# Mathematics Calendar

The most comprehensive and up-to-date Mathematics Calendar information is available on e-MATH at http://www.ams.org/mathcal/.

## June 2004

2004 **Fifth Edition of the International Conference on Functional Analysis and Approximation Theory**, Acquafredda di Maratea, Potenza, Italy. (Feb. 2004, p. 278)

2004 **Mathematical Foundations of Learning Theory**, Barcelona, Spain. (Apr. 2003, p. 499)

2004 **WSEAS Conferences**, Corfu Island, Greece. (Apr. 2003, p. 500)

1–4 **Galois Theory and Arithmetic (GATA 2004)**, Mathematisches Institut der Universität Bonn, Bonn, Germany. (May 2004, p. 574)

1–4 **International Workshop on Nonlinear Waves**, The Chinese University of Hong Kong, Hong Kong. (Dec. 2003, p. 1440)

1–5 **Asymptotic Theories and Painlevé Equations**, Université d'Angers, France. (May 2004, p. 574)

* 1–7 **Logic, Algebra and Geometry: A meeting in the Methods of Logic in Mathematics Series**, Euler Mathematical Institute, St. Petersburg, Russia.
**Purpose**: To discuss the interaction between logic and other branches of mathematics, e.g., algebra and geometry. The meeting will consist of Invited Talks, Tutorials and sessions for Contributed Papers.
**Tutorials**: A. Vershik (St. Petersburg Department of Steklov Institute) and O. Lessmann (Oxford) and Su Gao (North Texas). Abstracts of contributed talks should be sent to email: meeting@logic.pdmi.ras.ru.
**Invited Speakers**: J. Baldwin (Illinois), A. Blass (Ann Arbor, Michigan), J. Brendle (Kobe), P. Cameron (London, QMC), Yu. Ershov (Novosibirsk), M. Foreman (Univ. Calif., Irvine), M. Forti (Pisa), Su Gao (North Texas), M. Gavrilovich (Oxford), E. Gordon (Eastern Illinois), G. Hjorth (UCLA), T. Hyttinen (Helsinki), O. Lessmann (Oxford), M. di Nasso (Pisa), O. Spinas (Kiel), J. Steprans (Toronto), S. Thomas (Rutgers), S. Todorcevic (Paris 7, Toronto, Belgrade), V. Tolstykh (Kemerovo), B. Velickovic (Paris 7), A. Vershik (St. Petersburg Department of Steklov Institute) and Yi Zhang (Sun Yat-sen, Guangzhou).
**Program Committee**: M. Arslanov (Kazan), A. Blass (Michigan, Ann Arbor), A. Bovykin (Steklov Institute, St.Petersburg), E. Griffor (CAI/Michigan, Ann Arbor), A. Kechris (CalTech), J. Steprans (Toronto), Su Gao (North Texas), A. Vershik, co-chair (Steklov Institute, St.Petersburg), Yu.Ershov (Novosibirsk), Yi Zhang, co-chair (Sun Yat-sen, Guangzhou), B. Zilber (Oxford).
**Local Organizing Committee**: Anatoly Vershik, Yi Zhang, Elena Novikova and Andrey Bovykin.
**Contact**: Elena Novikova; email: novikova@pdmi.ras.ru.
**Information**: Registration can be done online at http://www.pdmi.ras.ru/EIMI/2004/lag/app.html; http://www.math.lsa.umich.edu/logicmethods.

1–11 **Workshop on Semi-classical Theory of Eigenfunctions and PDEs**, Centre de Recherches Mathématiques, Montréal, Québec, Canada. (Aug. 2003, p. 848)

2–4 **ICNPAA 2004: Mathematical Problems in Engineering and Aerospace Sciences**, The West University of Timisoara, Romania. (May 2003, p. 604)

* 2–5 **DIMACS Working Group on Computer-Generated Conjectures from Graph Theoretic and Chemical Databases II**, HEC Montreal 3000, Montreal, Quebec, Canada.
**Short Description**: Computers are increasingly used in mathematics and the sciences. To the traditional number-crunching have been

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**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 held in North America 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. Meetings held outside the North American area may carry more detailed information. In any case, 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, 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/.

added formal methods, automated proof techniques, and recently a large number of approaches to computer-aided automated discovery. The resulting techniques in this last endeavor are grouped under various names: experimental mathematics, discovery science, data mining and knowledge discovery, and the like. They are based on many different principles such as integer relation finding inductive logic programming or the joint use of metaheuristics and data analysis methods. They have led to strong results in many fields. Some of these results are very surprising, e.g. the discovery by Bailey Borwein and Plouffe of a relation for $p$ which allows finding the value of any bit of its binary expansion without knowing the previous ones.
**Sponsors**: DIMACS and GERAD: Group for Research in Decision Analysis.
**Organizers**: Patrick Fowler, University of Exeter, P.W.Fowler@exeter.ac.uk; Pierre Hansen, GERAD—École des Hautes Études Commerciales, email: Pierre.Hansen@gerad.ca.
**Aims**: The workshop will have several aims: (i) To survey main results obtained in computer-aided or automated discovery in various fields of mathematics, such as number theory, geometry, graph theory, algebra, etc., as well as in various sciences such as chemistry, physics, bioinformatics, economics, ecology, etc.; (ii) to present and discuss main tools of computer-aided or automated discovery; (iii) to illustrate the working of software for discovery through demonstrations and discussions; (iv) to stimulate the initiation of collaborative research between teams using different techniques and/or working in different fields.
**Information**: http://dimacs.rutgers.edu/Workshops/Conjectures2/. Please contact the organizers or Carole Dufour at GERAD (Carole.Dufour@gerad.ca).

3–10 **Sixth International Conference on Geometry, Integrability and Quantization**, Sts. Constantine and Elena Resort (near Varna), Bulgaria. (Mar. 2004, p. 357)

3–25 **MRI Spring School 2004: Lie Groups in Analysis, Geometry and Physics**, Utrecht University, Utrecht, The Netherlands. (Jan. 2004, p. 62)

5–26 **Clay Mathematics Institute Summer School: Floer Homology, Gauge Theory, and Low Dimensional Topology**, Alfréd Rényi Institute of Mathematics, Budapest, Hungary. (Apr. 2004, p. 457)

6–10 **Joint Summer Research Conference: String Geometry**, Snowbird Resort, Snowbird, Utah. (Feb. 2004, p. 278)

* 6–11 **Gordon Research Conference on Theoretical Biology & Biomathematics**, Tilton School, Tilton, New Hampshire.
**Chairs**: T. Elston & R. Mejia.
**Vice Chair**: P. Bressloff.
**Information**:http://www.grc.uri.edu/programs/2004/theobio.htm.

* 7–9 **DIMACS Workshop on Security Analysis of Protocols**, DIMACS Center, Rutgers University, Piscataway, New Jersey.
**Sponsors**: DIMACS and PORTIA.
**Topics**: Analysis methods involving computational complexity, game-theoretic approaches, methods based on logic and symbolic computation, probabilistic methods, model checking and symbolic search, formal proof systems, decision procedures and lower bounds, anything else that sounds like a great idea .
**Organizers**: J. Mitchell, Stanford, email: mitchell@cs.stanford.edu; R. Canetti, IBM Watson, email: canetti@watson.ibm.com.
**Local Arrangements**: M. Mercado, DIMACS Center, email: mercado@dimacs.rutgers.edu, 732-445-5928.
**Deadlines**: Registration: May 28, 2004.
**Information**: http://dimacs.rutgers.edu/Workshops/Protocols/.

7–10 **SEM 10th International Congress and Exposition on Experimental Mechanics**, Hilton Costa Mesa, Costa Mesa, California. (May 2004, p. 574)

7–10 **Sixth International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing and Second International Conference on Monte Carlo and Probabilistic Methods for Partial Differential Equations**, Juan-les-Pins, France. (Dec. 2003, p. 1440)

7–10 **Symposium on Analysis and PDEs**, Purdue University, West Lafayette, Indiana. (Mar. 2004, p. 357)

7–11 **4th Conference on Poisson Geometry**, University of Luxembourg, Luxembourg City, Grand-Duchy of Luxembourg. (Dec. 2003, p. 1441)

7–11 **Computational and Statistical Aspects of Microarray Analysis**, Bressanone, Italy. (Apr. 2004, p. 457)

* 7–11 **Fourth International Conference on Mathematics & Design**, Mar del Plata, Buenos Aires, Argentina.
**Organizers**: Vera Martha Winitzky de Spinadel, president, International Mathematics & Design Association; Carlos Eduardo Fantini, vice-rector, Universidad Tecnológica Nacional, Argentina.
**Information**: http://www.myd2004.org.ar.

* 7–11 **The Combinatorics of Large Sparse Graphs**, Cal State San Marcos, San Marcos, California.
**Sponsors**: NSF, CBMS.
**Featured Speaker**: Ten lectures by F. C. Graham.
**Organizers**: R. Ramamurthi; A. Kundgen.
**Information**: http://www.csusm.edu/Math/CBMS/.

7–26 **Probability Models and Statistical Analyses for Ranking Data**, University of Ottawa, Ontario, Canada. (Apr. 2004, p. 457)

8–9 **DIMACS Workshop on Genomic Instability in Cancer: Biological and Mathematical Approaches**, Institute for Advanced Study, Princeton, New Jersey. (Apr. 2004, p. 457)

8–13 **Representation Theory, Dynamical Systems, and Asymptotic Combinatorics**, St. Petersburg, Russia. (May 2004, p. 574)

9–12 **Call for Papers/Abstracts/Submissions: Hawaii International Conference on Statistics, Mathematics and Related Fields**, Sheraton Waikiki Hotel, Honolulu, Hawaii. (Dec. 2003, p. 1441)

10–12 **Lehigh University Geometry/Topology Conference**, Lehigh University, Bethlehem, Pennsylvania. (May 2004, p. 574)

* 11–12 **Seminar Sophus Lie**, Université de Metz, Metz, France.
**Invited Speakers**: Jean Bellissard (Georgia Inst. of Tech.), Jean-Louis Clerc (Univ. de Nancy I), Jacques Faraut (Univ.. et Marie Curie, Paris 6), Thomas Friedrich (Humboldt Univ. Berlin), Peter Heinzner (Ruhr-Univ. Bochum), Victor Nistor (Penn State Univ.), Gestur Olafsson (Louisiana State Univ.), Tudor Ratiu (EPF Lausanne), Robert Wendt (Univ. of Toronto).
**Information**: http://www.mmas.univ-metz.fr/~pasquale/SSL/SSL04.html.

13–16 **SIAM Conference on Discrete Mathematics (DM04)**, Loews Vanderbilt Plaza Hotel, Nashville, Tennessee. (Oct. 2003, p. 1129)

13–17 **Joint Summer Research Conference: Complex Dynamics: Twenty-Five Years after the Appearance of the Mandelbrot Set**, Snowbird Resort, Snowbird, Utah. (Feb. 2004, p. 278)

13–18 **Algorithmic Number Theory Symposium VI (ANTS-VI)**, United States Naval Academy, Annapolis, Maryland. (Oct. 2003,p. 1129)

* 13–18 **Emerging Applications of Measure Rigidity**, AIM Research Conference Center, Palo Alto, California.
**Organizers**: Anatole Katok, Elon Lindenstrauss, and Ralf Spatzier.
**Topics**: This workshop, sponsored by AIM and the NSF, will be devoted to exploring the interplay between flows on locally homogeneous spaces and a wide range of problems in number theory, theoretical physics, and representation theory. Specific topics include: classification of measures invariant under natural

flows on locally homogeneous spaces, particularly Cartan-type actions, unipotent flows and their applications to Diophantine approximations, L-functions, Heegner points, quantum chaos, and many other major areas of vigorous mathematical research.
**Information**: http://aimath.org/ARCC/workshops/measrigid.html.

14–18 (REVISED) **Conference on Surface Water Waves**, The Fields Institute, Toronto, Ontario, Canada. (Apr. 2004, p. 457)

15–17 **DIMACS Workshop on Mobile and Wireless Security**, DIMACS Center, Rutgers University, Piscataway, New Jersey. (Apr. 2004, p. 457)

* 16–18 **Vanderbilt University Conference–Mathematical Models in Signaling Systems**, Vanderbilt University, Nashville, Tennessee.
**Description**: This conference will bring together biologists, physicists, mathematicians and computational scientists, to assess the state of the art in quantitative modeling of signal transduction networks. The meeting will identify a set of methods and ideas and trace future directions for this emerging field. In addition, it will provide a reference forum for students and young scientists who are training to take interdisciplinary and systems approaches to signal transduction, pharmacology and cell biology.
**Sponsor**: Sponsored by Vanderbilt University, the National Academies Keck Futures Initiative, and AstraZeneca.
**Topics**: Detailed Local Models of Signaling Pathways, Cellular Models and Spatial Complexity, Experimental Approaches to Understanding Networks, Analysis of Network Architecture.
**Information**: Registration Scholarships now available. For more information, please visit http://www.nationalacademies.org/keck;http://medschool.mc.vanderbilt.edu/math_conference/index.php; phone: 615-322-0672.

16–19 **AIMS' Fifth International Conference on Dynamical Systems and Differential Equations**, California State Polytechnic University, Pomona, California. (Aug. 2003, p. 848)

* 16–19 **First Advanced Course in Operator Theory and Complex Analysis**, Seville, Spain.
**Description**: Although classical, it is a remarkable fact that complex analysis and operator theory are providing an unending number of rich and new ideas in mathematics. One of the purposes of these advanced courses delivered by well-renowned researchers is to show that these two areas are still emerging with full strength.
**Topics**: The topics will vary from determining the conformal type of Riemann surfaces to concrete classical operators acting on classical spaces of analytic functions, passing through how the behaviour of the powers of the classical shift operator determines whether every function in a given space of analytic functions on the disk has nontangential limits almost everywhere and lattices of jointly invariant subspaces for two Fourier translation semigroups.
**Speakers**: Alexandru Aleman (Lund Univ.), Analytic Contractions and Nontangential Boundary Behavior; David Drasin (NSF, Purdue Univ.), How Big Is a Riemann Surface?; Stephen Power (Lancaster Univ., UK), Invariant Subspaces of Translation Semigroups; Aristomenis Siskakis (Aristotle Univ. of Thessaloniki, Greece), Operators of Integration on Spaces of Analytic Functions.
**Information**: http://www.us.es/ceacyto/.

