMBIC on "Mathematical Sciences for Advancement of Science and Technology (MSAST 2014)"**, IMBIC, Salt Lake City, Kolkata, India. (Jun/Jul. 2014, p. 665)

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 of IMBIC*, Volume 3 (2014), having ISBN 978-81-925832-2-8, except for a few full scientific papers of high quality, which may be published in the highly acclaimed series of monographs of IMBIC. Many scientists from India, USA, Japan, Canada, Sweden, France, Germany, Finland, Australia, Russia, Egypt, Mexico, Algeria, Botswana, Korea, South Africa, and many other countries participated in the earlier conferences.

Contact: All correspondences in respect to the conference are to be addressed to Dr. Avishek Adhikari, Convenor MSAST 2014 & Secretary, IMBIC; email: msast.paper@gmail.com; http://www.isical.ac.in/~avishek_r/.

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

* 21–23 **International Conference on Recent Trends in Mathematical Analysis and Its Applications**, Indian Institute of Technology Roorkee, Roorkee-247667 Uttarakhand, India.

Description: This conference aims to bring together the experts and young researchers from all over the world to discuss the recent developments in Mathematical Analysis and to promote exchange of ideas in various applications of Mathematical Analysis in Science and Engineering. This conference will encourage the international collaboration and provide an opportunity to young researchers to learn the current state of research in their related fields. This conference will be organized at the Indian Institute of Technology Roorkee, Roorkee, India.

Information: <http://www.iitr.ac.in/icrtmaa14>.

January 2015

1–March 31 **High Performance and Parallel Computing for Materials Defects and Multiphase Flows**, Institute for Mathematical Sciences, National University of Singapore, Singapore. (Jun/Jul. 2014, p. 666)

Description: The program activities will consist of three workshops, tutorial lectures, public lectures, working seminars, and collaborative research. 1. Collaborative Research: January 1–March 31, 2015. 2. Workshop I: January 12–16, 2015. Title: Recent Advances in Parallel and High Performance Computing Techniques and Applications 3. Workshop II: February 9–13, 2015. Title: High Performance and Parallel Computing Methods and Algorithms for Materials Defects 4. Workshop III: March 2–6, 2015. Title: High Performance and Parallel Computing Methods and Algorithms for Multiphase/Complex Fluids. 5. Tutorial and Public Lectures—Distinguished researchers will give tutorial and public lectures on topics in high performance and parallel computing with applications in material defects and complex fluids.

Information: <http://www2.ims.nus.edu.sg/Programs/015hiper/index.php>.

4–6 **ACM-SIAM Symposium on Discrete Algorithms (SODA15), being held with Analytic Algorithmics and Combinatorics (ANALCO15) and Algorithm Engineering and Experiments (ALENEX15)**, The Westin Gaslamp Quarter, San Diego, California. (Feb. 2014, p. 214)

Description: Information on SODA, ALENEX and ANALCO will be available at <http://www.siam.org/meetings/da15/> in May 2014.

Information: <http://www.siam.org/meetings/da15/>.

5–9 **AIM Workshop: Tumor-immune dynamics**, American Institute of Mathematics, Palo Alto, California. (Jun/Jul. 2014, p. 665)

Description: This workshop, sponsored by AIM and the NSF, will be devoted to mathematical and computational modeling of tumor-immune dynamics.

Information: <http://aimath.org/workshops/upcoming/tumoriimmune2>.

5–June 26 **Periodic and Ergodic Spectral Problems**, Isaac Newton Institute for Mathematical Sciences, Cambridge, United Kingdom. (Mar. 2013, p. 365)

Description: The main objective of the programme is to bring together specialists in three major themes: periodic, almost-periodic, and random operators, to discuss recent developments and deep connections between the methods intrinsic for each of these research areas. Operators on manifolds or graphs and more general ergodic operators will also be considered, as well as problems that lie at the interface of the main topics (e.g. “sheared” periodic operators), and applications in other areas of mathematics (e.g. geometry). At the beginning of the programme, there will be a two-week long instructional conference with six mini-courses of about ten lectures each, which will be designed for students and non-specialists. Further there will be three workshops evenly spread over the period of the programme to cover more advanced results, each centred on one of the main themes. Several workshops will take place during the programme. For full details please see <http://www.newton.ac.uk/events.html>.

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

12–16 **Multiple Sequence Alignment**, Institute for Pure and Applied Mathematics (IPAM), UCLA, Los Angeles, California. (Aug. 2014, p. 795)

Description: Despite the importance of MSA estimation and active research, many challenges persist. The research community is addressing them through improved mathematical formalization of MSA estimation; development of sophisticated and biologically meaningful models of sequence evolution that include insertions, deletions, and rearrangements; and design of new methods that have good mathematical properties and empirical performance for large datasets. This workshop will engage researchers from different fields, including mathematicians, statisticians, evolutionary biologists, structural biologists, and computer scientists, with the aim of integrating diverse viewpoints, improving mathematical

foundations, and developing new and more powerful methods for estimating MSAs.

Support: Applications for travel support are due November 17, 2014. Please consult the webpage for more information.

Information: <http://www.ipam.ucla.edu/programs/MSA2015/>.

12-May 22 Dynamics on Moduli Spaces of Geometric Structures Program, Mathematical Sciences Research Institute, Berkeley, California. (Jan. 2014, p. 117)

Description: The program will focus on the deformation theory of geometric structures on manifolds, and the resulting geometry and dynamics. This subject is formally a subfield of differential geometry and topology, with a heavy infusion of Lie theory. Its richness stems from close relations to dynamical systems, algebraic geometry, representation theory, Lie theory, partial differential equations, number theory, and complex analysis.

Information: <http://www.msri.org/web/msri/scientific/programs/show/-/event/Pm9002>.

12-July 3 Random Geometry, Isaac Newton Institute for Mathematical Sciences, Cambridge, United Kingdom. (Mar. 2013, p. 365)

Description: A new frontier has emerged at the interface between probability, geometry, and analysis, with a central target to produce a coherent theory of the geometry of random structures. The principal question is the following: within a given structure, what is the interplay between randomness and geometry? More precisely, does the geometry appear to be random at every scale (i.e. fractal), or do fluctuations “average out” at sufficiently large scales? Can the global geometry be described by taking a suitable scaling limit that allows for concrete computations? The goal of the programme is to gather experts from probability, geometry, analysis and other connected areas, in order to study aspects of this question in some paradigmatic situations. Several workshops will take place during the programme. For full details please see <http://www.newton.ac.uk/events.html>.

Information: <http://www.newton.ac.uk/programmes/RGM/index.html>.

15-16 Connections for Women: Dynamics on Moduli Spaces of Geometric Structures, Mathematical Sciences Research Institute, Berkeley, California. (Jun/Jul. 2014, p. 665)

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 areas related to the program. The workshop will also include a panel discussion featuring successful women at various stages in their mathematical careers.

