August 2014

* 4-7 SIAM Conference on the Life Sciences (LS14), Sheraton Charlotte, Charlotte, North Carolina.

Invited Speakers: James J. Collins, HHMI, Boston University and Wyss Institute, Harvard University; Alison P. Galvani, Yale University; Alan Hastings, UC Davis; Oliver E. Jensen, University of Manchester, United Kingdom; Arthur D. Lander, University of California, Irvine; Norman A. Mazer, F. Hoffmann-La Roche Ltd, Switzerland; John Rinzel, New York University; Kristin Rae Swanson, Northwestern University.


* 12-14 The CUNY workshop on differential cohomologies, The CUNY Graduate Center, New York, New York.

Description: This workshop is aimed towards the topics of differential cohomology theories, including differential (ordinary) cohomology and differential K-theory, abelian gerbes, algebraic K-theory, free loop spaces, and connections with topological field theories. The goal is to bring together researchers in these areas, from graduate students to senior researchers, to present fundamental material as well as to exchange ideas on recent progress and to lay out new directions for research.


* 26-29 The 45th Annual Iranian Mathematics Conference, Semnan University, Semnan, Iran.

Description: The annual Iranian Mathematics Conference has been held every year since 1970. The goal of this conference is to survey recent advances on a wide range of Mathematics. The conference will provide a forum for mathematicians and scientists worldwide to present their latest results and a means to discuss their recent researches with each other.

Organizers: Semnan University and Iran Math. Soc.

Language: Persian and English.

Themes: Of this conference include all areas of mathematics, statistics and computer sciences and their application.


September 2014

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

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

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 is reference to previous announcements and 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 mathcalendar@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/.
workshop with the goal of helping the interested participants make the jump from desktops to bigger machines.


* 2–5 XXIII International Fall Workshop on Geometry and Physics, Faculty of Sciences of Granada University, Granada, Spain.

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 algebras 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.


* 8–17 CIMPA Research School on “Operator theory and the principles of quantum mechanics”, University Moulay Ismail, Meknes, Morocco.

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.


* 14 Future Directions in Commutative Rings Inspired by the Work of Laszlo Fuchs, Tulane University, New Orleans, Louisiana.

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.

* 22–26 Workshop on Tensor Valuations in Stochastic Geometry and Imaging, Sandbjerg Estate, Soenderborg, Denmark.

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/.

* 26–28 Entropy and Singular Solutions for Conservation Laws; Pressureless Gas Dynamics and Other Applications, West Virginia University, Morgantown, West Virginia.

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/.

October 2014

* 9–10 The Eighth International Conference on Provable Security (ProvSec 2014), The University of Hong Kong, Hong Kong.

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 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.


* 12–14 Information Security, the Seventeenth International Conference (ISC 2014), The University of Hong Kong, Hong Kong.

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.


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.

August 2014

NOTICES OF THE AMS

* 17–19 Conference “Inverse Problems and Spectral Theory” in honor of the 65th anniversary of Peter Kuchment, Texas A&M University, College Station, Texas.
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.

November 2014

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).

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

* 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.
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.

* 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.
Description: The scientific program of the conference includes the following sections: Computer science, applied mathematics, artificial intelligence, software engineering. For 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.

December 2014

* 10–12 Brazilian Congress of Young Researchers in Pure and Applied Mathematics, Mathematics and Statistics Institute, University of São Paulo, São Paulo, Brazil.
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”.

January 2015

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

* 20–23 AIM Workshop: Inference in high-dimensional regression, American Institute of Mathematics, Palo Alto, California.
Description: This workshop, sponsored by AIM and the NSF, will be devoted to explore recent methodological and theoretical advances in inference for high-dimensional statistical models.
Information: http://aimath.org/workshops/upcoming/inferencehighdim.

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.


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

**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.


**March 2015**

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

**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.


*18–20 IAENG International Conference on Scientific Computing 2015*, Royal Garden Hotel, Hong Kong.

**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.


**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](http://aimath.org/workshops/upcoming/dynalgcomb).

**May 2015**

*18–22 AIM Workshop: Carleson theorems and multilinear operators*, American Institute of Mathematics, Palo Alto, California.

**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](http://aimath.org/workshops/upcoming/multilinops).
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.

**August 2015**


**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](http://aimath.org/workshops/upcoming/firstpercolation)

**September 2015**

**1–4 IMA Conference on Numerical Methods for Simulation,** Mathematical Institute, University of Oxford, UK.

**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.

**Information:** [http://aimath.org/workshops/upcoming/firstpercolation](http://aimath.org/workshops/upcoming/firstpercolation)