16–23 **5th International Conference on Functional Analysis and Approximation Theory (FAAT 2004)**, Hotel Villa del Mare, Acquafredda di Maratea, Potenza, Italy. (Mar. 2004, p. 358)

17–18 **Analysis, Probability, and Logic: A Conference in Honor of Edward Nelson**, University of British Columbia, Vancouver, BC, Canada. (Apr. 2004, p. 457)

17–19 **Conference in Honour of Dale Brownawell**, University of Waterloo, Waterloo, Ontario, Canada. (Apr. 2004, p. 457)

18–20 **High Performance Software for Nonlinear Optimization: Status and Perspectives**, Ischia, Italy. (Feb. 2004, p. 278)

18–23 **Mathematical Foundations of Learning Theory**, Barcelona, Spain. (Dec. 2003, p. 1441)

19–24 **Symmetries and Integrability of Difference Equations—EuroConference on Analytic Difference Equations, Special Functions and Quantum Models on the Lattice**, Helsinki, Finland. (Apr. 2004, p. 458)

* 19–26 **DIMACS Working Group on the Mathematics of Web Search and Meta-Search**, Bertinoro International Center for Informatics, Bertorino, Italy.
**Short Description**: In an election each of a large number $k$ of voters ranks a small number $n$ of candidates. The rankings are then combined in some fashion to elect either a single or several candidates. The formal analysis of voting began in France in the latter half of the eighteenth century with two seminal, but conflicting, approaches proposed respectively by Jean Charles de Borda and Marie J. A. N. Caritat, the Marquis de Condorcet. This laid the groundwork for an extensive literature on the mathematics of voting. Fast-forwarding to a more modern problem: In Web meta-search, in response to a given query, each of a small number $k$ of search engines (voters) ranks a (subset of a) large number $n$ of candidates (pages). The results are then combined in some fashion to produce a ranking that is in some sense "better" than the results produced by any single search engine. As phrased here, the connection between voting, analysis of rank data, and the mathematics of (Web) search and meta-search is patent. Indeed, the voting literature inspired several of the meta-search results.
**Sponsor**: DIMACS.
**Organizers**: Cynthia Dwork, Microsoft, email: dwork@microsoft.com; Andrew Gelman, Columbia University, email: gelman@stat.columbia.edu; D. Sivakumar, IBM Almaden, email: siva@almaden.
**Information**: http://dimacs.rutgers.edu/Workshops/WGWebSearch/.

20–25 **Canadian Number Theory Association VIII Meeting**, University of Toronto, Toronto, Ontario, Canada. (Dec. 2003, p. 1441)

20–25 **8th Symposium on Probability and Stochastic Processes**, Universidad de las Americas, Cholula, Puebla, Mexico. (Nov. 2003, p. 1314)

* 20–26 **Reconnect Conference: Experimental Algorithmics, with a Focus on Branch and Bound for Discrete Optimization Problems**, Lafayette College, Easton, Pennsylvania.
**Principal Speaker**: C. Phillips, Sandia National Laboratories, email: caphill@sandia.gov.
**Organizers**: R. Leibowitz, Wheaton College (rochelle_leibowitz@wheatonma.edu); F. S. Roberts, Rutgers University (froberts@dimacs.rutgers.edu).
**Information**: http://dimacs.rutgers.edu/reconnect/. Contact: email: reconnect@dimacs.rutgers.edu, tel: 732-445-5928.

20–27 **42nd International Symposium on Functional Equations**, Opava, Czech Republic. (Jan. 2004, p. 62)

21–23 **V Italian-Spanish Conference on General Topology and Its Applications**, Almeria, Spain. (Mar. 2004, p. 358)

* 21–24 **ICCASV—International Conference on Complex Analysis in Several Variables**, Mid Sweden University, Sundsvall, Sweden.
**Scientific Committee**: U. Cegrell, C. Kiselman, T. Oshawa.
**Organizing Committee**: F. Kutzschebauch, A. Fällström.
**Speakers**: (More speakers are to be added): A. Atsuji, Z. Blocki, A. Brudnyi, B. Y. Chen, J. D'Angelo, S. Fu, S. Kolodziej, A. Nicoara, M. Shaw, M. Zaidenberg.
**Information**: http://www.fmi.mh.se/~plus/iccasv.html.

21–25 **Conference in Nonlinear Analysis, in Honor of Haïm Brezis, on the Occasion of His 60th Birthday**, Paris, France. (Jan. 2004, p. 62)

* 21–25 **BioMaPS/DIMACS/MBBC/PMMB Short Course: Transcriptional Regulation from Molecules to Systems and Beyond**,

DIMACS Center, CoRE Building, Rutgers University, Piscataway, New Jersey.
**Short Description**: The second annual BioMaPS Summer School, organized by Rutgers University Professors Wilma Olson and Anirvan Sengupta, will feature the short course "Transcriptional Regulation from Molecules to Systems and Beyond."
**Sponsor**: BioMaPS Institute in collaboration with the Center for Discrete Mathematics and Theoretical Computer Science (DIMACS), the Center for Molecular Biophysics and Biophysical Chemistry (MBBC), and the Program in Mathematics and Molecular Biology (based at Florida State University). The Sloan Foundation and the Burroughs-Wellcome Fund provide partial funding of the BioMaPS Summer School. Additional information is posted on the BioMaPS Web site (at: http://www.biomaps.rutgers.edu/summer_school.htm) and the DIMACS Web site (at: http://dimacs.rutgers.edu/Workshops/Transcription/).
**Organizers**: Wilma Olson, Rutgers University, email: olson@rutchem.rutgers.edu. Anirvan Sengupta, Rutgers University, email: anirvan@physics.rutgers.edu.
**Course Goals and Intended Audience**: This short course on transcription is designed to: (1) enable participants with advanced training in the mathematical, computational, and physical sciences, but with a more limited background in biology, to contribute to research at the interface of the biological, mathematical, and physical sciences, (2) introduce participants with traditional backgrounds in biochemistry, genetics, and molecular biology to the potential value of quantitative approaches in their own work, and (3) provide participants with in-depth training in an important subfield within molecular biology. The course is appropriate for graduate students, post-doctoral fellows, faculty members, and biomedical researchers from non-academic organizations.
**Information**: http://dimacs.rutgers.edu/Workshops/Transcription/. A registration form, application for financial support, and information on accommodations and travel arrangements are posted on the DIMACS Web site.

21–25 **Conference on Surface Water Waves**, The Fields Institute, Toronto, Ontario, Canada. (Oct. 2003, p. 1129)

21–26 **Nonlinear Modelling and Control, an International Seminar**, Nayanova University, Samara, Russia. (Mar. 2004, p. 358)

21–July 2 **Artificial Neural Networks**, University of Wyoming, Laramie, Wyoming. (Feb. 2004, p. 278)

21–July 2 **SMS-NATO Advanced Summer Institute : Morse Theoretic Methods in Nonlinear Analysis and Symplectic Topology**, Université de Montréal, Québec, Canada. (Feb. 2004, p. 278)

* 22–26 **Retrospective in Combinatorics: Honoring Richard Stanley's 60th Birthday**, Massachusetts Institute of Technology, Cambridge, Massachusetts.
**Information**: http://www.math.ucsd.edu/~stanfest.

22–27 **Representation Theory and Its Applications**, Uppsala University, Uppsala, Sweden. (Mar. 2004, p. 358)

24–26 **Statistical Mechanics: A Conference in Honour of the 75th Birthday of Oliver Penrose**, ICMS, Edinburgh, United Kingdom. (Apr. 2004, p. 458)

26–July 1 **The Future of Mathematics Education**, Ciechocinek, Poland. (Jan. 2004, p. 63)

27–July 2 **2004 USENIX Annual Technical Conference**, Boston, Massachusetts. (Dec. 2003, p. 1441)

28–July 1 **Applications and Advances of Plausible and Paradoxical Reasoning for Data Fusion (DSmT)**, Stockholm, Sweden. (Feb. 2004, p. 278)

28–July 2 **16th Annual International Conference on Formal Power Series and Algebraic Combinatorics**, University of British Columbia, Vancouver, BC, Canada. (Dec. 2003, p. 63)

28–July 3 **International Association for Statistical Education (IASE) 2004 Roundtable**, Lund University, Lund, Sweden. (Sept. 2003, p. 1006)

29–July 2 **Days on Diffraction-2004**, St. Petersburg Division of Steklov's Math. Inst. and St. Petersburg Univ., St. Petersburg, Russia. (Dec. 2003, p. 1441)

30–July 5 **20th International Conference on Operator Theory**, University of the West, Timisoara, Romania. (Mar. 2004, p. 358)

30–July 7 **Fourth World Congress of Nonlinear Analysts (WCNA2004)**, Hyatt Orlando, Orlando, Florida. (Aug. 2003, p. 849)

## July 2004

1–December 31 **Wall Bounded and Free-Surface Turbulence and Its Computation**, Institute for Mathematical Sciences, National University of Singapore, Singapore. (Aug. 2003, p. 849)

4–7 **ISSAC-2004: International Symposium on Symbolic and Algebraic Computation**, University of Cantabria, Santander, Spain. (Mar. 2004, p. 359)

4–8 **Joint Summer Research Conference: Algebraic Geometry: Presentations by Young Researchers**, Snowbird Resort, Snowbird, Utah. (Feb. 2004, p. 279)

4–11 **The 10th International Congress on Mathematical Education**, Copenhagen, Denmark. (Oct. 2003, p. 1129)

5–8 **International Workshop on Orthogonal Polynomials: Orthogonal Polynomials and Mathematical Physics**, Escuela Politecnica Superior of the Universidad Carlos III de Madrid, Leganes, Madrid, Spain. (Mar. 2004, p. 359)

5–9 **8th International Conference on p-Adic Functional Analysis**, University Blaise Pascal, Clermont-Ferrand, France. (Dec. 2003, p. 1441)

5–9 **Eleventh International Conference on Fibonacci Numbers and Their Applications**, Braunschweig, Germany. (Dec. 2003, p. 1441)

5–9 **Graphes et Combinatoire, un Colloque a la Memoire de Claude Berge**, Université Paris 6, Paris, France. (Mar. 2003, p. 409)

5–9 **Iwasawa 2004**, Université de Franche-Comte, Besançon, France. (May 2004, p. 574)

5–9 **19th "Summer" Conference on Topology and Its Applications**, University of Cape Town, Rondebosch, South Africa. (Sept. 2003, p. 1006)

5–10 **International Conference: 2004—Dynamical Systems and Applications**, Antalya-Pamukkale (Hierapolis), Turkey. (Mar. 2004, p. 359)

5–10 **Non-commutative Geometry and Representation Theory in Mathematical Physics**, Karlstad University, Karlstad, Sweden. (Dec. 2003, p. 1442)

5–11 **Nonstandard Mathematics**, Aveiro, Portugal.

5–14 **Workshop on the Moonshine Conjecture, Vertex Algebras, Hyperbolic Lie Algebras and Automorphic Forms**, International Centre for Mathematical Sciences, Edinburgh, United Kingdom. (Jan. 2004, p. 63)

5–15 **Moonshine—the First Quarter Century and Beyond: A Workshop on the Moonshine Conjectures and Vertex Algebras**, International Centre for Mathematical Sciences, Edinburgh, United Kingdom. (Apr. 2004, p. 458)

5–16 (REVISED) **Advanced Course on Automata Groups**, Barcelona, Spain. (Apr. 2003, p. 500)

* 7–9 **DIMACS Workshop and Working Group on Usable Privacy and Security Software**, DIMACS Center, Rutgers University, Piscataway, New Jersey.

**Brief Description**: This workshop and working group is intended to bring together security and privacy experts with human-computer interaction experts to discuss approaches to developing more usable privacy and security software. The workshop sessions on July 7 and July 8 will include invited talks and discussion. July 9 will feature a "working group" of invited participants who will spend the day identifying important problems; discussing some of the research issues raised during the workshop in more depth; and brainstorming about approaches to future research, collaboration, and more user-centered design of security and privacy software.
**Participation**: Participation in the workshop is open to anyone who registers (no submission necessary). Participation in the working group on July 9 is limited because of the emphasis on achieving a high degree of interactivity and discussion. Workshop participants who are interested in participating in the working group session should send a 1-page abstract or position paper describing their work relevant to this workshop to lorrie@acm.org. Abstracts and position papers should be submitted in plain text, HTML, or PDF formats only. All submissions must be received by April 2, 2004, and authors will be notified by April 19, 2004, as to whether they have been accepted to participate in the working group. In addition, the authors of some submissions will be invited to present 10-minute short talks about their work.
**Organizers**: L. Cranor, chair, Carnegie Mellon Univ., lorrie@acm.org; Mark Ackerman, Univ. of Michigan, ackerm@umich.edu; Fabian Monrose, Johns Hopkins Univ., fabian@cs.jhu.edu; Andrew Patrick, NRC Canada, Andrew.Patrick@nrc-cnrc.gc.ca; Norman Sadeh, Carnegie Mellon Univ., sadeh@cs.cmu.edu.
**Local Arrangements**: Maria Mercado, DIMACS Center, mercado@dimacs.rutgers.edu, 732-445-5928.
**Deadlines**: Abstracts and position papers: April 2, 2004. Registration: June 30, 2004.
**Information**: http://dimacs.rutgers.edu/Workshops/Tools/; http://dimacs.rutgers.edu/Workshops/WGTools/.

* 7–12 **Polynomial-Based Cryptography**, Melbourne, Australia.
**Speakers**: Daniel Bernstein, John Cannon, Kwangjo Kim, Arjen Lenstra, Tsuyoshi Takagi, Edlyn Teske.
**Organizers**: Hugh Williams, Andreas Stein, Igor Shparlinski, Kathy Horadam, Lynn Batten.
**Deadline**: For submission of abstracts: June 4, 2004.
**Information**:http://www.it.deakin.edu.au/cryptography2004.

7–20 **MSRI-PIMS Summer Graduate Programme: Knots and 3-Manifolds**, University of British Columbia, Vancouver, BC, Canada. (Apr. 2004, p. 458)

* 8 **Internet Accessible Mathematical Computation Workshop at ISSAC 2004—First Announcement and Call for Submissions**, University of Cantabria, Santander, Spain.
**Topics**: Everyone with an interest in the many aspects of making mathematical computation or information accessible on the Web/Internet is welcome to attend. Topics of the workshop include, but are not limited to: Remote access to mathematical software over the Internet; Encoding of mathematical expressions (including XML, text and binary encodings) used for email, HTML embedding, digital libraries, computer algebra systems, and other scientific applications; Interoperability between software that creates/transforms/displays mathematical expressions (e.g. symbolic, numeric, graphics, text-processing packages); Web-based mathematics education; Access and interoperability to mathematical knowledge bases; Protocols, APIs, URL schemes, metadata, and other mechanisms for system interoperability, parallel/distributed computing, and standardization; Application of IAMC for practical purposes such as scientific publishing and archiving, distributed problem solving, etc.
**Invited Speakers**: Mike Dewar, Numerical Algorithm Group Ltd., Project Manager Mathematics on the NET, ESPRIT Project; Patrick Ion, Mathematical Reviews, American Mathematical Society, Chair, World Wide Web Consortium Math Working Group.
**Information**: ISSAC homepage: http://www.risc.uni-linz.ac.at/issac2004. IAMC homepage: http://www.orcca.on.ca/conferences/iamc2004.