Information: <http://www.msri.org/workshops/739>.

19-February 6 Lie Theory and Representation Theory, Centro di Ricerca Matematica Ennio De Giorgi, Pisa, Italy. (Jun/Jul. 2014, p. 665)

Description: In Winter 2014-2015, a trimester on “Perspectives in Lie Theory” will be held at Centro de Giorgi. The second session of this trimester will be devoted to the topic “Lie Theory and Representation Theory”. This session will include a seminar, time for discussions and collaboration, and three minicourses held by Alexander Premet (University of Manchester), Vera Serganova (University of California, Berkeley) and Geordie Williamson (Max-Planck-Institute, Bonn).

Information: <http://www.crm.sns.it/event/293/>. More information can be found at: <http://www.crm.sns.it/event/293/activities.html#title>.

20-23 AIM Workshop: Inference in high-dimensional regression, American Institute of Mathematics, Palo Alto, California. (Aug. 2014, p. 795)

Description: This workshop, sponsored by AIM and the NSF, will be devoted to exploring recent methodological and theoretical advances in inference for high-dimensional statistical models.

Information: <http://aimath.org/workshops/upcoming/inferencehighdim>.

20-23 Introductory Workshop: Dynamics on Moduli Spaces of Geometric, Mathematical Sciences Research Institute, Berkeley, California. (Jun/Jul. 2014, p. 665)

Description: The deformation theory of geometric structures on manifolds is a subfield of differential geometry and topology, with a heavy infusion of Lie theory. Its richness stems from close relations to dynamical systems, algebraic geometry, representation theory, Lie theory, partial differential equations, number theory, and complex analysis. The introductory workshop will serve as an overview to the program. It aims to familiarize graduate students, post-docs, and other researchers to the major topics of the program. There will be a number of short courses.

Information: <http://www.msri.org/workshops/740>.

26-30 AIM Workshop: Graph Ramsey Theory, American Institute of Mathematics, Palo Alto, California. (Jun/Jul. 2014, p. 665)

Description: This workshop, sponsored by AIM and the NSF, will be devoted to graph Ramsey theory. The main topics of the workshop are Hypergraph Ramsey numbers, Generalized Ramsey numbers, and Geometric Ramsey theorems.

Information: <http://aimath.org/workshops/upcoming/graphramsey>.

26-30 Symmetry and Topology in Quantum Matter, Institute for Pure and Applied Mathematics (IPAM), UCLA, Los Angeles, California. (Aug. 2014, p. 795)

Description: Topological phases of matter are remarkable both for their richness of physical phenomena, and for their mathematical description by topological quantum field theories (TQFTs). Recently, the prediction and experimental discovery of topological insulators has spurred physicists to explore the role of symmetry in topological phases, leading to the identification of new classes of phases of matter, and new insights into their classification, properties, and potential physical realizations. This is an area with a history of strong connections between physics and mathematics, and the time is ripe for the emerging understanding of symmetric topological phases to benefit from new mathematical ideas in TQFTs, and vice versa. This interdisciplinary workshop will bring together theoretical physicists and mathematicians to discuss symmetric topological phases and TQFTs, with a goal of forging productive new interactions between these communities.

Deadline: Applications are due December 1, 2014.

Information: <http://www.ipam.ucla.edu/programs/stq2015/>.

29-30 Connections for Women: Geometric and Arithmetic Aspects of Homogeneous Dynamics, Mathematical Sciences Research Institute, Berkeley, California. (Aug. 2014, p. 796)

Description: This workshop will consist of several mini-courses given by prominent female mathematicians in the field, intended for graduate students, post-docs, and researchers in areas related to the program. The workshop will also include an informal panel discussion session among female researchers on career issues.

Information: <http://www.msri.org/workshops/741>.

February 2015

2-6 MBI Workshop on Tumor Heterogeneity and the Microenvironment, Mathematical Biosciences Institute, The Ohio State University, Jennings Hall 3rd Floor, 1735 Neil Ave., Columbus, Ohio. (Jun/Jul. 2014, p. 665)

Description: Most solid tumors present as dense fibrotic masses, which suggests that fibroblasts contribute to tumor growth by infiltrating and depositing extracellular matrix proteins. Fibroblasts act in wound healing, angiogenesis and tissue remodeling by releasing growth factors and proteases such as matrix metalloproteinases. Therefore, if the growing tumor can co-opt such fibroblasts it has

an unlimited source of many of the fundamental elements required for growth and invasion. The two central themes of this workshop are: - Heterogeneity (be it phenotypic, signaling or genotypic), and - Microenvironment (ECM, nutrients, fibroblasts and immune cells). Since a highly heterogeneous tumor has the potential to adapt to any microenvironment, understanding how interactions between the growing tumor and its microenvironment modulate tumor heterogeneity is critical to unraveling the mechanisms of cancer initiation.

Information: <http://mbi.osu.edu/event/?id=819>; phone: 614-292-3648.

2–March 8 ICERM Semester Program: Phase Transitions and Emergent Properties, Brown University, Providence, Rhode Island. (Mar. 2014, p. 317)

Description: Emergent phenomena are properties of a system of many components which are only evident or even meaningful for the collection as a whole. A typical example is a system of many molecules, whose bulk properties may change from those of a fluid to those of a solid in response to changes in temperature or pressure. The basic mathematical tool for understanding emergent phenomena is the variational principle, most often employed via entropy maximization. The difficulty of analyzing emergent phenomena, however, makes empirical work essential; computations generate conjectures and their results are often our best judge of the truth. The semester will include three workshops that will concentrate on different aspects of current interest, including unusual settings such as complex networks and quasicrystals, the onset of emergence as small systems grow, and the emergence of structure and shape as limits in probabilistic models.

Information: <http://icerm.brown.edu/sp-s15>.

*** 4–6 Computational Photography and Intelligent Cameras**, Institute for Pure and Applied Mathematics (IPAM), UCLA, Los Angeles, California.

Description: Computational photography is a new area of computer graphics and vision, seeking to create new types of photographs and to allow photographers to acquire better images or images they never could observe before. This involves research into new software algorithms for fusing data from multiple images, video streams, or other types of sensors as well as into new hardware architectures for capturing the data needed for the software and numerical processing. Applications of computational photography paradigms include compressed sensing cameras, extended depth of field/refocussing, high dynamic range images, invertible motion blurs, and plenoptic cameras, and mathematics is an important tool for inventing and optimizing these new cameras. This workshop will serve as a gathering place for all those interested in theories, algorithms, methodologies, hardware designs, and experimental studies in computational photography.

Deadline: Applications are due December 10, 2014. Consult the webpage for more information.

Information: <http://www.ipam.ucla.edu/programs/CP2015/>.

8–28 Algebraic topology, geometric and combinatorial group theory, Centro di Ricerca Matematica Ennio De Giorgi, Pisa, Italy. (Jun/Jul. 2014, p. 665)

Description: In Winter 2014–2015, a trimester on “Perspectives in Lie Theory” will be held at Centro de Giorgi. The third session of this trimester will be devoted to “Algebraic topology, geometric and combinatorial group theory”. This session will include a seminar, time for discussions and collaboration, and three minicourses held by Vic Reiner (University of Minnesota), Ulrike Tillmann (University of Oxford), and Karen Vogtmann (University of Warwick).

Information: More information can be found at: <http://www.crm.sns.it/event/293/activities.html#title>; <http://www.crm.sns.it/event/293/>.

9–13 Crystals, Quasicrystals and Random Networks, Brown University, Providence, Rhode Island. (Mar. 2014, p. 317)

Description: In this workshop we will focus on two significant variants of this classic picture: quasicrystals, and complex networks/random graphs. The analogue of energy minimizing crystals for quasicrystals are aperiodic tilings, such as the kite and dart tilings of Penrose, and for complex networks the analogue of energy minimizing crystals are (multi-partite) extremal graphs, graphs which minimize the number of subgraphs of some type. The workshop will focus on extremal graphs and aperiodic tilings and on the ‘solid’ phases they are believed to yield when random defects are introduced. It is hoped that progress can be made by pooling the expertise of researchers interested in the various aspects of these subjects.

Information: <http://icerm.brown.edu/sp-s15-w1>.

9–13 Zariski-dense Subgroups, Institute for Pure and Applied Mathematics (IPAM), UCLA, Los Angeles, California. (Aug. 2014, p. 796)

Description: This workshop will survey the recent progress in the study of Zariski-dense subgroups (both arithmetic and non-arithmetic) of semi-simple algebraic groups; the impact of this work on adjacent areas such as algebraic groups, division algebras, and Galois cohomology; and applications in further areas such as geometry (isospectral and length-commensurable locally symmetric spaces) and combinatorics (expander graphs). These developments have led to new connections between different areas of mathematics (algebra, number theory, algebraic and Lie groups, differential geometry and topology, and combinatorics), and the workshop will bring together people working in those areas, using the subject of Zariski-dense subgroups as a common thread to build new scientific connections as well as to solve new problems that have recently appeared.

Deadline: Applications for travel support are due December 15, 2014. Please consult the webpage for more information.

Information: <http://www.ipam.ucla.edu/programs/ZDS2015/>.

16–20 MBI Workshop on Treatment, Clinical Trials and Resistance of Cancer, Mathematical Biosciences Institute, The Ohio State University, Jennings Hall 3rd Floor, 1735 Neil Ave., Columbus, Ohio. (Jun/Jul. 2014, p. 667)

Description: This workshop will focus on two broad topics: Mathematical modeling of cancer treatment strategies and how to model resistance of cancers to drug treatments. Use of mathematical models to compare clinical trial arms and virtually simulate clinical trials outcomes. The workshop will highlight modeling applications that are as close as possible to direct clinical impact including design of multi-institutional clinical trials for patient-specific radiation dose strategies, quantification of patient-specific response to treatment that can be useful in predicting outcomes and treatment design, as well as include discussions of sequencing of drug treatments, optimal scheduling, and modeling of combination therapies which are useful in rapidly mutating diseases, such as cancer and HIV. The workshop will also discuss ways to implement the use of mathematical models in a clinical setting.

Information: <http://mbi.osu.edu/event/?id=820>; phone: 614-292-3648.

23–27 Machine Learning for Many-Particle Systems, Institute for Pure and Applied Mathematics (IPAM), UCLA, Los Angeles, California. (Aug. 2014, p. 796)

Description: This workshop will address the reaches and limitations of ML as applied to many-particle systems and highlight examples where physical models can be successfully combined with ML algorithms. The workshop aims to create novel synergistic collaborations between researchers in two different fields: modeling of many-particle (quantum and classical) systems and machine learning. Interactions between many constituent particles generally give rise to collective (or emergent) phenomena in matter. Even when the interactions between the particles are well defined and the governing

equations of the system are understood, the collective behavior of the system as a whole does not trivially emerge from these equations.

Deadline: Applications for travel support are due January 1, 2015. Consult the webpage for more information.

Information: <http://www.ipam.ucla.edu/programs/ml2015/>.

25-March 1 **Introductory Workshop**, Uppsala University, Uppsala, Sweden. (Jun/Jul. 2014, p. 667)

Description: Satellite of the Representation theory program at the Institute Mittag-Leffler.

Invited speakers: Alexander Alldridge (Cologne), Henning Haahr Andersen (Arhus), Karin Baur (Graz), Eleonore Faber (Toronto), Vyacheslav Futorny (Sao Paulo), Martin Herschend (Uppsala), Bernard Leclerc (Caen), Marco Mackaay (Algarve), Vanessa Miemietz (UEA), Idun Reiten (Trondheim), Claus Michael Ringel (Jeddah/Shanghai), Anne-Laure Thiel (Uppsala), Michela Varagnolo (Cergy-Pontoise), Eric Vasserot (Paris VII), Yu Zhou (Bielefeld).

Organizers: Aslak Bakke Buan and Volodymyr Mazorchuk.

Deadline: January 10, 2015.

Information: <http://www.math.uu.se/IW2015/>; email: iw2015@math.uu.se.

March 2015

9-12 **Broad Perspectives and New Directions in Financial Mathematics**, Institute for Pure and Applied Mathematics (IPAM), UCLA, Los Angeles, California. (Aug. 2014, p. 796)

Description: This IPAM “long program” will address the stability of the network of financial institutions, the impact of high frequency and algorithmic trading, the financialization of the commodity markets, and the huge challenges raised by the size and the speed of trade data. This program will bring together academic mathematicians, economists, regulators, and experts from the finance industry to seed research — even if speculative — in these areas. The program will open with tutorials, and will be punctuated by four major workshops and a culminating workshop. Long program participants will participate for extended periods up to the entire length of the program. Applications for individual workshops are separate and are posted on individual workshop home pages. Applications for the long program will be accepted through December 9, 2014, but decisions will be made starting in July. Please consult the webpage for more information.

Information: <http://www.ipam.ucla.edu/programs/fm2015/>.

14-18 (UPDATED) **SIAM Conference on Computational Science and Engineering (CSE15)**, The Calvin L. Rampton Salt Palace Convention Center, Salt Lake City, Utah. (Jun/Jul. 2014, p. 667)

Description: Call for Participation Now Available! The SIAM CS&E conference seeks to enable in-depth technical discussions on a wide variety of major computational efforts on large problems in science and engineering, foster the interdisciplinary culture required to meet these large-scale challenges, and promote the training of the next generation of computational scientists. We especially encourage submissions of posters to CSE15, where we will have expanded poster sessions, including demos and thematic groups of posters (or poster minisymposia), as well as poster prizes. New at CSE15: Poster Minisymposia (including demos). A minisymposium of posters (that is, a minisympositerium) consists of a collection of three or more posters by different presenters grouped around a central theme. The posters will be co-located in the poster viewing area.