8–10 **From Arithmetic to Cryptology: Conference on the Occasion of Gerhard Frey's 60th Birthday**, University of Duisburg-Essen, Essen Campus, Essen, Germany. (Mar. 2004, p. 359)

* 9 **DIMACS Working Group on Usable Privacy and Security Software**, DIMACS Center, Rutgers University, Piscataway, New Jersey.
**Short Description**: This workshop and working group is intended to bring together security and privacy experts with human-computer interaction experts to discuss approaches to developing more usable privacy and security software. The workshop sessions on July 7 and July 8 will include invited talks and discussion. July 9 will feature a "working group" of invited participants who will spend the day identifying important problems, discussing some of the research issues raised during the workshop in more depth, and brainstorming about approaches to future research, collaboration, and more user-centered design of security and privacy software.
**Organizers**: Lorrie Cranor, Chair, Carnegie Mellon University, lorrie@acm.org; Mark Ackerman, University of Michigan, ackerm@umich.edu; Fabian Monrose, Johns Hopkins University, fabian@cs.jhu.edu; Andrew Patrick, NRC Canada, Andrew.Patrick@nrc-cnrc.gc.ca; Norman Sadeh, Carnegie Mellon University, sadeh@cs.cmu.edu.
**Local Arrangements**: Maria Mercado, DIMACS Center, mercado@dimacs.rutgers.edu, 732-445-5928.
**Deadline**: Registration: June 30, 2004.
**Information**: Visit http://dimacs.rutgers.edu/Workshops/WGTools/.

11–14 **SIAM Conference on the Life Sciences (LS04)**, Oregon Convention Center, Portland, Oregon. (Dec. 2003, p. 1442)

11–15 **Joint Summer Research Conference: Representations of Algebraic Groups, Quantum Groups, and Lie Algebras**, Snowbird Resort, Snowbird, Utah. (Feb. 2004, p. 279)

* 11–17 **Reconnect Conference: Folding and Unfolding in Computational Geometry**, St. Mary's College, Moraga, California.
**Principal Speaker**: J. O'Rourke, Smith College, email: orourke@cs.smith.edu.
**Organizers**: R. Leibowitz, Wheaton College (rochelle_leibowitz@wheatonma.edu); F. S. Roberts, Rutgers University (froberts@dimacs.rutgers.edu).
**Information**: http://dimacs.rutgers.edu/reconnect/. Contact: email: reconnect@dimacs.rutgers.edu, tel: 732-445-5928.

11–17 **XI Meeting on Real Analysis and Measure Theory (CARTEMI)**, Hotel Continental Terme, Ischia, Naples, Italy. (Apr. 2004, p. 458)

12–13 **Workshop on Logical Foundations of an Adaptive Security Infrastructure (WOLFASI)**, Turku, Finland. (May 2004, p. 574)

* 12–15 **Canada-France Meeting of Mathematics**, Centre de Congrés Pierre Baudis, Toulouse, France.
**Plenary Speakers**: G. Allaire, École Polytech., Palaiseau; M. Artigue, Univ. Paris VI, Jussieu; M. Bergounioux, Univ. d'Orléans; J. Borwein, Dalhousie Univ.; D. Brillinger, Univ. of California, Berkeley; A. Connes, IHÉS et Collège de France; W. Craig, McMaster Univ.; H. Darmon, McGill Univ.; E. Giroux, CNRS et ENS Lyon; L. Lafforgue, IHÉS; G. Lugosi, Pompeu Fabra Univ., Barcelona; M. Lyubich, Univ. of Toronto; C. Reutenauer, Univ. du Québec à Montréal; A.-S. Sznitman, ETH, Zurich; M. S. Taqqu, Boston Univ.; H. Wolkowicz, Univ. of Waterloo.
**Chair of Scientific Committee**: F. H. Clarke, Univ. Claude Bernard-Lyon I.
**Special Sessions**: Operator algebras, Symplectic topology and geometry, Number theory, The Langlands program, Spectral and

geometric analysis, Partial differential equations, Dynamical systems, Differential equations and control, Variational analysis and optimization, Stochastic analysis, Multifractals and long memory processes, The probability/statistics interface, Statistical analysis of functional data, Numerical analysis, Low dimensional topology and geometric group theory, Mathematical biology, Complex dynamical systems, Poster session.

**Information**:http://cms.math.ca/Events/Toulouse2004/;http://smc.math.ca/Reunions/Toulouse2004/; email: marie-line.chemin@math.ups-tlse.fr.

12–15 **8th WSEAS CSCC**, Vouliagmeni, Athens, Greece. (Feb. 2004, p. 279)

12–15 **First Joint Canada-France Meeting of the Mathematical Sciences**, Centre de Congrès Pierre Baudis, Toulouse, France. (May 2004, p. 575)

12–16 **School on Atmospheric Sciences and Climate Dynamics**, IST, Lisbon, Portugal. (Apr. 2004, p. 458)

*14–17 **Nineteenth Annual IEEE Symposium on Logic in Computer Science (LICS 2004)**, Turku, Finland.

**Description**: The LICS Symposium is an annual international forum on theoretical and practical topics in computer science that relate to logic in a broad sense. LICS 2004 will be held in conjunction with the thirty-first International Colloquium on Automata, Languages, and Programming (ICALP 2004).

**Program Chair**: H. Ganzinger (hg@mpi-sb.mpg.de).

**Information**: http://www.lfcs.informatics.ed.ac.uk/lics; http://www.math.utu.fi/ICALP04/WScall.html.

16–19 **XIIIth Oporto Meeting on Geometry, Topology and Physics**, Faculty of Sciences, University of Oporto, Oporto, Portugal. (May 2004, p. 575)

16–20 **Algebraic Topology in Computer Science Workshop**, University of Western Ontario, London, Ontario, Canada. (Apr. 2004, p. 458)

18–23 **International Conference on Differential Equations and Applications in Mathematical Biology**, Malaspina University College, Nanaimo, British Columbia, Canada. (Apr. 2004, p. 458)

18–23 **Joint Summer Research Conference: Gaussian Measure and Geometric Convexity**, Snowbird Resort, Snowbird, Utah. (Feb. 2004, p. 279)

18–24 **Workshop on Mathematical Ideas in Nonlinear Optics: Guided Waves in Inhomogenous Media**, International Centre for Mathematical Sciences, Edinburgh, United Kingdom. (Jan. 2004, p. 63)

19 or 20 **The Second International Workshop on Declarative Agent Languages and Technologies (DALT-2004)**, The Third International Joint Conference on Autonomous Agents & Multi-Agent Systems (AAMAS 2004), New York, New York. (Apr. 2004, p. 458)

19–22 **11th Conference of the International Linear Algebra Society**, University of Coimbra, Coimbra, Portugal. (Apr. 2004, p. 459)

*19–22 **Eleventh Workshop on Logic, Language, Information and Computation (WoLLIC'2004)**, Fontainebleau, Paris, France.

**Description**: This is the eleventh in a series of workshops intended to foster interdisciplinary research in pure and applied logic.

**Speakers (tentative)**: T. Ehrhard, K. Meer, D. Niwinski, L. Ong, G. Paun, A. Rabinovich, and S. Shieber.

**Support**: Graduate students and recent Ph.D.'s in logic may apply for modest grants to attend the workshop; the deadline for applications is March 1, 2004.

**Information**: http://www.cin.ufpe.br/~wollic/wollic2004/.

*19–23 **Com2MaC 2004 Conference on Association Schemes, Codes, and Designs**, POSTECH, Pohang, South Korea.

**Topics**: Association schemes, combinatorial designs, error-correcting codes, finite geometry, distance-regular graphs, orthogonal polynomials and special functions.

**Plenary Speakers**: E. Bannai (Japan), A. Brouwer (The Netherlands), C. Godsil (Canada), A. A. Ivanov (UK), T. Ito (Japan), J. H. Koolen (Korea), A. Munemasa (Japan), V. Pless (USA), P. Terwilliger (USA), J. A. Thas (Belgium), H. Van Maldeghem (Belgium).

**Conference Advisory Board**: C. Colbourn (USA), S. G. Hwang (Korea), J. H. Kwak (Korea), M. Ozeki (Japan), C. E. Praeger (Australia), D. K. Ray-Chaudhuri (USA), J. Stufken (USA), V. Tonchev (USA), J. van Lint (The Netherlands), W. Wallis (USA), Z.-X. Wan (China).

**Program Committee**: S. Bang, H. Blau, J. Caughman, J. R. Cho, B. Curtin, W. Haemers, M. Hirasaka, T. Huang, D. S. Kim, H. K. Kim, M. Klin, J. Koolen (co-chair), M. Lang, W. Martin, A. Munemasa, M. Muzychuk, J. Balmaceda, H. Shen, S. Y. Song (co-chair), P.-H. Zieschang.

**Important Dates**: May 1, 2004: Submission deadline for abstracts to be invited. May 15, 2004: Notification of invitation. May 31, 2004: Registration deadline. July 15, 2004: Submission deadline for full manuscript of the talks. July 19–23, 2004: Conference.

**Registration Fee**: US$200 (before May 31, 2004), US$250 (after May 31, 2004); students/unemployed persons: US$100 (before May 31, 2004), US$125 (after May 31, 2004). The Com$^2$MaC will cover local expenses for invited speakers and student participants upon request.

**Information**: Conference Director: Dr. Hyun Kwang Kim; email: hkkim@postech.ac.kr; http://com2mac.postech.ac.kr/conference/conf2004; or write to conf2004@com2mac.postech.ac.kr or email: sysong@iastate.edu.

19–23 **Knots in Vancouver: Workshop in Knot Theory and 3-Manifolds**, PIMS, University of British Columbia, Vancouver, BC, Canada. (Apr. 2004, p. 459)

19–23 **Quantum Information and Quantum Control Conference**, The Fields Institute, Toronto, Ontario, Canada. (Apr. 2004, p. 459)

19–23 **Tensor Decompositions**, AIM Research Conference Center, Palo Alto, California. (May 2004, p. 575)

19–23 **XVIII Escola de Algebra (Eighteenth Algebra School)**, State University of Campinas (UNICAMP), Campinas, SP/Brazil. (Oct. 2003, p. 1129)

19–24 **School and Workshop on Oceanography, Lakes and Rivers**, IST, Lisbon, Portugal. (Apr. 2004, p. 459)

19–31 **The 7th International Diffiety School**, Santo Stefano del Sole, Italy. (May 2004, p. 575)

19–August 6 **Summer School and Conference on Dynamical Systems**, ICTP, Trieste, Italy. (Feb. 2004, p. 279)

*21–23 **Special Session: Computer Algebra and Coding Theory at the 10th IMACS International Conference on Applications of Computer Algebra**, Lamar University, Beaumont, Texas.

**Information**: Edgar Martínez-Moro; email: edgar.martinez@ieee.org.

24–28 **European Congress on Computational Methods in Applied Sciences and Engineering**, Jyväskylä, Finland. (Feb. 2003, p. 295)

25–31 **2004 ASL European Summer Meeting (Logic Colloquium '04)**, Torino, Italy. (June/July 2003, p. 725)

26–30 **Algebraic Groups, Arithmetic Groups, Automorphic Forms and Representation Theory: An International Conference in Memory of Armand Borel**, Center of Mathematical Sciences, Zhejiang University, Hangzhou, China. (Mar. 2004, p. 360)

26–30 **IMS Annual Meeting/6th Bernoulli World Congress**, Barcelona, Spain. (Aug. 2003, p. 849)

26–30 **Workshop on Spectral Theory of Schrödinger Operators**, Centre de Recherches Mathématiques, Montréal, Québec, Canada. (Aug. 2003, p. 849)

*26–30 **XIII School of Differential Geometry, Dedicated to the memory of José Fernando Escobar**, Institute of Mathematics and Statistics, University of São Paulo, Brazil.
**Description**: The following activities are planned for the event: five short courses in topics at intermediate/advanced doctoral level, plenary lectures given by the invited speakers, communications, short communications, and posters. In order to encourage the participation of students, we also plan to have eight poster sections. Proposals for communications will be accepted until May 30, 2004.
**Information**: email: xiiiescolagd@ime.usp.br or http://www.thiagorodrigo.com.br/escolagd/escolagd.php?idioma=en.http://www.ime.usp.br/~egd.

26–30 **XIV Brazilian Topology Meeting**, Campinas, São Paulo, Brazil. (Sept. 2003, p. 1007)

30–August 1 **The Seventh Annual International Conference of Bridges: Mathematical Connections in Art, Music, and Science**, Southwestern College, Winfield, Kansas. (Jan. 2004, p. 63)

*31–August 4 **International Conference on Representation Theory, III**, Sichuan University, Chengdu, People's Republic of China.
**Description**: This is the third conference in the series including the Shanghai conference (the International Conference on Representation Theory, held at East China Normal University, June 29–July 3, 1998) and the Kunming conference (the International Conference on Representations of Algebraic Groups and Quantum Groups, July 22–28, 2001).
**Main Speakers**: Dan Barbasch (Cornell Univ., USA), Stephen Berman (Univ. of Saskatchewan, Canada), Jon F. Carlson (Univ. of Georgia, USA), Shun-Jen Cheng (National Taiwan Univ., Taiwan), Bangming Deng (Beijing Normal Univ., China), Congying Dong (Univ. of California at Santa Cruz, USA), Yun Gao (York Univ., Canada), Robert L. Griess, Jr. (Univ. of Michigan, USA), Roger Howe (Yale Univ., USA), Jun Hu (Beijing Inst. of Tech., China), Seok-Jin Kang (Korea Inst. for Adv. Study, Korea), Alexander Kleshchev (Univ. of Oregon, USA), Shrawan Kumar (Univ. of North Carolina, USA), Gus I. Lehrer (Univ. of Sydney, Australia), Haisheng Li (Rutgers Univ., USA), Jianshu Li (The Hong Kong Univ. of Sci. and Tech., Hong Kong), Yanan Lin (Xiamen Univ., China), Zongzhu Lin (Kansas State Univ., USA), Kefeng Liu (Univ. of California at Los Angeles, USA), George Lusztig (MIT, USA), Olivier Mathieu (Univ. Claude-Bernard (Lyon 1), France), Hiraku Nakajima (Kyoto Univ., Japan), Daniel K. Nakano (Univ. of Georgia, USA), Brian J. Parshall (Univ. of Virginia, USA), Hebing Rui (East China Normal Univ., China), Idun Reiten (Norwegian Univ. of Sci. and Tech., Norway), Leonard Scott (Univ. of Virginia, USA), Shaobin Tan (Xiamen Univ., China), Weiqiang Wang (Univ. of Virginia, USA), Nanhua Xi (Chinese Acad. of Sci., China), J. Zhang (Univ. of Washington, USA), Jiping Zhang (Peking Univ., China), Ruibin Zhang (Univ. of Sydney, Australia), Yongchang Zhu (The Hong Kong Univ. of Sci. and Tech., Hong Kong).
**Deadline**: The deadline is June 30, 2004. Some additional lectures can be arranged on basis of abstracts provided by participants.
**Information**: Please send your abstract (a LaTex file) to Liangang Peng, penglg@mail.sc.cninfo.net, or Jie Xiao, jxiao@math.tsinghua.edu.cn. For further information, you can contact: Liangang Peng, penglg@mail.sc.cninfo.net; http://www.scu.edu.cn/home/math.