Deadlines: Submission: July 31, 2014. Abstracts for contributed and minisymposium speakers August 21, 2014: Abstracts for contributed posters and minisympositerium posters (thematic groups). Travel Fund Application: August 7, 2014: SIAM Student Travel Award and Post-doc/Early Career Travel Award Applications Twitter hashtag: #SIAMCSE15 Contact SIAM Conference Department at <http://meetings@siam.org> with any questions about the conference.

Information: <http://www.siam.org/meetings/cse15/index.php>.

* 16-20 **6th International Conference on High Performance Scientific Computing**, Hanoi, Vietnam.

Description: The conference is jointly organized by Heidelberg Institute of Theoretical Studies (HITS), Institute of Mathematics, Vietnam Academy of Science and Technology, Interdisciplinary Center for Scientific Computing (IWR), University of Heidelberg, and Vietnam Institute for Advanced Study in Mathematics.

Topics: Mathematical modeling, numerical simulation, methods for optimization and control, parallel computing (architectures, algorithms, tools and environments), software development applications of scientific computing (in physics, mechanics, hydrology, chemistry, biology, medicine, transport, logistics, site location, communication, scheduling, industry, business, finance...). The conference proceedings with selected high-quality contributions will be published by Springer.

Information: <http://hpsc.iwr.uni-heidelberg.de/HPSCHanoi2015/>.

16-20 **Small Clusters, Polymer Vesicles and Unusual Minima**, Brown University, Providence, Rhode Island. (Mar. 2014, p. 317)

Description: This workshop will explore emergent phenomena in the context of small clusters, supramolecular self-assembly and the shape of self-assembled structures such as polymer vesicles. The emphasis will be on surprises which arise when common conditions are not satisfied, for instance when the number of components is small, or they are highly non-spherical, or there are several types of components. Interactions vary from hard sphere repulsion to competition between coarse-grained liquid-crystalline ordering competing with shape deformation.

Information: <http://icerm.brown.edu/sp-s15-w2>.

18-20 **IAENG International Conference on Scientific Computing 2015**, Royal Garden Hotel, Hong Kong. (Aug. 2014, p. 796)

Description: The IAENG International Conference on Scientific Computing (ICSC'15) will take place in Hong Kong, 18-20 March, 2015. The conference ICSC'15 is held under the International MultiConference of Engineers and Computer Scientists 2015. The IMECS 2015 is organized by the International Association of Engineers (IAENG), a non-profit international association for the engineers and the computer scientists.

Information: <http://www.iaeng.org/IMECS2015/ICSC2015.html>.

23-27 **AIM Workshop: Dynamical algebraic combinatorics**, American Institute of Mathematics, Palo Alto, California. (Aug. 2014, p. 796)

Description: This workshop, sponsored by AIM and the NSF, will focus on dynamical systems arising from algebraic combinatorics.

Information: <http://aimath.org/workshops/upcoming/dynalgcomb>.

23-27 **MBI Workshop on Targeting Cancer Cell Proliferation and Metabolism Networks**, Mathematical Biosciences Institute, The Ohio State University, Jennings Hall 3rd Floor, 1735 Neil Ave., Columbus, Ohio. (Jun/Jul. 2014, p. 667)

Description: This workshop will encompass a mix of experimentalists and mathematicians. Ideally, the former will be engaged on the production of large datasets on cancer cell proliferation, both at the cell population and single-cell level, and in response to microenvironment perturbations including anti-proliferative drugs. The latter will focus on mathematical models of proliferation and metabolism at several scales, including genetic, signaling and cellular, including a focus on the ability of cancer cell populations to regenerate and reprogram in response to hostile microenvironment and to targeted treatment, ultimately persisting in their proliferative state. Multi-scale models connecting the growth of cultured cancer cells and/or individual tumors to epidemiological data will also be

considered. Although tumor growth and cancer cell proliferation have been modeled mathematically for decades, adequate datasets have been scarce and fragmentary due to experimental limitations. **Information:** <http://mbi.osu.edu/event/?id=821>; phone: 614-292-3648.

27 Philosophy of Information and Information Processing, Pembroke College, Oxford, United Kingdom. (Jun/Jul. 2014, p. 667)

Description: The overall objective of this workshop is to study open questions within the philosophy of information and information processing, with an emphasis on the value of observed information and its measurement. Interest in the philosophy, meaning and value of information goes back half a century but has rapidly increased recently with many new directions of research into the meaning, quantification and measures of information and its complexity. Theoretic advances in these directions will have a huge impact on a wide range of real world applications.

Information: <http://www.american.edu/cas/economics/info-metrics/workshop/workshop-2015-spring.cfm>.

30-31 3rd IMA International Conference on Flood Risk, Swansea University, Wales, United Kingdom. (Jun/Jul. 2014, p. 667)

Description: Recent coastal and inland flooding events such as occurred in the UK, have highlighted the difficulties in forecasting individual and sequences of extreme events. The widespread and catastrophic flooding following the Japanese earthquake in March 2011 heightened the global public awareness of the limitations of existing flood defence infrastructure and flood warning systems. The conference will provide a forum at which engineers, mathematicians and statisticians can meet to exchange views on this important technical area. The emphasis will be on new developments in the mathematical and statistical techniques applicable for assessing flood risk. The conference will be of interest to flood defence practitioners; flood defence managers; statisticians, mathematicians and civil engineers.

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

April 2015

13-17 Dynamics on Moduli Spaces, Mathematical Sciences Research Institute, Berkeley, California. (Jun/Jul. 2014, p. 667)

Description: The Research Workshop of the “Dynamics on moduli spaces of geometric structures” will concentrate on some of the following general interrelated themes: (1) Geometric structures on the spaces of geometric structures which extend and generalize classical constructions on Teichmüller metric and its geodesic flow, Fenchel-Nielsen coordinates, Fock-Goncharov Thurston-Penner coordinates, and the symplectic and Poisson geometries (2) Relations with harmonic maps, Riemann surfaces, complex geometry: specifically Higgs bundles, holomorphic differentials (quadratic, cubic, etc.) as parameters for representations of the fundamental group, hyperkähler and complex symplectic geometry of moduli spaces, lifts of Teichmüller geodesic flows to flat bundles of character varieties (3) Asymptotic properties of higher Teichmüller spaces, including generalized measured geodesic laminations, Culler-Morgan-Shalen group.

Information: <http://www.msri.org/workshops/743>.

13-17 Limit Shapes, Brown University, Providence, Rhode Island. (Mar. 2014, p. 317)

Description: Since the days of Boltzmann, it has been well accepted that natural phenomena, when described using tools of statistical mechanics, are governed by various “laws of large numbers.” For practitioners of the field this usually means that certain empirical means converge to constants when the limit of a large system is taken. However, evidence has been amassed that such laws apply also to geometric features of these systems and, in particular, to many naturally-defined shapes. The last decade has seen a true explosion of “limit-shape” results. New tools of combinatorics, random

matrices and representation theory have given us new models for which limit shapes can be determined and further studied. The goal of the workshop is to attempt to confront this “ZOO” of combinatorial examples with older foundational work and develop a better understanding of the general limit shape phenomenon.

Information: <http://icerm.brown.edu/sp-s15-w3>.

13-17 MBI Workshop on Stem Cells, Development, and Cancer, Mathematical Biosciences Institute, The Ohio State University, Jennings Hall 3rd Floor, 1735 Neil Ave., Columbus, Ohio. (Jun/Jul. 2014, p. 667)

Description: What is the relationship between normal tissue stem cells and tumor-initiating cells (e.g., cancer stem cells)? Which signaling and other regulatory networks are altered in tumors relative to the normal tissues, and how do they function within the tumor? Finally, there is growing evidence that therapies aimed at the major cell types in tumors may sometimes make things worse, by leading to an expansion in the fraction of cancer stem cells. How can this be avoided? This workshop will address these and other questions through discussions among mathematical and computational modelers and experimentalists. In particular, the strong connections between normal development, tumor growth and the use of novel treatment strategies will be discussed.

Information: <http://mbi.osu.edu/event/?id=822>; phone: 614-292-3648.

May 2015

6-10 Representation Theory Workshop, Uppsala University, Uppsala, Sweden. (Jun/Jul. 2014, p. 668)

Description: Satellite of the Representation Theory program at the Institute Mittag-Leffler.

Invited speakers: Aslak Bakke Buan (Trondheim), Vyjayanthi Chari (Riverside), Shun-Jen Cheng (Taipei), Kevin Coulembier (Ghent), Jonathan Kujawa (Oklahoma), Shrawan Kumar (Chapel Hill), Gus Lehrer (Sydney), George Lusztig (MIT), Steffen Oppermann (Trondheim), Ivan Penkov (Bremen), Loic Pouain d'Andecy (Amsterdam), Antonio Sartori (Bonn), Vera Serganova (Berkeley), Weiqiang Wang (Virginia), Kaiming Zhao (Waterloo).

Organizers: Henning Haahr Andersen and Volodymyr Mazorchuk.

Registration deadline: March 24, 2015.

Information: <http://www.math.uu.se/rtw2015/>; email: rtw2015@math.uu.se.

11-15 Advances in Homogeneous Dynamics, Mathematical Sciences Research Institute, Berkeley, California. (Jun/Jul. 2014, p. 668)

Description: The Advances in Homogeneous Dynamics workshop will feature the speakers whose work is at the forefront of the field. There will be a panel discussion accompanied by an open problem session to lay out possible directions for the research in homogeneous dynamics. Talks will be in a broad range of topics and this will help to build more connections between researchers interested in dynamical systems, number theory, and geometry. For example we hope that the involvement of the participants of the other program held at MSRI during the same academic year (Dynamics on Moduli Spaces of Geometric Structures, Spring 2015) would create new connections between the topics. There will be shorter talks presented by early-career researchers.

Information: <http://www.msri.org/workshops/738>.

17-21 SIAM Conference on Applications of Dynamical Systems (DS15), Snowbird Ski and Summer Resort, Snowbird, Utah. (May 2014, p. 556)

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/ds15/>.

18–22 AIM Workshop: Carleson theorems and multilinear operators, American Institute of Mathematics, Palo Alto, California. (Aug. 2014, p. 796)

Description: This workshop, sponsored by AIM and the NSF, will be devoted to a selection of questions at the intersection of Carleson operators and multilinear operators.

Information: <http://aimath.org/workshops/upcoming/multilinops>.

* **18–22 International Conference on Differential & Difference Equations and Applications 2015**, Military Academy, Amadora, Portugal.

Description: The main aim of the conference is to promote, encourage, cooperate, and bring together researchers in the fields of differential & difference equations. All areas of differential & difference equations will be represented with special emphasis on applications. It is anticipated that the conference will attract over 200 participants with 10 plenary speakers, 20 main speakers, and more than 200 lectures. It will be a mathematically enriching and socially exciting event.

Information: <http://sites.google.com/site/sandrapinelas/icddea-2015>.

27–30 Seventh International Conference on Dynamic Systems and Applications & Fifth International Conference on Neural, Parallel, and Scientific Computations, Department of Mathematics, Morehouse College, Atlanta, Georgia. (Aug. 2014, p. 797)

Description: This is a joint international conference on selected topics of Dynamic Systems and Applications & Neural, Parallel, and Scientific Computations.

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

28–31 3rd International Conference on “Applied Mathematics & Approximation Theory-AMAT 2015”, Ankara, Turkey. (May 2014, p. 557)

Description: All subareas and topics of Applied Mathematics and Approximation Theory are welcome.

Plenary Speakers: George A. Anastassiou (University of Memphis, USA); Jerry L. Bona (University Illinois at Chicago, USA); Alexander Goncharov (Bilkent University, Turkey); Weimin Han (University of Iowa, USA); Varga Kalantarov (Ko University, Turkey); Gitta Kutyniok (Technische Universität, Germany); Choongil Park (Hanyang University, South Korea); Tamaz Vashakmadze (Tbilisi State University, Georgia).

Organizers: George A. Anastassiou (University of Memphis, USA) and Oktay Duman (TOBB Economics and Technology University, Ankara, Turkey).

Contact: email: amat2015@etu.edu.tr; amat2015conference@gmail.com.

Information: <http://amat2015.etu.edu.tr/>.

June 2015

* **1–5 AIM Workshop: Stochastic methods for non-equilibrium dynamical systems**, American Institute of Mathematics, Palo Alto, California.

Description: This workshop, sponsored by AIM and the NSF, will be devoted to the study of the statistical properties of dynamical systems of physical interest.

Information: <http://aimath.org/workshops/upcoming/noneqdynsys>.

8–12 AIM Workshop: Mathematical aspects of physics with non-self-adjoint operators, American Institute of Mathematics, Palo Alto, California. (Aug. 2014, p. 797)

Description: This workshop, sponsored by AIM and the NSF, will emphasize the state-of-the-art techniques for the mathematically rigorous analysis of non-self-adjoint phenomena encountered in main stream and newly developing fields of physics.

Information: <http://aimath.org/workshops/upcoming/nonselfadjoint>.