## August 2004

*1–5 **11th International Conference on Geometry and Graphics (ICGG 2004)**, Quangzhou, China.
**Organizer**: Zongyi Zuo, email: zuo@gdut.edu.cn,
**Information**: Contact local organizer; or Gunter Weiss, email: weiss@math.tu-dresden; visit http://www.isgg.tu-dresden.de.

*1–7 **8th Brazilian School of Probability**, Ubatuba, Sao Paulo, Brazil.
**Description**: The school is intended as a forum to discuss new developments in probability and related areas, an occasion to detect new directions of research and to establish new collaborations. Activities will include minicourses, plenary talks by invited speakers, short communications, and problem sessions.

The school is concentrated in probability and stochastic processes. This year the topics are: fragmentation, random surfaces, hydrodynamics, random motion in random environments, traffic models, cellular automata.
**Courses**: Jean Bertoin, Olle Haggstrom.
**Talks**: Lorenzo Bertini, Luc Devroye, Jim Fill, David Griffeath, Richard Kenyon, Alejandro Maass, Vladas Sidoravicius, Bálint Tóth.
**Information**: http://www.ime.usp.br/ebp8/.

2–5 **CSIR-Sponsored Seminar: Recent Advances in Combinatorics, Graphs and Codes and Their Applications**, Eluru, India. (Apr. 2004, p. 459)

2–6 **First Announcement: The 9th International Conference on Difference Equations and Applications ICDEA-9**, University of Southern California, Los Angeles, California. (Dec. 2003, p. 1442)

2–6 **Workshop on Dynamics in Statistical Mechanics**, Centre de Recherches Mathématiques, Montréal, Québec, Canada. (Aug. 2003, p. 850)

2–6 **Workshop on Derived Categories, Quivers and Strings**, International Centre for Mathematical Sciences, Edinburgh, United Kingdom. (Jan. 2004, p. 63)

2–27 **Magnetic Reconnection Theory**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England. (Apr. 2003, p. 500)

4–6 **2004 IMCC (International Math Conference at Chonbuk National University)**, Chonbuk National University, Chonju, Chonbuk, Korea. (Jan. 2004, p. 63)

*4–6 **Recent Advances in Operator-Related Function Theory**, Trinity College, Dublin, Ireland.
**Topics**: The main topic of this conference is spectral measures. Other topics include composition operators on spaces of analytic functions, Cauchy transforms, and function algebras.
**Lecturers**: The principal lectures will be given by A. B. Aleksandrov, K. M. Dyakonov, J. E. McCarthy, and D. Sarason.
**Speakers**: Confirmed speakers are J. J. Donaire, D. Girela, S. Garcia, R. Mortini, A. Nicolau, P. Nieminen, A. Poltoratski, W. Ross, E. Saksman, J. Shapiro, W. Smith.
**Organizers**: email: amatheson@albany.edu; email: richardt@maths.tcd.ie; email: stessin@math.albany.edu.
**Information**: http://littlewood.math.albany.edu.

4–6 **The Seventh North American New Researchers Conference**, York University, Toronto, Ontario, Canada. (Jan. 2004, p. 64)

5–6 **Beyond the Formula VIII: A Conference on Teaching Introductory Statistics**, Monroe Community College, Rochester, New York. (May 2004, p. 575)

5–6 **Workshop on Missing Data Problems**, The Fields Institute, Toronto, Ontario, Canada. (Apr. 2004, p. 459)

6–7 **New Directions in Probability Theory**, The Fields Institute, Toronto, Ontario, Canada. (Aug. 2003, p. 850)

6–11 **17th International Conference on Multiple Criteria Decision Analysis**, Whistler, British Columbia, Canada. (Apr. 2004, p. 459)

8–11 **Euler 2004—Third Annual Meeting of the Euler Society**, Roger Williams University Conference Center, Portsmouth, Rhode Island. (Apr. 2004, p. 459)

*8–14 **Reconnect Conference: Integrating Information from Sequence and Evolution: An Introduction to Computational Biology**, DIMACS, Rutgers University, Piscataway, New Jersey.

**Principal Speaker**: R. Ravi, Carnegie Mellon Univ., email: ravi@andrew.cmu.edu.
**Organizers**: R. Leibowitz, Wheaton College (rochelle_leibowitz@wheatonma.edu); F. S. Roberts, Rutgers University (froberts@dimacs.rutgers.edu).
**Information**: http://dimacs.rutgers.edu/reconnect/. Contact: email: reconnect@dimacs.rutgers.edu, tel: 732-445-5928.

9–13 **13th USENIX Security Symposium**, San Diego, California. (Dec. 2003, p. 1442)

9–13 **Moment Maps and Surjectivity in Various Geometries**, AIM Research Conference Center, Palo Alto, California. (May 2004, p. 575)

9–27 **Advanced School & Conference on Non-commutative Geometry**, ICTP, Trieste, Italy. (Feb. 2004, p. 279)

*16–20 **Sphere Packings, Lattices, and Infinite Dimensional Algebra**, AIM Research Conference Center, Palo Alto, California.
**Organizers**: L. Carbone, N. Elkies, and J. Lepowsky.
**Topics**: This workshop, sponsored by AIM and the NSF, will focus on sphere packings and lattice packings, with particular attention to dimensions 8 and 24 and the connection with automorphic forms and Moonshine. Primarily, the workshop will consist of: (1) An investigation of the techniques of Cohn and Elkies, and of Cohn and Kumar, which are conjectured to give rise to a proof that the $E_8$ root lattice and the Leech lattice give the densest sphere packings in $\mathbb{R}^8$ and $\mathbb{R}^{24}$, respectively. (2) An introduction to the recent work of Frenkel, Lepowsky, and Meurman, and of Huang, which indicates deep connections between lattices, codes, and conformal field theory.
**Deadline**: May 16, 2004.
**Information**: Visit http://aimath.org/ARCC/workshops/spherepacking.html.

*16–20 **Automorphisms of Curves**, Lorentz Center, Leiden, The Netherlands.
**Aim**: We will discuss the latest developments in the theory of group actions on algebraic curves, a field that has been lifted to a new level of sophistication in recent years.
**Topics**: Deformation theory, lifting to characteristic zero, relation to moduli of curves, patching method, techniques from fundamental groups, equivariant families, non-archimedean uniformization, and group theoretic aspects.
**Organizers**: Gunther Cornelissen and Frans Oort (Univ. Utrecht).
**Keynote Participants**: A. Abbes, P. Bradley, T. Chinburg, R. Guralnick, D. Harbater, F. Kato, S. Maugeais, R. Pries, M. Raynaud, N. Stalder, S. Wewers, M. Zieve.
**Information**: See http://pascal.lc.leidenuniv.nl/ under "Program Workshops, year 2004". For scientific information about this workshop, please contact the organizers directly at email: cornelis@math.uu.nl or oort@math.uu.nl.

16–December 17 **Quantum Information Science**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England. (Apr. 2003, p. 500)

*17–19 **6th WSEAS International Conference on Applied Mathematics**, Corfu Island, Greece.
**Symposia**: Linear Algebra and Applications; Numerical Analysis and Applications; Differential Equations and Applications; Probabilities; Statistics; Operational Research; Optimization; Algorithms; Discrete Mathematics; Systems; Communications; Control, Computers, Education.
**Other Conferences**: Mathematical Biology and Ecology, Fluid Mechanics, Heat and Mass Transfer.
**Information**: http://www.wseas.org.

17–20 **Degenerate PDEs and Singular Geometries**, University of Potsdam, Potsdam, Germany. (Apr. 2004, p. 460)

*19–20 **DIMACS Working Group on the Burrows–Wheeler Transform: Ten Years Later**, DIMACS Center, Rutgers University, Piscataway, New Jersey.
**Short Description**: On May 10, 1994, Michael Burrows and David Wheeler published the Technical eport *A block sorting lossless data compression algorithm* describing a new data compression algorithm based on a reversible transformation of the input. This transformation had a profound impact in several algorithmic fields and is today universally known as the BWT: the Burrows-Wheeler Transform.

The BWT changed the approach to data compression in a twofold way: it highlighted the role of input transformations to prepare data for achieving better compression and showed that a pipeline of simple encoders may be more effective than a one-shot compression pass. The BWT has also revolutionized the field of indexing data structures: using the BWT it is possible to build the so-called "compressed indexes", a new family of data structures that support powerful substring searches and occupy roughly the same space required by the best compressors.
**Sponsor**: DIMACS.
**Organizers**: Paolo Ferragina, University of Pisa; Giovanni Manzini, University of Piemonte Orientale; S. Muthukrishnan, Rutgers University, email: muthu@cs.rutgers.edu.
**Information**: http://dimacs.rutgers.edu/Workshops/BWT/.

*23–26 **Workshop on Harmonic Analysis and Homogenoeus Spaces**, Leiden University, Leiden, The Netherlands.
**Information and Registration**: http://www.lc.leidenuniv.nl/lc/web/2004/20040823/info.php3?wsid=122.

23–September 2 **International Conference-School on Geometry and Analysis Dedicated to the 75th Anniversary of Academician Yu. G. Reshetnyak**, Sobolev Institute of Mathematics, Novosibirsk, Russia. (Apr. 2004, p. 460)

24–27 **International Conference on Nonlinear Operators, Differential Equations and Applications (ICNODEA-2004)**, Babes-Bolyai University, Cluj-Napoca, Romania. (Sept. 2003, p. 1008)

*24–28 **Geometric Topology, Discrete Geometry and Set Theory (in Celebration of the Centennial of L. V. Keldysh)**, Steklov Institute and Moscow State University, Moscow, Russia.
**Chairman**: Sergey Novikov (RAS).
**Sections**: Geometric Topology (A. V. Chernavsky , E. V. Shchepin); Set Theory (V. V. Fedorchouk, V. G. Kanovei, V. A. Lyubetsky); Topology of Low Dimensions (S. V. Matveev, I. A. Dynnikov); Combinatorial Geometry and Algebraic Topology (V. M. Buchstaber).
**Topics**: Geometric topology of continua and manifolds, homeomorphisms and embeddings, topology of dimensions 2–4, knots, algorithmic questions, discrete geometry, algebraic topology, general topology, descriptive set theory, foundations of mathematics.
**Information**: http://keldysh-100.mi.ras.ru/.

29–September 4 **Seventh International Workshop on Complex Structures and Vector Fields**, Plovdiv, Bulgaria. (Mar. 2004, p. 360)

*30–September 3 **Algebraic Cycles and Motives**, Lorentz Center, Leiden, The Netherlands.
**Organizers**: B. Edixhoven, J. Nagel.
**Scientific Coordinator**: C. Peters.
**Tentative List of Speakers**: L. Barbieri Viale, A. Beauville. S. Bloch, J.-L. Colliot-Thélène (*), A. Conte, F. Deglise (*), C. Deninger, H. Esnault, P. Griffiths (*), M. Hanamura, U. Jannsen, K. Kuenemann (*), S. Mueller-Stach, A. Otwinowska (*), D. Ramakrishnan, S. Saito, C. Schoen (*), T. Scholl, T. Shioda, C. Soulé (*), T. Springer, V. Srinivas, B. van Geemen (*), A. Verra, C. Voisin (*). (*) to be confirmed.
**Information**: http://www.lc.leidenuniv.nl/lc/web/program.php3?jaar=2004.

*30–September 3 **7th French-Romanian Colloquium in Applied Mathematics**, Craiova, Romania.

**Invited Speakers**: Vlad Bally (Paris), Catherine Bandle (Basel), Jean-Yves Chemin (Paris), Philippe G. Ciarlet (Paris and Hong Kong), Alain Damlamian (Paris), George Dinca (Bucharest), Cristian Faciu (Bucharest), Olivier Goubet (Amiens), George Haiman (Lille), Dragos Iftimie (Lyon), Petru Jebelean (Timisoara), Claude Le Bris (Paris), Bernadette Miara (Noisy-le-Grand), Sorin Micu (Craiova), Gheorghe Nenciu (Bucharest), Dan Polisevschi (Bucharest), Radu Precup (Cluj), Tudor Ratiu (Lausanne), Mircea Sofonea (Perpignan), Michel Théra (Limoges).
**Invited Sessions**: Contrôle des systèmes gouvernés par des équations aux dérivées partielles, organized by Marius Tucsnak (Nancy I); Homogénéisation et applications aux sciences des matériaux, organized by Horia Ene (Bucharest); Mathématiques financières, organized by Radu Tunaru (London); Biomécanique, organized by Marc Thiriet (Paris); Inégalités et applications, organized by Constantin Niculescu (Craiova).
**Contacts**: Matei Basarab, Laboratoire Jacques-Louis Lions, Université Paris 6, 175 rue du Chevaleret, 75013 Paris, France; email: matei@ann.jussieu.fr. Vicentiu Radulescu, Department of Mathematics, University of Craiova, 200 585 Craiova, Romania; email: colloque@inf.ucv.ro.
**Information**: Additional information about the colloquium may be obtained at: http://www.inf.ucv.ro/colloque2004.

30–September 3 **9th Conference on Differential Geometry and Its Applications**, Prague, Czech Republic. (Apr. 2003, p. 500)

30–September 3 **Geometric and Ergodic Theory of Dynamical Systems—a Workshop in Honor of the 60th Birthday of C. Gutierrez and M. A. Teixeira**, ICMC-USP, Sao Carlos-SP, Brazil. (May 2004, p. 575)

## September 2004

1–6 (REVISED) **Sixth Pan-African Congress of Mathematicians**, Institute National des Sciences Appliquees et del la Technologie (INSAT), Université 7 Novembre à Carthage, Tunis, Tunisia. (May 2003, p. 604)

2–4 **2nd International Conference on Soft Methods in Probability and Statistics**, Edificio Historico de la Universidad, Oviedo, Spain. (Jan. 2004, p. 64)

* 7 **The DIMACS Symposium on Phylogenetics and Rapidly Evolving Pathogens**, Aotea Centre, Auckland, New Zealand.
**Description**: This working group will build on phylogenetic methods developed by computational biologists to explore ways in which such methods can be applied and developed to shed new light on the origin, evolution, and likely future development of viruses and other pathogens. Phylogeny is now a central tool for studies into the origin and diversity of viruses such as HIV and dengue fever virus. These and other investigations have provided new insights, such as identifying the possible pattern of transfer of HIV-type viruses between primate species. Phylogenetic techniques have also proved useful in mapping the evolution of different strains of the human influenza A virus, with the goal of predicting which strain is most likely to cause future epidemics, with applications to vaccine development.
**Sponsor**: DIMACS.
**Organizers**: Allen Rodrigo, Univ. of Auckland, email: a.rodrigo@auckland.ac.nz; Mike Steel, Univ. of Canterbury, email: M.Steel@math.canterbury.ac.nz.
**Deadlines**: This meeting is by invitation only. Student posters are welcome. If you are interested in participating, please contact the organizers.
**Information**: http://dimacs.rutgers.edu/Workshops/WGPhylogeneticTrees/.