15–19 Connections in Discrete Mathematics, Simon Fraser University, Vancouver, Canada. (Jun/Jul. 2014, p. 668)

Description: Discrete mathematics plays a central role in modern mathematics. This is in large part due to the work of Ron Graham. His work has spanned over five decades and includes over 300 published papers, 5 books, countless talks and editorial assignments, service as president of the AMS and the MAA, and the many connections that he has made in the mathematics community. His research encompasses number theory, graph theory, discrete geometry, Ramsey theory, combinatorics, algorithms, and more; often revealing surprising interconnections between these topics. To celebrate the life and work of Ron Graham, this conference will bring together prominent researchers in number theory, graph theory, combinatorics, probability, discrete geometry, and so on, to explore the connections between these areas of mathematics. In addition to plenary and invited talks we will have contributed talks. We particularly encourage graduate students and early career mathematicians to participate.

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

22–24 3rd International Conference on “Graph Modelling in Engineering”, University of Bielsko-Biala, Bielsko-Biala, Poland. (Jun/Jul. 2014, p. 668)

Description: On behalf of Professor Józef Woźnarski, the father of graph-based modelling of mechanical systems in Poland, we would like to invite you to participate in our conference. Upon the initiative of Professor Józef Woźnarski, discussed among the members of Polish Committee on TMM, we would like to continue the tradition of two previous conferences which had been organized by the Silesian TU in Gliwice in 1993 and 1999.

Goal: Of our conference is to unite the society of scientists whose works are dedicated to an application of graphs into mechanical engineering and related fields of knowledge.

Scope: The scope is wide but narrower than other conferences on mathematical modeling or industrial mathematics. It is dedicated to an application not only graph theory but also discrete mathematics, combinatorics, number theory, network theory and some other related disciplines of mathematics. The tools, methods, algorithms and structures of these fields of mathematics could be utilized in versatile areas of mechanical engineering, mechanics, mechatronics and connected engineer and industry related areas. The full scope of the conference is given in the adequate subpage. In our opinion, the proposed scope gives a unique opportunity to join together all areas of graph-related applications which are usually considered separately as e.g., bond-graphs, Petri nets or graph grammars which, in fact, are closely and almost fully related to graph theory. Please, take into consideration that our proposal is rare on the market of contemporary conferences intertwining all possible graph-related science and technical applications. We do hope that rebirthing of such a forum would be fruitful for all participants. Bielsko-Biala is an open, nice city with a multi-cultural, multi-nationality and multi-religious tradition which gives a friendly atmosphere for our meeting.

Information: email: szawislak@ath.bielsko.pl; email: gm2015@ath.eu.

* **22–26 International conference “Dynamical Systems and Their Applications”**, Institute of Mathematics of National Academy of Sciences of Ukraine, Kyiv, Ukraine.

Description: The conference is devoted to a wide range of issues of the modern theory of dynamical systems, among which are to-

pological dynamics, ergodic theory, the theory of attractors and chaos, combinatorial and symbolic dynamics, the theory of fractals, bifurcation and stability theory, infinite-dimensional dynamical systems, and various kinds of applications, especially in mathematical physics. Emphasis is expected to be paid to combinatorial dynamics, originating from the widely known Sharkovskiy's theorem on the coexistence of cycles.

Information: <http://cds2015.imath.kiev.ua/>.

July 2015

**6–10 Classical and quantum hyperbolic geometry and topology/
Topologie et géométrie hyperbolique classique et quantique,** Université Paris-Sud, Orsay, France. (Jun/Jul. 2014, p. 668)

Description: This conference is in honor of Francis Bonahon (University of Southern California); The main themes are low-dimensional topology, hyperbolic geometry, quantum Teichmüller theory, topological quantum field theory, higher Teichmüller theory.

Information: <http://www.math.u-psud.fr/~paulin/Bonahon2015.html>.

6–10 10th IMACS Seminar on Monte Carlo Methods, Johannes Kepler University Linz and Radon Institute for Computational and Applied Mathematics, Linz, Austria. (Oct. 2013, p. 1205)

Description: The IMACS Seminar on Monte Carlo Methods is a bi-annual event that previously took place in Brussels, Varna, Salzburg, Berlin, Tallahassee, Reading, Brussels, Borovets, and Annecy-le-Vieux.

Topics: Algorithms for high-dimensional problems and complexity, computational stochastic differential equations, generation of random numbers, low discrepancy point sets and sequences, Markov Chain Monte Carlo, multilevel Monte Carlo.

Information: <http://www.mcm2015.jku.at>.

8–10 SIAM Conference on Control and Its Applications (CT15), Maison de la Mutualit, Paris, France. (Jun/Jul. 2014, p. 668)

Description: The field of control theory is central to a wide range of aerospace, energy, automotive and advanced technological systems and is increasingly recognized as fundamental for emerging fields ranging from nanotechnology, smart grid 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 control of PDEs, computational mathematics for control and optimization, real-time optimization and data assimilation, cooperative control for unmanned autonomous vehicles, differential games, cellular and biological regulation, control of hybrid systems, control techniques for financial mathematics, biomedical control, risk sensitive control and filtering, control of smart systems, flow control and quantum control.

Information: <http://www.siam.org/meetings/ct15/>.

13–17 12th International Conference on Finite Fields and Their Applications (Fq12), Skidmore College, Saratoga Springs, New York. (Feb. 2014, p. 214)

Description: The bi-annual series of "Fq" conferences returns to the USA for the first time since 1993. The Fq12 conference will feature 8 invited lectures and approximately 80 contributed talks on all aspects, theoretical and applied, of mathematics and computer science which are related to finite fields. Truly an international event, recent conferences in the series have attracted researchers from about 30 different countries. See the Fq12 website for more information.

Information: <http://www.skidmore.edu/fq12>.

13–December 18 Coupling Geometric PDEs with Physics for Cell Morphology, Motility and Pattern Formation, Isaac Newton Institute for Mathematical Sciences, Cambridge, United Kingdom. (Mar. 2014, p. 318)

Description: The aim of this six-month research programme is to create a unique forum to strengthen and develop research links between state-of-the-art experimental "wet" sciences (biology, medicine, bio-physics) and theoretical "dry" sciences (pure, applied and computational mathematics, theoretical physics, statistics). In this programme we will discuss and present in a hands-on format current experimental methodology for cell motility and pattern formation. We will emphasise interactions between experimentalists and theoreticians, with the dual goals of understanding how current mathematical techniques from physics, differential geometry, mathematical modelling and numerical analysis can help to understand current problems in the areas of cell motility and pattern formation, and what new mathematical techniques may emerge in the process. Several workshops will take place during the programme. For full details please see www.newton.ac.uk/events.html.

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

14–17 International Conference on Nonlinear Operators, Differential Equations and Applications, ICNODEA-2015, Babes-Bolyai University, Cluj-Napoca, Romania. (Aug. 2014, p. 797)

Description: The conference will explore new developments in the theory of nonlinear operators and its applications to integral, differential and partial differential equations and inclusions. A special emphasis will be on applications in biology, medicine, economics, physics and engineering.