7–11 **2004 Workshop on Algebraic Geometry and Physics**, Instituto Superior Tecnico (IST), Lisbon, Portugal. (Apr. 2004, p. 460)

* 9–12 **Recent Trends in Additive Combinatorics**, AIM Research Conference Center, Palo Alto, California.
**Topics**: This workshop, sponsored by AIM and the NSF, will focus on four interrelated themes: (1) Long arithmetic progressions and the Szemeredi regularity lemma; (2) the Erdös-Szemeredi sum-product conjecture, the Erdös distance set problem, and Szemeredi-Trotter type problems in various dimensions and fields; (3) Freiman's inverse theorem and sum-sets; (4) the Kakeya conjecture in finite fields, and related problems from harmonic analysis. There have been a number of recent breakthroughs in each of these fields involving new techniques, and the goal of the workshop is to popularize these new techniques with people working in neighboring fields.
**Organizers**: T. Tao and V. Vu.
**Deadline**: June 9, 2004.
**Information**: http://aimath.org/ARCC/workshops/additivecomb.html.

10–14 **International Conference of Numerical Analysis and Applied Mathematics 2004 (ICNAAM 2004)**, Chalkis, Greece. (Mar. 2004, p. 360)

13–17 **Homogenization and Shape Optimization—Summer School 2004**, University of Lisbon, Lisbon, Portugal. (May 2004, p. 575)

* 14–16 **4th WSEAS International Conference on Simulation, Modeling and Optimization (ICOSMO 2004)**, Izmir, Turkey.
**Information**: http://www.wseas.org.

14–18 (REVISED) **Third International Conference on Boundary Integral Methods: Theory and Applications**, University of Reading, United Kingdom. (Nov. 2002, p. 1287)

* 16–19 **Algebraic Cycles, K-Theory, and Modular Representation Theory (in Honor of the 60th Birthday of Eric Friedlander)**, Northwestern University, Evanston, Illinois.
**Sponsors**: The Clay Mathematics Institute, the National Security Agency, the National Science Foundation, and Northwestern University.
**Description**: The theme of the conference will be a survey of the state of the art in algebraic cycles, K-theory, and modular representation theory, in particular as influenced by the work of Eric Friedlander. The conference will feature several keynote talks that will survey the historical background, current state of development, and prospects for future progress in all of the focused areas. These talks will be particularly valuable for young researchers. Other talks will present recent developments in the focused areas.
**Speakers Include**: D. Benson (Georgia), S. Bloch (Chicago), D. Cox (Amherst), W. Dwyer (Notre Dame), B. Lawson (Stony Brook), S. Lichtenbaum (Brown), B. Mazur (Harvard), D. Nakano (Georgia), B. Parshall (Virginia), A. Suslin (Northwestern), V. Voevodsky (IAS), M. Walker (Nebraska), C. Weibel (Rutgers).
**Organizers**: C. Bendel (Wisconsin-Stout), D. Cox (Amherst), C. Haesemeyer (Illinois), R. Joshua (Ohio State), J. Pevtsova (Oregon).
**Funding**: Funding is available to support the expenses of graduate students and recent graduates. Requests for support must be received by July 31, 2004.
**Information**: http://www.math.northwestern.edu/conferences/friedlander/.

* 17–18 **Zirkumferenz 2004**, Aula der Mädchenrealschule des Zisterzienserinnenklosters in Waldsassen, Bavaria, Germany.
**Description**: An interdisciplinary dialogue on science, mathematics, philosophy, and art involving the number $\pi$.
**Organizers**: Hael Yxxs and J. V. Schmidt.
**Information**: http://www.zirkumferenz.de.

* 18–20 **Workshop on Harmonic Analysis and Number Theory**, University of Exeter, Exeter, United Kingdom.
**Organizers**: Nigel Byott and Anton Deitmar.

**Speakers**: D. Bump, K. Buzzard, S. deBacker, M. Harris, G. Henniart, W. Hoffmann, R. Langlands, C. Moeglin, W. Mueller, F. Murnaghan.
**Information**: email: a.h.j.deitmar@ex.ac.uk.

19–22 **The First International Conference on Complex Systems CSIMTA 2004 (Complex Systems Intelligence and Modern Technology Applications)**, Cherbourg, France. (Oct. 2003, p. 1129)

20–22 **Workshop on Elliptic Curve Cryptograpy**, Ruhr University, Bochum, Germany. (Mar. 2004, p. 360)

* 20–21 **DIMACS Workshop on Reticulated Evolution**, DIMACS Center, Rutgers University, Piscataway, New Jersey.
**Sponsor**: DIMACS.
**Organizers**: Mel Janowitz, DIMACS, email: melj@dimacs.rutgers.edu; Randy Linder, University of Texas, email: rlinder@mail.utexas.edu; Bernard Moret, University of New Mexico, email: moret@cs.unm.edu.
**Short Description**: Species evolution has long been modeled as a branching process that can uniquely be represented by a tree topology. In such a topology, each species can only be linked to its closest ancestor, while interspecies relationships such as species hybridization or lateral gene transfer in bacteria are not allowed. With the advent of phylogenetic analysis at the molecular level, there is increasing evidence that such a model is inadequate. This workshop will explore the history and latest status of these new models of "reticulate evolution" and will be coupled with a smaller working group meeting designed to explore promising avenues for future research.
**Deadlines**: Main speakers are by invitation only. Workshop participants may submit papers by contacting one of the organizers no later than August 1, 2004.
**Information**: http://dimacs.rutgers.edu/Workshops/Reticulated/.

20–24 **2004 IEEE/WIC/ACM International Conference on Web Intelligence (WI'04)**, King Wing Hot Spring Hotel, Beijing, China. (Mar. 2004, p. 361)

20–24 **12th French-German-Spanish Conference on Optimization**, University of Avignon, Avignon, France. (Jan. 2004, p. 64)

* 20–24 **Analysis and Applied Mathematics Summer School**, Univ. Roma "La Sapienza", Roma, Italy.
**Organizers**: V. Chiado' Piat (Politecnico di Torino), A. Garroni (Univ. di Roma "La Sapienza",) C. Mantegazza (Scuola Normale Superiore di Pisa).
**Speakers**: Xavier Cabré (ICREA-Univ. Politecnica de Catalunya), Phase Transition Layers, Minimal Surfaces and Ground States; Giovanna Citti (Univ. di Bologna), Real Analysis in Lie Groups and Perceptual Completions; Gianni Dal Maso (SISSA, Trieste), Variational Models in Fracture Mechanics; Barbara Niethammer (Humboldt Univ., Berlin), Averaging Techniques for Models of Phase Transitions.
**Registration**: There is no registration fee, but interested people are requested to register by sending an email to Valeria Chiado' Piat at valeria.chiadopiat@polito.it.
**Funds**: Limited funds are available for young researchers to cover accommodations in double rooms. For information, please contact Valeria Chiado' Piat at the address above.
**Information**: Please see http://cvgmt.sns.it/roma2004.

* 20–24 **IMA Tutorial: Mathematics of Materials**, University of Minnesota, Minneapolis, Minnesota.
**Organizers**: M.-C. Calderer (UMN), P. J. Sternberg (Indiana).
**Information**: Contact: Institute for Mathematics and its Applications, University of Minnesota, 207 Church St., SE, 400 Lind Hall, Minneapolis, MN 55455; tel: 612-624-6066; email: visit@ima.umn.edu; http://www.ima.umn.edu/matter/.

* 20–24 **The Second International Course of Mathematical Analysis in Andalucia**, Facultad de Ciencias, University of Granada, Granada, Spain.
**Description**: Our aim is to give an extensive overview of new directions and advances in mathematical analysis. Therefore the researcher is invited to get into topics that seem promising as guidelines for current and future research in this interesting area of mathematics. Leading researchers in the field will provide us with a nice variety of topics and open problems, showing also some tools and techniques that have been helpful in similar situations. To this goal, we offer both seminars and one-hour talks. While the one-hour talks are intended to provide an overview on a variety of current topics, the seminars will extend over several days and will therefore allow an in-depth discussion of certain specific subjects.
**Invited Speakers**: Richard M. Aron (Kent State Univ., USA), Fernando Bombal (Univ. Complutense de Madrid, Spain), José Bonet (Univ. Politécnica de Valencia, Spain), Javier Duoandikoetxea (Univ. del País Vasco, Spai), Miguel de Guzmán (Univ. Complutense de Madrid, Spain), Gilles Godefroy (Univ. Paris VI , France), William B. Johnson (Texas A&M Univ., USA), Nigel J. Kalton (Univ. of Missouri, USA), Michael Neumann (Mississippi State Univ., USA), Lawrence Narici (St. John's Univ., New York, USA), Kristian Seip (Norwegian Univ. of Sciences and Technology, Norway), Manuel Valdivia (Univ. de Valencia, Spain), Joan Verdera (Univ. Autónoma de Barcelona, Spain), Felipe Zó (Univ. Nacional de San Luis, Argentina).
**Organizing/Local Committee**: M. Dolores Acosta, Julio Becerra, Antonio Moreno, Antonio Peralta.
**Information**: http://www.ugr.es/local/amandal, where one can register on-line, or email: amandal@ugr.es.

20–30 **Stochastic Finance 2004 (StochFin2004)**, Coimbra and Lisbon, Portugal. (Mar. 2004, p. 361)

* 22 **DIMACS Working Group on Reticulated Evolution**, DIMACS Center, Rutgers University, Piscataway, New Jersey.
**Short Description**: Species evolution has long been modelled as a branching process that can uniquely be represented by a tree topology. In such a topology, each species can only be linked to its closest ancestor, while interspecies relationships such as species hybridization or lateral gene transfer in bacteria are not allowed. With the advent of phylogenetic analysis at the molecular level, there is increasing evidence that such a model is inadequate. This working group meeting is coupled with a workshop on the same subject. Its goal will be to initiate promising avenues of research designed to explore new models of "reticulate evolution" that are biologically meaningful and computationally feasible. Attendance will be by invitation only.
**Sponsor**: DIMACS.
**Organizers**: Mel Janowitz, DIMACS, email: melj@dimacs.rutgers.edu; Randy Linder, University of Texas, email: rlinder@mail.utexas.edu; Bernard Moret, University of New Mexico, email: moret@cs.unm.edu.
**Deadlines**: Participation is by invitation only. If you wish an invitation, please contact one of the organizers.
**Information**: http://dimacs.rutgers.edu/Workshops/Reticulated_WG/.

* 23–25 **Austrian Workshop on Asset Liability Management in Insurance**, Vienna University of Technology, Vienna, Austria.
**Program**: Professors from universities in Vienna and experts from the industry will give an introductory crash course for those who are not yet experts in the field of asset-liability management for insurance companies, especially with respect to mathematical concepts and methods. This half-day series of lectures is held in German. The second day will feature a range of sessions with experts from the industry in Austria, Germany, and Switzerland. The sessions will be held in English in order to enable non-German speakers to take part in the discussions. The third day will feature sessions with internationally renowned academic researchers in the field of mathematical methods in insurance.
**Organizers**: M. Fulmek (Vienna University/INFORM); T. Hudetz (Financial Market Authority/INFORM); M. Jeckle (Univ. of Applied

Sciences BFI Vienna); C. Krischanitz (AVOe, arithmetica); S. Pichler (WU Wien); M. Predota (Austrian Financial Market Authority); W. Schachermayer (FAM@TUWien/INFORM); H. Schicketanz (FJH); U. Schmock (FAM@TU Wien).
**Information**: http://alm.fam.tuwien.ac.at.

*27–30 **9th European Conference on Logics in Artificial Intelligence**, Lisbon, Portugal.
**Aim and Scope**: The aim of the 9th European Conference on Logics in Artificial Intelligence, JELIA'04, is to bring together active researchers interested in all aspects concerning the use of logics in artificial intelligence to discuss current research, results, problems, and applications of both a theoretical and practical nature.
**Invited Lecturers**: F. Baader, TU Dresden, Germany; B. Nebel, Univ. Freiburg, Germany; F. Rossi, Univ. of Padova, Italy.
**Information**: Send your questions and comments to email: jelia04@di.fct.unl.pt or http://centria.di.fct.unl.pt/~jelia2004.

*27-October 1 **IMA Workshop: Modeling of Soft Matter**, University of Minnesota, Minneapolis, Minnesota.
**Organizers**: M.-C. Calderer (UMN), E. Terentjev (Univ. of Cambridge).
**Information**: Contact: Institute for Mathematics and its Applications, University of Minnesota, 207 Church St., SE, 400 Lind Hall, Minneapolis, MN 55455; tel: 612-624-6066; email: visit@ima.umn.edu; http://www.ima.umn.edu/matter/fall/softmatter.html.

27–October 2 **Workshop on Elliptic Cohomology and Its Relation to the Geometry of Loop Spaces**, The Fields Institute, Toronto, Ontario, Canada. (Apr. 2004, p. 460)

27–October 2 **Workshop on Elliptic Cohomology and Its Relation to the Geometry of Loop Spaces**, The Fields Institute, Toronto, Ontario, Canada. (Apr. 2004, p. 460)

28–October 1 **48th Annual Conference of the Australian Mathematical Society**, RMIT University, Melbourne, Australia. (Apr. 2004, p. 460)

## October 2004

*6–9 **HYKE Conference on Complex Flows**, Centre de Recerca Matemàtica, Bellaterra, Italy.
**Organizer**: Centre de Recerca Matemàtica.
**Aim**: The main objective of the conference is to highlight new developments of either a numerical or analytical nature in kinetic and hydrodynamic equations. We would like to foster the interaction with applications, with special sessions devoted to two applications: granular media and astrophysical flows.
**Speakers**: E. Caglioti (Univ. di Roma I, Italy), B. Despres (Univ. Paris VI, France), L. Desvilletes (ENS Cachan, France), F. Filbet (Univ. d'Orléans, France), J. A. Font (Univ. de Valencia, Spain), A. Goldshtein (Technion Haifa, Israel), L. Gosse (IAC Bari, Italy), T. Goudon (Univ. des Sci. et Tech. Lille 1, France), C. Helzel (IAM Bonn, Germany), J. M. Ibáñez (Univ. de Valencia, Spain), P. E. Jabin (ENS Paris, France), K. H. Karlsen (Univ. of Bergen, Norway), D. Levermore (Univ. of Maryland), A. Mangeney (Inst. de Phys. du Globe de Paris, France), J. M. Marti (Univ. de Valencia, Spain), C. Mouhot (ENS Lyons, France), S. Osher (UCLA), T. Poeschel (Humboldt-Univ.-Charité, Germany), S. Rjasanow (Saarland Univ., Germany), G. Russo (Univ. di Catania, Italy), O. Sánchez (Univ. de Granada, Spain), A. Santos (Univ. de Extremadura, Spain), H. J. Schroll (Lund Univ., Sweden), S. Serna (Univ. de Valencia, Spain), B. Sjogreen (KTH Stockholm, Sweden), M. Torrillhon (ETHZ, Switzerland), G. Toscani (Univ. di Pavia, Italy), J. J. L. Velázquez (Univ. Complutense de Madrid, Spain).
**Deadlines**: Application for financial support: June 5, 2004. Title of presentation: June 6, 2004. Registration and payment: June 30, 2004.
**Information**: http://www.crm.es/ComplexFlows; email: ComplexFlows@crm.es.

*6–12 **Workshop "Global and Geometric Aspects in Nonlinear PDE"**, Yerevan State University, Yerevan, Armenia.
**Scientific Committee**: L. Caffarelli, P. Markowich, H. Shahgholian.
**Organizing Committee**: A. Hakobyan, M. Poghosyan.
**Tentative List of Speakers**: A. Aftalion (France), I. Athanasopoulos (Greece), H. Berestycki (France), Y. Brenier (France), X. Cabre (Spain), M. Chipot (Switzerland), C. Lederman (Argentina), K. Lee (South Korea), F. Lin (USA), N. Garofalo (USA), F. Hamel (France), R. Monneau (France), L. Nirenberg (USA), S. Osher (USA), S. Salsa (Italy), S. Serfaty (USA), J. Sethian (USA), H. Mete Soner (Turkey), T. Souganidis (USA), N. Trudinger (Australia), N. Uraltseva (Russia), J. Vazquez Suarez (Spain), N. Wolanski (Argentina).
**Deadline**: June 1, 2004.
**Information**: http://math.sci.am; http://www.math.kth.se/~henriksh/armenia04.html; email: mathconf@ysu.am.

7–8 **DIMACS Workshop on Computational Issues in Auction Design**, DIMACS Center, Rutgers University, Piscataway, New Jersey. (Apr. 2004, p. 460)

*12–15 **3rd WSEAS International Conference on Applied Mathematics and Computer Science (AMCOS 2004)**, Copacabana, Rio de Janeiro, Brazil.
**Information**: http://www.wseas.org.

13–16 **Conference on Automorphic Forms and the Trace Formula, in Honour of James Arthur on the Occasion of His 60th Birthday**, The Fields Institute, Toronto, Ontario, Canada. (Apr. 2004, p. 460)

14–15 **DIMACS Workshop on Cryptography: Theory Meets Practice**, DIMACS Center, Rutgers University, Piscataway, New Jersey. (Apr. 2004, p. 460)

*14–15 **Seventh New Mexico Analysis Seminar**, University of New Mexico, Albuquerque, New Mexico.
**Description**: The New Mexico Analysis Seminar is a yearly conference that runs between the University of New Mexico and New Mexico State University. The goal of the seminar is to provide an opportunity for scientific exchange and cooperation among broadly defined analysts. The centerpieces of the conference this year will be two workshops led by the keynote speakers.
**Keynote Speakers**: Patricia Bauman, Purdue University, "Analysis of Ginzburg-Landau models with applications to materials"; Luca Capogna, University of Arkansas, "Mean curvature flow in the Heisenberg group and applications".
**Lecturers**: To complement the workshops, four invited one-hour lectures will be featured: Lia Bronsard (McMaster Univ.), Donatella Danielli (Purdue Univ.), Scott Pauls (Darmouth College), and Peter Sternberg (Indiana Univ.).
**Sponsor**: NSF.
**Organizers**: Cristina Pereyra (crisp@math.unm.edu), Joseph Lakey (jlakey@nmsu.edu), Tiziana Giorgi (tgiorgi@nmsu.edu), Adam Sikora (asikora@nmsu.edu), Robert Smits (rsmits@nmsu.edu).
**Information**: http://www.math.unm.edu/colloquia/analysis_seminar.php.

16–17 **AMS Southeastern Section Meeting**, Vanderbilt University, Nashville, Tennessee. (May 2003, p. 604)

16–17 **AMS Western Section Meeting**, University of New Mexico, Albuquerque, New Mexico. (May 2003, p. 604)

23–24 **AMS Central Section Meeting**, Northwestern University, Evanston, Illinois. (Feb. 2004, p. 279)

24–31 **The Tenth International Conference in Modern Group Analysis (MOGRAN X)**, Larnaca, Cyprus. (Mar. 2004, p. 361)

*25–29 **IMA Workshop: Singularities in Materials**, University of Minnesota, Minneapolis, Minnesota.
**Organizers**: F. Lin (NYU), J. Rubinstein (Indiana), P. J. Sternberg (Indiana).
**Information**: Contact: Institute for Mathematics and its Applications, University of Minnesota, 207 Church St., SE, 400 Lind Hall, Minneapolis, MN 55455; tel: 612-624-6066; email: visit@ima.umn.edu; http://www.ima.umn.edu/matter/fall/singularities.html.

*27–29 **DIMACS/LAMSADE Workshop on Computer Science and Decision Theory**, University Paris Dauphine, France.
**Short Description**: The workshop focuses on modern computer science applications of methods developed by decision theorists, in particular methods involving consensus and associated order relations. The broad outlines concern connections between computer science and decision theory, development of new decision-theory-based methodologies relevant to the scope of modern CS problems, and investigation of their applications to problems of computer science and also to problems of the social sciences which could benefit from new ideas and techniques. For more details see the DIMACS/LAMSADE partnership.
**Main Themes**: Preference modelling, social choice, knowledge extraction, fusion of information, issues involving AI, large databases and inference , computational intractability, of consensus functions, axiomatics: approaches and algorithms for consensus functions, order relations and revealed preferences.
**Sponsor**: DIMACS/LAMSADE PARTNERSHIP, National Science Foundation, and CNRS.
**Organizers**: Mel Janowitz, DIMACS, email: melj@dimacs.rutgers.edu; Fred Roberts, DIMACS, email: froberts@dimacs.rutgers.edu; Alexis Tsoukias, LAMSADE, email: tsoukias@lamsade.dauphine.fr.
**Information**: http://dimacs.rutgers.edu/Workshops/DecisionTheory/.

27–29 **SEM Fall Conference—MEMS**, Sheraton Springfield Hotel, Springfield, Massachusetts. (May 2004, p. 576)

## November 2004

1–4 **ICDM '04: The Fourth IEEE International Conference on Data Mining**, Brighton, United Kingdom. (Mar. 2004, p. 361)

*1–5 **Recent Developments in Spectral Geometry**, Blossin (near Berlin), Germany.
**Description**: The workshop will be devoted to recent aspects in index, scattering, and spectral theory of geometric operators (Laplace, Dirac) on Riemannian manifolds.
**Organizers**: C. Bär (Potsdam), Th. Friedrich (Berlin), D. Schüth (Berlin).
**Invited Lecturers**: W. Ballmann, Bonn; T. Branson, Iowa; U. Bunke, Göttingen; G. Carron, Nantes; J. Dodziuk, New York; R. Mazzeo, Stanford; W. Müller, Bonn; P. Perry, Kentucky; St. Zelditch, Baltimore.
**Information**: http://www-irm.mathematik.hu-berlin.de/~pahlisch/Blossin-2004.html.

*3–5 (NEW DATE) **DIMACS Workshop on Mobile and Wireless Security**, DIMACS Center, Rutgers University, Piscataway, New Jersey.
**Short Description**: The rapid growth of both voice and data wireless communications has resulted in several serious security problems in both the voice and data spaces. Unfortunately, many of the early security mistakes made with wireless voice communications were repeated with data communications. This workshop will focus on addressing the many outstanding issues that remain in wireless cellular and WLAN networking such as (but not limited to): Management and monitoring, ad hoc trust establishment, secure roaming between overlay networks, availability and denial of service mitigation, and network and link layer security protocols. We will seek to extend work on ad hoc networking from a nonadversarial setting, assuming a trusted environment, to a more realistic setting in which an adversary may attempt to disrupt communication. We will investigate a variety of approaches to securing ad hoc networks, in particular ways to take advantage of their inherent redundancy (multiple routes between nodes), replication, and new cryptographic schemes such as threshold cryptography.
**Organizer**: Bill Arbaugh, University of Maryland, email: waa@cs.umd.edu.
**Local Arrangements**: Maria Mercado, DIMACS Center, email: mercado@dimacs.rutgers.edu, 732-445-5928.
**Information**: http://dimacs.rutgers.edu/Workshops/MobileWireless/.

6–7 **AMS Eastern Section Meeting**, University of Pittsburgh, Pittsburgh, Pennsylvania. (Sept. 2003, p. 1009)

7–9 **Constructive Functions Tech-04**, Georgia Institute of Technology, Atlanta, Georgia. (Feb. 2004, p. 1443)

*11–12 **DIMACS Workshop on Markets as Predictive Devices (Information Markets)**, DIMACS Center, Rutgers University, Piscataway, New Jersey.
**Description**: For decades economists have studied an astonishing "side effect" of financial and wagering markets: their ability to serve as highly accurate forecasting devices. This workshop aims to explore the use of markets as a substitute for, or complement to more traditional forecasting tools. We will examine how information flows from traders to the market and back again, how market mechanisms process information, how market prices communicate information and forecasts, and what mechanisms best foster accurate and statistically testable predictions. The workshop will bring together researchers and practitioners from a variety of relevant fields, including economics, finance, computer science, and statistics, in both academia and industry, to discuss the state of the art today and the challenges and prospects for tomorrow.

As part of the workshop, one or more tutorials are planned for the benefit of students and other newcomers to the field; little or no background knowledge will be assumed.
**Organizers**: R. Hanson, George Mason Univ., email: rhanson@gmu.edu; J. Ledyard, Calif. Inst. of Tech., email: jledyard@hss.caltech.edu; D. Pennock, Overture Services, email: David.Pennock@overture.com.
**Local Arrangements**: M. Mercado, DIMACS Center, email: mercado@dimacs.rutgers.edu, 732-445-5928.
**Information**: http://dimacs.rutgers.edu/Workshops/Markets/.

*15–17 **5th WSEAS International Conference on Acoustics and Music: Theory and Applications (AMTA 2004)**, Tehran, Iran. (Apr. 2004, p. 461)
**Other Conferences**: Mathematics and Computers in Biology and Chemistry (MCBC'04), Mathematics and Computers in Business and Economics (MCBE'04), Automation & Information (ICAI'04).
**Information**: http://www.wseas.org.

15–17 **Coxeter Lecture Series**, The Fields Institute, Toronto, Ontario, Canada.

*18–20 **IMA Workshop: Future Challenges in Multiscale Modeling and Simulation**, University of Minnesota, Minneapolis, Minnesota.
**Organizers**: T. Y. Hou (Caltech), M. Luskin (UMN).
**Information**: Contact: Institute for Mathematics and its Applications, University of Minnesota, 207 Church St., SE, 400 Lind Hall, Minneapolis, MN 55455; tel: 612-624-6066; email: visit@ima.umn.edu; http://www.ima.umn.edu/matter/fall/challenges.html.

*19–23 **International Conference of Computational Methods in Sciences and Engineering 2004 (ICCMSE 2004)**, Vravrona, Attica, Greece. (Apr. 2004, p. 461)
**Description**: In the past decades many significant insights have been made in several areas of computational methods in sciences and engineering. New problems and methodologies have appeared. There is permanently a need in these fields for the advancement of information exchange. This undoubtedly beneficial practice of interdisciplinary and multidisciplinary interactions should be expressed by an interdisciplinary and multidisciplinary conference on computational methods in sciences and engineering. ICCMSE 2004 aims to play the above role, and for this reason the aim of the conference is to bring together computational scientists and engineers from several disciplines in order to share methods, methodologies, and ideas.

**Information**: Secretary ICCMSE 2004 (E. Ralli-Simou), email: iccmse@uop.gr; 26 Menelaou Street, Amfithea Paleon Faliron, GR-175 64, Athens, Greece; fax: +30210 94 20 091; http://www.uop.gr/~iccmse/.

19–23 **Workshop on Mirror Symmetry**, The Perimeter Institute, Waterloo, Ontario, Canada.

## December 2004

5–16 **International Workshop on Nonlinear Partial Differential Equations**, IPM, Tehran, Iran. (Aug. 2003, p. 850)

*6–10 **III Joint Meeting Japan-Mexico in Topology and Its Applications**, Oaxaca, Mexico.

**Description**: The purpose of this international meeting is to gather topologists from around the world. All areas of topology will be covered. This is the third in a series of meetings organized by Japanese and Mexican topologists. The first one took place in Morelia, Mexico, in July 1999, and the second one in Matsue, Japan, in June 2002.

The academic program of the conference will consist of 11 plenary lectures, invited talks, and contributed talks. We encourage all participants to present contributed talks in parallel sections.

**Organizing Committee**: Mexican Committee: Chairman: M. Eudave-Munoz (IMUNAM), D. Juan-Pineda (Algebraic Topology, IMUNAM-Morelia), S. Antonyan (Geometric Topology, Fac. Ciencias, UNAM), V. Nunez (Knot Theory, CIMAT), M. Hrusak (Set-Theory, IMUNAM-Morelia), S. Garcia-Ferreira (Set-Theoretic Topology, IMUNAM-Morelia), and I. Puga (Continuum Theory, Fac. Ciencias, UNAM). Japanese Committee: Chairman: A. Kono (Kyoto Univ.), N. Iwase (Algebraic Topology, Kyushu Univ.), A. Koyama (Geometric Topology, Osaka Kyoiku Univ.), A. Kawauchi (Knot Theory, Osaka City Univ.), S. Kamo (Set-Theory, Osaka Prefecture Univ.) and T. Nogura (Set-Theoretic Topology, Ehime Univ.).

**Main Speakers**: M. Asaoka (Kyoto Univ.), R. Cauty (Univ. de Paris VI, Pierre et Marie Curie), A. Dranishnikov (Univ. of Florida at Gainesville), J. Gonzalez (CINVESTAV), A. Illanes (IMUNAM), S. Kamada (Hiroshima Univ.), Y. Kamiyama (Ryukyu Univ. of Japan), K. Yamazaki (Tsukuba Univ.), M. Neumann-Coto (IMUNAM), M. G. Tkachenko (Univ. Autonoma Metropolitana-Iz).