Conference Sessions: Nonlinear ODEs and Applications; Topological and Variational Methods for Nonlinear PDEs; Mathematical Models in Applied Sciences; Fixed Point Theory.

Keynote Speakers: Ravi P. Agarwal, Gabriele Bonanno, Alberto Cabada, Wojciech Kryszewski, Dumitru Motreanu, Themistocles M. Rassias, Mircea Sofonea.

Organizers: Radu Precup, Adrian Petrusel, Adriana Buica, Marcel Serban, Szilárd András.

Information: <http://www.cs.ubbcluj.ro/~icnodeacj/index.htm>.

20–24 The 11th International Conference on Fixed Point Theory and its Applications, Galatasaray University, Istanbul, Turkey. (Dec. 2013, p. 1497)

Description: The purpose of the conference is to bring together leading experts and researchers in fixed point theory and to assess new developments, ideas and methods in this important and dynamic field. A special emphasis will be put on applications in related areas, as well as other sciences, such as the natural sciences, medicine, economics and engineering. The conference will continue the tradition of the previous fixed point theory meetings which were held in Marseille (1989), Halifax (1991), Seville (1995), Kazimierz Dolny (1997), Haifa (2001), Valencia (2003), Guanajuato (2005), Chiang Mai (2007), Changhua (2009) and Cluj-Napoca (2012).

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

20–August 14 Metric and Analytic Aspects of Moduli Spaces, Isaac Newton Institute for Mathematical Sciences, Cambridge, United Kingdom. (Mar. 2014, p. 318)

Description: The term 'moduli space' has its origins in the classification of conformal structures on two-dimensional surfaces. Closed surfaces are classified topologically by their genus, but for fixed genus, the set of inequivalent conformal structures is essentially a smooth finite-dimensional manifold, a first example of a moduli space. In more recent times, many other instances of mathematical structures of this type have come to light, above all in gauge theory. They continue to have, a major impact in modern geometry, topology and mathematical physics.

Goal: The goal of the programme is to explore moduli spaces from the metric and analytical points of view. We shall survey the current state of the art with a focus on four themes: 4-dimensional hyper-Kähler manifolds; compactification of moduli spaces; analysis on moduli spaces; new constructions and challenges. There will be a

5-day workshop during the second week of the programme. For full details please see <http://www.newton.ac.uk/events.html>.
Information: <http://www.newton.ac.uk/programmes/MAM/>.

August 2015

3-7 AIM Workshop: First passage percolation and related models, American Institute of Mathematics, Palo Alto, California. (Aug. 2014, p. 797)

Description: This workshop, sponsored by AIM and the NSF, will be devoted to the study of first passage percolation on the d-dimensional integer lattice and related models.

Information: <http://aimath.org/workshops/upcoming/firstpercolation>.

3-7 Differential and combinatorial aspects of singularities, TU Kaiserslautern, Germany. (Aug. 2014, p. 797)

Description: This conference will focus on aspects of singularity theory and complex algebraic geometry, including D-module theory, homological methods, (logarithmic) derivations and differential forms, topology of hypersurface singularities and arrangements of hyperplanes.

Information: <http://www.mathematik.uni-kl.de/agag/workshops/singconf2015>.

19-December 18 Mathematical, Foundational and Computational Aspects of the Higher Infinite, Isaac Newton Institute for Mathematical Sciences, Cambridge, United Kingdom.

Description: Current set-theoretic research on infinity focuses on the following three broad areas: large Cardinals and inner model theory, descriptive set-theoretic methods and classification problems, and infinite combinatorics. The programme HIF will connect these three main strands of set-theoretic research and other fields of set theory to the wider scope of mathematics, to research in the foundations of mathematics, including some philosophical issues, and to research on computational issues of infinity, e.g. in theoretical computer science and constructive mathematics. Three workshops are planned during the programme: The first one (August 24–28, 2015) will be the 5th European Set Theory Conference. The second workshop, entitled “New challenges in iterated forcing” will be a Satellite Meeting held at the University of East Anglia in Norwich (November 2–6, 2015). A final workshop will take place on December 14–18, 2015. For full details please see <http://www.newton.ac.uk/events.html>.

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

September 2015

1-August 31 Call for Research Programmes 2015-2016, Centre de Recerca Matematica, Bellaterra, Barcelona, Spain.

Description: The CRM invites proposals for Research Programmes during the academic year 2015–2016 in any branch of mathematics and its applications. 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 analyze the state and perspectives of their area.

Deadlines for submission of proposals: November 29, 2013, for preliminary proposals and October 25, 2013, for final proposals.

Information: <http://www.crm.cat/en/Pages/DetailCrida.aspx?ItemID=7>.

1-4 IMA Conference on Numerical Methods for Simulation, Mathematical Institute, University of Oxford, UK. (Aug. 2014, p. 797)

Description: Developments in numerical methods underpin simulations in many ways, for example, in any area where high-dimensional problems are governed by differential equations. Computational fluid dynamics has driven many developments in this area; however there is a wide range of application areas where the problems, and indeed solution techniques may be similar. Numerical methods are important in diverse areas such as geophysical modelling, fluid-

structure interaction, high-dimensional dynamical systems, weather prediction, climate modelling, oil reservoir simulation, and so on. The conference will bring together application specialists, applied mathematicians, numerical analysts and computational scientists who develop and use numerical simulations. Applications which focus on data assimilation, inverse problems, uncertainties or control, which contain as a major component a high-dimensional forward model, will also be represented.

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

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.

September 2015

***9-11 IMA Conference on Mathematics of Robotics**, St. Anne's College, Oxford, United Kingdom.

Description: The IMA Conference on the Mathematics of Robotics aims to bring together researchers working on all areas of robotics which have a significant mathematical content. The idea is to highlight the mathematical depth and sophistication of techniques applicable to robotics and to foster cooperation between researchers working in different areas of robotics.

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

9-December 4 ICERM Semester Program: Computational Aspects of the Langlands Program, Brown University, Providence, Rhode Island. (Jun/Jul. 2014, p. 669)

Description: During the semester we will focus on three specific aspects of the Langlands program. First, we will look at elliptic curves over number fields and genus 2 curves over the rationals and will consider their relationship to modular forms. Second, we will consider computational aspects of modular forms in higher rank. Specifically, we will examine K3 surfaces and their connections to modular forms on orthogonal groups. Our third topic concerns analytic aspects of L-functions, building upon and complementing the algebraic, arithmetic, and geometric data.

Information: <http://icerm.brown.edu/sp-f15/>.