**Information**: http://www.cimat.mx/~victor/jamex. There you will be able to register, submit an abstract, and find updated information about the conference; or email: jamex@matmor.unam.mx.

*6–10 **Compact Moduli Spaces and Birational Geometry**, AIM Research Conference Center, Palo Alto, California.

**Topics**: This workshop, sponsored by AIM and the NSF, will be devoted to the study of compact moduli spaces, especially those inspired by the minimal model program. Perhaps the first example is the Deligne/Mumford compactification of the moduli space of stable curves, where the limiting curves are dictated by the structure of canonical models for surfaces fibered over curves. This was extended to surfaces by Kolár/Shepherd-Barron and Alexeev, which led to work of Corti, Hacking, Tevelev/Keel, Alexeev, and others, where birational geometry inspired the choice of limiting objects and sometimes played a role in constructing moduli spaces.

**Goals**: The main goals of this workshop are: to promote cross-fertilization by bringing together specialists in birational geometry and moduli theory; to make the techniques of the field more widely known and accessible; and to identify concrete, tractable questions for young researchers entering the area.

**Organizers**: Brendan Hassett and Sándor Kovács.

**Deadline**: September 6, 2004.

**Information**: http://aimath.org/ARCC/workshops/birational.html.

13–17 **The 9th Asian Technology Conference in Mathematics (ATCM2004)**, National Institute of Education, Singapore. (Apr. 2004, p. 461)

*13–17 **Recent Advances in Core Model Theory**, AIM Research Conference Center, Palo Alto, California.

**Organizers**: John Steel and Ernest Schimmerling.

**Topics**: This workshop, sponsored by AIM and the NSF, will be devoted to important recent results in core model theory due to Hugh Woodin, results whose proofs are not widely known and have not been published. One of these is Woodin's refutation of the Cofinal Branches Hypothesis (CBH). Another is his identification of HOD computed inside a model of AD+ with a new kind of inner model constructed from extenders and iteration strategies.

**Lecturer**: Hugh Woodin has agreed to be the primary lecturer. John Steel and possibly one or two others will exposit parts of Hugh Woodin's work or the material on which it rests. We hope that the wider dissemination of these developments will lead to further advances in one of the central programs in pure set theory: extending inner model theory to stronger large cardinal hypotheses.

**Deadline**: September 13, 2004.

**Information**: http://aimath.org/ARCC/workshops/coremodel.html.

*13–18 **Joint Conference: The 2004 NZIMA Conference in Combinatorics and Its Applications and The 29th Australasian Conference in Combinatorial Mathematics and Combinatorial Computing (29th ACCMCC)**, Copthornes-Manuels, Lake Taupo, New Zealand.

**Topics**: Graph Theory, Matroid Theory, Design Theory, Coding Theory, Enumerative Combinatorics, Combinatorial Optimization, Combinatorial Computing and Theoretical Computer Science, Combinatorial Matrix Theory.

**Organizing Committee**: NZIMA: Paul Bonnington, email: p.bonnington@auckland.ac.nz; Geoff Whittle, email: geoff.whittle@vuw.ac.nz. ACCMCC: Brendan McKay, email: bdm@cs.anu.edu.au; Ian Wanless, email: imw@cs.anu.edu.au.

**Plenary Speakers**: Dan Archdeacon (Univ. of Vermont), Richard Brualdi (Univ. of Wisconsin), Darryn Bryant (Univ. of Queensland), Peter Cameron (Queen Mary, Univ. of London), Bruno Courcelle (Bordeaux Univ.), Catherine Greenhill (Univ. of New South Wales), Bojan Mohar (Univ. of Ljubljana), Bruce Richter (Univ. of Waterloo), Neil Robertson (Ohio State Univ.), Paul Seymour (Princeton Univ.), Robin Thomas (Georgia Inst. of Tech.), Carsten Thomassen (Tech. Univ. of Denmark), Mark Watkins (Univ. of Syracuse), Dominic Welsh (Oxford Univ.).

**Registration Deadline**: November 14, 2004.

**Information**: Visit http://www.nzima.auckland.ac.nz/combinatorics/conference.html.

*15–17 **Arithmetic, Geometry and Topology, Conference on the Occasion of Larry Breen's Sixtieth Birthday**, Institut Galilée, Université Paris 13, France.

**Information**: http://www-math.univ-paris13.fr/~lb2004/.

*16–19 **International Conference on History and Heritage of Mathematical Sciences**, Govt. Model Autonomous Holkar Science College, Indore, India.

**Focus**: The conference will cover all aspects of the history of mathematical sciences, including mathematics, statistics, operations research, and computer science. In particular the conference will focus on the following areas: General Histories, Source Books and Biographies of Mathematicians; Mathematics and Indigenous Cultures of the World; Ancient Indian Mathematics; Jaina Mathematics; The Origin of Mathematics; Mathematics in 15th to 18th Centuries, Renaissance; 19th and 20th Centuries Mathematics and Mathematical Sciences; History of Mathematics as A Subject in Educational Curricula; Future Prospects. The academic sessions will consist of invited plenary talks and contributed paper presentations.

**Organizers**: The Indian Society for History of Mathematics; Govt. Model Autonomous Holkar Science College, Indore; Kundakunda Jnanapitha, Indore, and other institutions.

**Call for Papers**: Papers covering topics pertaining to the above areas are invited for the conference. Authors are requested to submit the full version of their papers in publishable form by October 1, 2004, along with the abstract. The proceedings of the conference will be published.
**Information**: email: bsyadav@indianshm.com (program, talks, papers); email: anupamjain3@rediffmail.com or kundkund@sancharnet.in (registration, accommodations, etc.).

* 17–19 **4th WSEAS International Conference on Signal Processing, Computational Geometry & Artificial Vision (ISCGAV'04)**, Puerto De La Cruz, Tenerife, Canary Islands, Spain.
**Other Conference**: Systems Theory and Scientific Computation (ISTASC'04).
**Information**: http://www.wseas.org.

17–19 **International Conference on Smarandache Algebraic Structures**, Indian Institute of Technology, IIT Madras, Chennai, Tamil Nadu, India. (Aug. 2003, p. 850)

17–22 **The Third International Congress of Chinese Mathematicians**, The Chinese Univ. of Hong Kong, Shatin, Hong Kong, P. R. China. (Dec. 2003, p. 1443)

* 18–20 **Recent Advances in Mathematics & Its Applications (ISRAMA 2004)**, Kolkata (Calcutta), India.
**Topics**: Algebra, Discrete Mathematics & Theoretical Computer Science; Analysis & Topology and their Applications; Geometry and its Applications; Dynamical Systems, Chaos and Fractals; Continuum Mechanics; Plasma Physics; Control Theory and Optimization Theory; Bio-mechanics; Applications of Mathematics to Environmental Problems; History and Philosophy of Physical Science; Quantum Information Theory; Relativity and Its Applications.
**Information**: Prof. M. R. Adhikari, Secretary, Calcutta Mathematical Society, AE-374, Sector-1, Salt Lake City, India; email: cms@cal2.vsnl.net.in.

* 20–23 **Sharp Thresholds for Mixing Times**, AIM Research Conference Center, Palo Alto, California.
**Topics**: This workshop, sponsored by AIM and the NSF, will address basic questions about the mixing times of Markov chains. The mixing times of Markov chains are fundamental parameters that encode key geometric information about the chain and at the same time have a wide variety of applications. In the last twenty years, computer scientists and probabilists have brought new perspectives and methods to this study. By bringing together experts on a variety of different techniques, we hope that perhaps some of them can be combined or modified to obtain the necessary insights into the problems.
**Organizers**: Amir Dembo, Yuval Peres, and David Revelle.
**Deadline**: September 20, 2004.
**Information**: http://aimath.org/ARCC/workshops/mixingtimes.html.

* 29–31 **6th WSEAS International Conference on Mathematical Methods and Computational Techniques in Electrical Engineering (MMACTEE 2004)**, Vouliagmeni, Athens, Greece.
**Other Conferences**: Nonlinear Analysis, Nonlinear Systems and Chaos (NOLASC 2004), Wavelet Analysis and Multirate Systems (WAMUS 2004).
**Information**: http://www.wseas.org.

## January 2005

5–8 **Joint Mathematics Meetings**, Hyatt Regency Atlanta & Atlanta Marriott Marquis, Atlanta, Georgia. (Sept. 2002, p. 1001)

* 7–8 **2004–05 ASL Winter Meeting (with Joint Mathematics Meetings)**, Atlanta, Georgia.
**Program Committee**: R. Jin, A. Kanamori (chair), and A. Shlapentokh.
**Deadline**: Abstracts: September 17, 2004 at the ASL Business Office.
**Information**: email: asl@vassar.edu.

8–15 **Geometry: Interactions with Algebra and Analysis**, Napier, New Zealand. (May 2004, p. 576)

* 10–14 **Braid Groups, Clusters and Free Probability**, AIM Research Conference Center, Palo Alto, California.
**Topics**: This workshop, sponsored by AIM and the NSF, will be devoted to deciphering the mysterious connections between the following objects: Garside monoid structures for Coxeter and braid groups, and the associated "lattices of noncrossing partitions"; the cluster algebras of Fomin and Zelevinsky, and the associated polytopes known as "generalized associahedra"; ad-nilpotent ideals within Borel subalgebras of semisimple Lie algebras or, equivalently, subsets of pairwise incomparable positive roots.
**Organizers**: Jon McCammond, Alexandru Nica, and Victor Reiner.
**Deadline**: October 10, 2004.
**Information**: http://aimath.org/ARCC/workshops/braidgroups.html.

10–14 **Workshop on Topological Strings**, The Fields Institute, Toronto, Ontario, Canada. (Apr. 2004, p. 461)

17–July 15 **Model Theory and Applications to Algebra and Analysis**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England. (Apr. 2003, p. 500)

27–29 **IMAC-XXIII Preconference Courses**, Rosen Plaza Hotel, Orlando, Florida. (May 2004, p. 576)

31–February 3 **IMAC-XXIII: A Conference on Structural Dynamics**, Rosen Plaza Hotel, Orlando, Florida. (May 2004, p. 576)

## February 2005

* 3–4 (NEW DATE) **DIMACS Workshop on Markets as Predictive Devices (Information Markets)**, DIMACS Center, Rutgers University, Piscataway, New Jersey.
**Description**: For decades economists have studied an astonishing "side effect" of financial and wagering markets: their ability to serve as highly accurate forecasting devices. This workshop aims to explore the use of markets as a substitute for, or complement to, more traditional forecasting tools. We will examine how information flows from traders to the market and back again, how market mechanisms process information, how market prices communicate information and forecasts, and what mechanisms best foster accurate and statistically testable predictions. The workshop will bring together researchers and practitioners from a variety of relevant fields, including economics, finance, computer science, and statistics, in both academia and industry, to discuss the state of the art today and the challenges and prospects for tomorrow. As part of the workshop, one or more tutorials are planned for the benefit of students and other newcomers to the field; little or no background knowledge will be assumed.
**Organizers**: R. Hanson, George Mason Univ., email: rhanson@gmu.edu; J. Ledyard, Calif. Inst. of Tech., email: jledyard@hss.caltech.edu; D. Pennock, Overture Services, email: David.Pennock@overture.com.
**Local Arrangements**: M. Mercado, DIMACS Center, email: mercado@dimacs.rutgers.edu, 732-445-5928.
**Information**: http://dimacs.rutgers.edu/Workshops/Markets/.

* 7–9 **IMA Tutorial/Workshop: Where Mathematics Meets Industry**, University of Minnesota, Minneapolis, Minnesota.
**Organizers**: G. Milton (Utah).
**Information**: Contact: Institute for Mathematics and its Applications, University of Minnesota, 207 Church St., SE, 400 Lind Hall, Minneapolis, MN 55455; tel: 612-624-6066; email: visit@ima.umn.edu; http://www.ima.umn.edu/matter/.

14–18 **Geometry: Interactions with Algebra and Analysis**, University of Auckland, Auckland, New Zealand. (May 2004, p. 576)

15–17 **International Symposium on Stochastic Models in Reliability, Safety, Security and Logistics (SMRSSL'05)**, Negev Academic College of Engineering (NACE), Beer Sheva, Israel. (Apr. 2004, p. 461)

## March 2005

* 1–2 **DIMACS Short Course: A Field Guide to GenBank and NCBI Molecular Biology Resources**, DIMACS Center, Rutgers University, Piscataway, New Jersey.
**Short Description**: The National Center for Biotechnology Information (NCBI) presents "A Field Guide to GenBank and NCBI Molecular Biology Resources", a lecture and hands-on computer workshop on GenBank and related databases covering effective use of the Entrez databases and search service, the BLAST similarity search engine, genome data and related resources. Further information about NCBI may be found at http://www.ncbi.nlm.nih.gov.
**Sponsors**: The National Center for Biotechnology Information, the Department of Genetics at Rutgers University, DIMACS, and the BIOMAPS Institute for Quantitative Biology.
**Organizers**: Paul Ehrlich, BIOMAPS Institute, email: pehrlich@biomaps.rutgers.edu; Mel Janowitz, DIMACS, email: melj@dimacs.rutgers.edu; Tara Matise, Rutgers University, email: matise@biology.rutgers.edu.
**Local Arrangements**: Maria Mercado, DIMACS Center, email: mercado@dimacs.rutgers.edu, 732-445-5928.
**Information**: http://dimacs.rutgers.edu/Workshops/NCBI/.

* 7–9 **DIMACS Working Group on Order Theoretic Aspects of Epidemiology**, DIMACS Center, Rutgers University, Piscataway, New Jersey.
**Short Description**: Many practical epidemiological problems involve the comparison of one or more quantities. Most often the quantities are rates or proportions leading to a measure of effect or association, but they may also involve distances, exposure categories, job titles, etc. Often the actual values in question are not important, only whether one value is smaller than or larger than a second, i.e., their order. This working group will study how fundamental order-theoretic concepts of TCS and DM such as semiorders, interval orders, general partial orders, and lattices can be used to improve the results of epidemiological investigations. We will give epidemiological concepts a careful definition in the language of partial orders and explore the use of visualization of order-theoretic concepts in epidemiologic studies. The latter will involve issues such as how best to visualize a poset through clever presentation of its Hasse diagram, an issue of great interest in the field of TCS known as graph drawing.
**Sponsor**: DIMACS.
**Organizers**: David Ozonoff, Boston University, email: dozonoff@bu.edu; Melvin Janowitz, Rutgers University, email: melj@dimacs.rutgers.edu; Fred Roberts, Rutgers University, email: froberts@dimacs.rutgers.edu.
**Information**: http://dimacs.rutgers.edu/Workshops/WGOrder/.