14-18 The European Numerical Mathematics and Advanced Applications (ENUMATH) Conference, Institute of Applied Mathematics, Middle East Technical University, Ankara, Turkey. (Dec. 2013, p. 1497)

Description: The European Numerical Mathematics and Advanced Applications (ENUMATH) conferences are a forum for discussion of basic aspects and new trends in numerical mathematics and challenging scientific and industrial applications on the highest level of international expertise. They started in Paris in 1995 and were subsequently held at the universities of Heidelberg (1997), Jyvaskyla (1999), Ischia Porto (2001), Prague (2003), Santiago de Compostela (2005), Graz (2007), Uppsala (2009), Leicester (2011), Lausanne (2013).

Information: <http://enumath2015.metu.edu.tr/>.

21-26 International Conference in Mathematics Education, Catania, Sicily, Italy. (Aug. 2014, p. 797)

Description: The 12th International Conference of the Mathematics Education into the 21st Century Project will be held this year from Sep. 21-26 in Montenegro. Already more than 160 people have registered and it promises to be a very successful and productive meeting. The First Announcement and Call for Papers, with full details of the conference and a registration form, as well as background on our Project and Conferences, can be downloaded at: <http://www.cdnalma.poznan.pl/static/alan/FAMontenegro6.doc>. We are starting to plan our next conference, to be held in a beautiful hotel convention centre overlooking the sea close to Catania, Sicily,

Italy, in late September, 2015. It will feature papers and workshops on all aspects of innovation in Mathematics, Science, Statistics and Computer Education.

Information: Would you be kind enough to give us some personal feedback as follows? It is probable/possible/impossible (please choose one) that I can attend the Catania Conference in late September 2015. Dr. Alan Rogerson, International Coordinator of the Mathematics Education into the 21st Century Project.

December 2015

1–5 BioInfoSummer 2014: Summer symposium in bioinformatics, Monash University (Caulfield Campus), Melbourne, Australia. (Jun/Jul. 2014, p. 669)

Description: Bioinformatics is an exciting, fast-moving area analysing and simulating the structures and processes of biological systems. BioInfoSummer introduces students, researchers and others working in related areas to the discipline. The program features: Introduction to biology and bioinformatics; evolutionary biology; systems biology; next generation sequencing; and coding and algorithms for bioinformatics.

Information: <http://www.amsi.org.au/BIS>.

January 2016

14–15 Connections for Women: Differential Geometry, Mathematical Sciences Research Institute, Berkeley, California. (Jun/Jul. 2014, p. 669)

Description: The purpose of this meeting is to help junior female researchers to become familiar with the focus topics of the main MSRI program, and also for the junior researchers to have an opportunity to get acquainted with more senior women researchers in differential geometry.

Information: <http://www.msri.org/workshops/702>.

18–22 Introductory Workshop: Modern Riemannian Geometry, Mathematical Sciences Research Institute, Berkeley, California. (Jun/Jul. 2014, p. 669)

Description: The week will be devoted to an introduction to modern techniques in Riemannian geometry. This is intended to help graduate students and younger researchers get a headstart, in order to increase their participation during the main semester programs and research lectures. To increase outreach, the week will focus on Riemannian geometry and should be largely accessible. Some mini-courses on topics of recent interest will be included. The workshop will also have semi-expository lectures dealing with aspects of spaces with curvature bounded from below, since such spaces will occur throughout the semester. We expect that many Berkeley mathematicians and students will participate in the introductory workshop.

Information: <http://www.msri.org/workshops/703>.

February 2016

15–June 17 Melt in the Mantle, Isaac Newton Institute for Mathematical Sciences, Cambridge, United Kingdom. (Apr. 2014, p. 433)

Description: The Earth's mantle is almost entirely solid, but on geological timescales it convects vigorously, the well-known surface expression of this being plate tectonics. Although the basic thermodynamics of melt generation in these settings is well understood, how the melt is transported to the surface is not, despite several decades of work on the problem. Sophisticated mathematical techniques are needed to map an understanding of physics at the smallest scales to plate-tectonic scales. Seismology offers a way to image melt in the mantle, but development of new tools in inverse theory is required to extract that information. Models are cast as a series of coupled non-linear PDEs, which require advanced numerical techniques to solve. This programme will bring together a broad spectrum of mathematicians and solid Earth scientists to tackle these and other challenges in the area. Several workshops will take place during the programme. For full details please see www.newton.ac.uk/events.html.

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

March 2016

21–25 Kähler Geometry, Einstein Metrics, and Generalizations, Mathematical Sciences Research Institute, Berkeley, California. (Jun/Jul. 2014, p. 669)

Description: The workshop will integrate elements from complex differential geometry with Einstein metrics and their generalizations. The topics will include • Existence of Kähler-Einstein metrics and extremal Kähler metrics. Notions of stability in algebraic geometry such as Chow stability, K-stability, b-stability, and polytope stability. Kähler-Einstein metrics with conical singularities along a divisor. • Calabi-Yau metrics and collapsed limit spaces. Connections with physics and mirror symmetry. • Einstein metrics and their moduli spaces, ϵ -regularity, noncompact examples such as ALE, ALF, and Poincaré-Einstein metrics. Generalizations of the Einstein condition, such as Bach-flat metrics and Ricci solitons. • Sasaki-Einstein metrics and metrics with special holonomy. New examples and classification problems.

Information: <http://www.msri.org/workshops/704>.

May 2016

2–6 Geometric Flows in Riemannian and Complex Geometry, Mathematical Sciences Research Institute, Berkeley, California. (Jun/Jul. 2014, p. 669)

Description: The workshop will concentrate on parabolic methods in both Riemannian and complex geometry. The topics will include • Ricci flow. Analytic questions about Ricci flow in three dimensions. Possible applications of Ricci flow to 4-manifold topology. Ricci flow in higher dimensions under curvature assumptions. • Kähler-Ricci Flow. Applications to the Kähler-Einstein problem. Connections to the minimal model program. Study of Kähler-Ricci solitons and limits of Kähler-Ricci flow. • Mean curvature flow. Singularity analysis. Generic mean curvature flow. • Other geometric flows such as Calabi flow and pluriclosed flow.

Information: <http://www.msri.org/workshops/705>.

July 2016

11–December 21 Theoretical Foundations for Statistical Network Analysis, Isaac Newton Institute for Mathematical Sciences, Cambridge, United Kingdom. (Apr. 2014, p. 433)

Description: The core of this 6-month programme is understanding and quantifying mathematical structure in network models. Networks are ubiquitous in modern science and society. In fact, whenever we observe entities and relationships between them, we have network data. The behaviour of almost all networks, natural or engineered, physical or information-based, involves a strong component of randomness and is typically not fully or directly observed. Considerable open challenges remain in proving properties both of generative mechanisms for such networks, as well as of methods for inference. This motivates the development of theoretical foundations for statistical network analysis. Several workshops will take place during the programme, including an opening, midterm and closing workshop, as well as a Satellite Meeting and an Open for Business industry day. For full details please see <http://www.newton.ac.uk/events.html>.

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