* 7–11 **Third International Conference on Pattern Avoiding Permutations**, University of Florida, Gainesville, Florida.
**Organizer**: Miklos Bona, email: bona@math.ufl.edu.
**Deadline**: For submitting 6-page extended abstracts: December 1, 2004.
**Keynote Speaker**: Doron Zeilberger (Rutgers University).
**Information**: email: bona@math.ufl.edu.

18–19 **AMS Southeastern Section Meeting**, Western Kentucky University, Bowling Green, Kentucky. (May 2004, p. 576)

* 19–22 **2005 ASL Annual Meeting**, Stanford, California.
**Program Committee**: J. Mitchell, M. Rathjen, S. Shapiro, R. Solomon, P. Speissegger, and J. Steel (chair).
**Organizing Committee**: A. Arana, S. Feferman, G. Mints, J. Mitchell, and R. Sommer (chair).
**Information**: email: asl@vassar.edu.

21–25 **Workshop on N=1 Compactifications**, The Fields Institute, Toronto, Ontario, Canada. (Mar. 2004, p. 361)

* 28–30 **IMA Tutorial/Workshop: New Paradigms in Computation**, University of Minnesota, Minneapolis, Minnesota.
**Organizer**: R. V. Kohn (NYU).
**Information**: Contact: Institute for Mathematics and its Applications, University of Minnesota, 207 Church St., SE, 400 Lind Hall, Minneapolis, MN 55455; tel: 612-624-6066; email: visit@ima.umn.edu; http://www.ima.umn.edu/matter/spring/paradigms.html.

* 28–April 1 **Generalized Kostka Polynomials**, AIM Research Conference Center, Palo Alto, California.
**Topics**: This workshop, sponsored by AIM and the NSF, concerns Kostka polynomials and their connections to various areas of mathematics. Kostka polynomials and their generalizations have arisen in numerous ways, such as in the context of symmetric functions, combinatorics, representation theory, quantum groups and crystal bases, statistical mechanics, algebraic geometry, and Kazhdan-Lusztig theory. The goal of this workshop is to bring together mathematicians who have studied Kostka polynomials from different points of view, state the various connections and open conjectures, and work towards their proofs.
**Organizers**: M. Kleber, A. Schilling, and M. Vazirani.
**Deadline for Applications**: January 28, 2005.
**Information**: http://aimath.org/ARCC/workshops/kostka.html.

28–April 1 **Workshop on String Phenomenology**, The Perimeter Institute, Waterloo, Ontario, Canada. (Apr. 2004, p. 461)

## April 2005

1–July 8 **Special Semester on "Modern Methods of Time-Frequency Analysis"**, Erwin Schroedinger Institute (ESI) for Mathematical Physics, Vienna, Austria. (Apr. 2004, p. 461)

2–3 **AMS Eastern Section Meeting**, University of Delaware, Newark, Delaware. (May 2004, p. 576)

8–10 **AMS Central Section Meeting**, Texas Tech University, Lubbock, Texas. (May 2004, p. 576)

* 11–15 **IMA Workshop: Atomic Motion to Macroscopic Models: The Problem of Disparate Temporal and Spatial Scales in Matter**, University of Minnesota, Minneapolis, Minnesota.
**Organizers**: R. D. James (UMN), M. Luskin (UMN), J. Maddocks (Swiss Fed. Inst. of Tech.), C. Schütte (Freie Univ. Berlin).
**Information**: Contact: Institute for Mathematics and its Applications, University of Minnesota, 207 Church St., SE, 400 Lind Hall, Minneapolis, MN 55455; tel: 612-624-6066; email: visit@ima.umn.edu; http://www.ima.umn.edu/matter/spring/atomic.html.

* 14–15 **DIMACS Workshop on Intellectual Property Protection**, DIMACS Center, Rutgers University, Piscataway, New Jersey.
**Short Description**: We have reached the point where there is enough bandwidth on the Internet and enough computing and storage power on client machines that most digital goods can be easily shared and utilized by many. Peer-to-peer networks make it easy for users to find music and other files and to download them from a nearby computer. Existing copyright laws developed to deal with exchanges that are based on physical media or paper are evolving to laws dealing with electronic exchanges, but these laws need to be developed in tandem with new technologies for digital rights management. Technologies for protecting intellectual property have been developed in the research community, but no perfect solution exists. There is need to develop such technologies that reflect both protection of the rights holder and the "public good" resulting from exchange of ideas. This workshop aims to explore the problem of protecting soft goods and managing digital rights. A major goal is to explore the limits of what can be accomplished in software and to consider the minimal hardware required for solutions to work.
**Sponsor**: DIMACS.

**Organizers**: D. Dean, SRI Internat., email: ddean@csl.sri.com; M. Jakobsson, RSA Labs, email: mjakobsson@rsasecurity.com.
**Information**: http://dimacs.rutgers.edu/Workshops/Intellectual/.

16–17 **AMS Western Section Meeting**, University of California, Santa Barbara, California. (May 2004, p. 576)

## May 2005

*2–6 **IMA Workshop: Experiments in Physical Biology, Part I**, University of Minnesota, Minneapolis, Minnesota.
**Information**: Contact: Institute for Mathematics and its Applications, University of Minnesota, 207 Church St., SE, 400 Lind Hall, Minneapolis, MN 55455; tel: 612-624-6066; email: visit@ima.umn.edu; http://www.ima.umn.edu/matter/spring/biology.html.

2–6 **Workshop on Gravitational Aspects of String Theory**, The Fields Institute, Toronto, Ontario, Canada. (Apr. 2004, p. 461)

*6–9 **Statistical Inferences on Shape Manifolds**, AIM Research Conference Center, Palo Alto, California.
**Topics**: This workshop, sponsored by AIM and the NSF, will be devoted to algorithmic and computational shape analysis. It will bring together researchers in the field of shape analysis to identify and discuss outstanding issues in algorithmic shape representation, statistical inferences on shape manifolds, and applications to areas such as medical imaging, homeland security, and military target recognition. Algorithmic shape analysis has a multidisciplinary nature, so the workshop will seek to promote interaction and foster the development of new collaborations among researchers with expertise in mathematics, statistics, and image analysis.
**Deadline**: February 6, 2005.
**Information**: Visit http://aimath.org/ARCC/workshops/shapemanifolds.html.

*15–21 **ICMI Study 15: The Professional Education and Development of Teachers of Mathematics**, Águas de Lindóia, São Paulo, Brazil.
**Scope and Purpose**: The premise of this study, the fifteenth to be organized by the International Commission on Mathematical Instruction (ICMI), is that the education and continued development of teachers is key to students' opportunities to learn mathematics. What teachers of mathematics know, care about, and do is a product of their experiences and socialization, both prior to and after entering teaching, together with the impact of their professional education. The study focuses on the initial and continuing education of teachers of mathematics at the primary and secondary levels. It is organized in two main strands: Teacher Preparation Programs and the Early Years of Teaching; and Professional Learning for and in Practice. The study conference will be a working meeting, where every participant will be expected to be active, and participation is by invitation only, based on submitted proposals. The Program Committee welcomes contributions from individuals from a variety of backgrounds, including mathematicians, teacher educators, and school practitioners.
**Program Committee**: Deborah Loewenberg Ball, email: dball@umich.edu (USA), and Ruhama Even, email: ruhama.even@weizmann.ac.il (Israel), cochairs; Romulo Lins, email: romlins@rc.unesp.br (Brazil), chair; Jo Boaler (USA), Chris Breen (South Africa), Frédéric Gourdeau (Canada), Marja van den Heuvel-Panhuizen (Netherlands), Barbara Jaworski (Norway), Gilah Leder (Australia), Shiqi Li (China), João Filipe Matos (Portugal), Hiroshi Murata (Japan), Jarmila Novotna (Czech Republic), Aline Robert (France), Bernard R. Hodgson (Canada), and Hyman Bass (USA), ex officio, ICMI Executive Committee.
**Deadline for Submissions**: October 15, 2004.
**Information**: http://www-personal.umich.edu/~dball/icmistudy15.html.

*16–20 **IMA Workshop: Experiments in Physical Biology, Part II**, University of Minnesota, Minneapolis, Minnesota.
**Information**: Contact: Institute for Mathematics and its Applications, University of Minnesota, 207 Church St., SE, 400 Lind Hall, Minneapolis, MN 55455; tel: 612-624-6066; email: visit@ima.umn.edu; http://www.ima.umn.edu/matter/spring/biology.html.

*17–20 **Graph Theory with Altitude**, University of Colorado at Denver, Denver, Colorado.
**Description**: Graph theory conference in honor of Joan P. Hutchinson on the occasion of her 60th birthday.
**Topics**: Chromatic and topological graph theory, visibility graphs, graph algorithms, and combinatorics.
**Organizers**: Ellen Gethner, Mike Jacobson, Arta Doci, and John Clark.
**Plenary Speakers**: Mike Albertson, Fan Chung, Ron Graham, Carsten Thomassen, Doug West, Sue Whitesides, and Herb Wilf.
**Information**: http://carbon.cudenver.edu/~egethner/JoanHutchinson60.html.

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**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.**

## June 2005

*6–10 **Moduli Spaces of Properly Embedded Minimal Surfaces**, AIM Research Conference Center, Palo Alto, California.
**Topics**: This workshop, sponsored by AIM and the NSF, will be devoted to advancing the understanding of properly embedded minimal surfaces in three-space, a subject whose roots go back to Euler and Lagrange. New examples discovered in an explosion of activity in the 1980s have gradually focused the subject on the problem of classification. Recently, several new approaches and techniques have been developed which together begin to suggest that it might be possible to organize these examples into families and indeed to describe the structure of the space of properly embedded minimal surfaces. This workshop will be tightly focused on a few specific questions which are fundamental for this classification effort. These problems are linked to a confluence of attention from mathematicians with different points of view and by the prospect that real progress might be made by approaches using several different methods simultaneously.
**Organizers**: Michael Wolf, David Hoffman, and Matthias Weber.
**Deadline**: March 6, 2005 .
**Information**: Visit http://aimath.org/ARCC/workshops/minimalsurfaces.html.

*8–11 **IMA Workshop: Effective Theories for Materials and Macromolecules**, University of Minnesota, Minneapolis, Minnesota.
**Organizers**: Weinan E (Princeton), R. D. James (UMN), R. V. Kohn (NYU), C. Le Bris (ENPC), M. Luskin (UMN).
**Information**: Contact: Institute for Mathematics and its Applications, University of Minnesota, 207 Church St., SE, 400 Lind Hall, Minneapolis, MN 55455; tel: 612-624-6066; email: visit@ima.umn.edu; http://www.ima.umn.edu/matter/spring/theories.html.

*20–25 **Asymptotic and Probabilistic Methods in Geometric Group Theory**, Geneva, Switzerland.
**Organizers**: Goulnara N. Arzhantseva, Laurent Bartholdi, Alexander Yu. Ol'shanskii, Mark Sapir, and Efim Zelmanov.
**Invited Speakers**: Werner Ballmann (RFWU, Bonn), Mladen Bestvina (Utah), Marc Burger (ETH, Zürich), Peter Buser (EPFL, Lausanne), Jim Cannon (Utah), Mikhael Gromov (IHES, Paris), Pierre de la Harpe (Geneva), David Kazhdan (HUJI, Jerusalem), Alex Lubotzky (HUJI, Jerusalem) Grigori Margulis (Yale), Shahar Mozes (HUJI, Jerusalem).
**Information**: http://mad.epfl.ch/apg/.

*20–August 15 **Computational Prospects of Infinity**, Institute for Mathematical Sciences, National University of Singapore, Singapore.

**Program**: This two-month program will focus on recent developments in set theory and recursion theory, which are two main branches of mathematical logic. Topics for set theory will include issues related to Cantor's Continuum Hypothesis (CH), with special attention paid to the importance of the conjecture, while topics for recursion theory will include recursive enumerability and randomness.
**Organizing Committee**: Cochairs: Chi Tat Chong (National Univ. of Singapore), Qi Feng (National Univ. of Singapore and Chinese Acad. of Sci., China), Theodore A. Slaman (Univ. of California at Berkeley), and W. Hugh Woodin (Univ. of California at Berkeley).
**Activities**: The program will consist of two tutorials and seminars. The tutorials will provide background material on topics such as Ω-logic, fine structure, recursive enumerability, and effective randomness. Seminars on recent and up-to-date results related to the core themes of the programs will also be conducted.
**Registration**: Registration forms for participation in the tutorials are available at `http://www.ims.nus.edu.sg/Programs/infinity/index.htm`. Completed forms should be received by the institute at least one month before commencement of each activity. Registration is free of charge. Institute membership is not required for participation.
**Information**: For general enquiries, please email `ims@nus.edu.sg`, while for enquiries on scientific aspects of the program, please email Qi Feng at `matfq@nus.edu.sg`. More information about the program is available at `http://www.ims.nus.edu.sg/Programs/infinity/index.htm`.

* 26–July 1 **ERLOGOL-2005: Intermediate Problems of Model Theory and Universal Algebra**, State Technical University/Mathematics Institute, Novosibirsk, Russia.
**Organizers**: Algebra department of Novosibirsk State Technical University and Mathematics Institute of Russian Academy of Sciences.
**Information**: Information about previous meetings is on the following sites: 1995–2001: `http://www2.nstu.ru/deps/algebra/erlogol/`; 2003: `http://www.nstu.ru/science/conf/erlogol-2003`. Pay attention to the `http://www2` in the first address! You may send email to: `algebra@nstu.ru`, `ponom@online.sinor.ru`, `knp1958@yahoo.com`.

## July 2005

* 2–7 **SRTL-4: The Fourth International Research Forum on Statistical Reasoning, Thinking, and Literacy**, The University of Auckland, Auckland, New Zealand.
**Theme**: Reasoning about Distribution.
**Deadline**: Submission of Interest deadline: June 1, 2004.
**Information**: Maxine Pfannkuch, Department of Statistics, The University of Auckland, New Zealand; phone: 64 9 373 7599; ext. 88794; fax: 64 9 373 7018; email: `m.pfannkuch@auckland.ac.nz`; or see `http://www.stat.auckland.ac.nz/srtl4/`.

* 25–29 **IMA Workshop: Mixed Integer Programming**, University of Minnesota, Minneapolis, Minnesota.
**Organizers**: A. Atamturk (Berkeley), D. Bienstock (Columbia), S. Dash (IBM), A. Letchford (Lancaster Univ.), J. Linderoth (Lehigh Univ.).
**Information**: Contact: Institute for Mathematics and its Applications, University of Minnesota, 207 Church St., SE, 400 Lind Hall, Minneapolis, MN 55455; tel: 612-624-6066; email: `visit@ima.umn.edu`; `http://www.ima.umn.edu/hot-topics/2005/W7.25-29.05.html`.