
Mathematics Calendar

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

September 2004

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

Theme: Mathematical Sciences and the Development of Africa—Challenges for Building a Knowledge Society in Africa. The scientific program will include plenary lectures, invited lectures, contributed research papers, a symposium, and exhibitions.

Contact: Those interested in speaking at or participating in the congress are invited to contact: A. Boukricha, local organizing committee, Université de Tunis EL Manar Département de Mathématiques, Faculté des Sciences De Tunis, 1060 Tunis, Tunisia; email: aboukricha@fst.rnu.tn.

Information: Please submit curriculum vitae and abstract to: J. Persens, Pres., African Mathematical Union, Univ. of the Western Cape, Private Bag X17, Belville 7535, South Africa; jpersens@uwc.ac.za; and copies to: J.-P. Ezin, Sec. General, African Mathematical Union, Institut de Mathématiques et de Sciences Physiques, BP613, Porto Novo, Benin; jpezin@syfed.bj.refer.org; http://www.ams.org/mathcal/info/2004_sep1-6_tunis.html.

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

Description: The scope of SMPS 2004 is to bring together experts representing all existing approaches used in soft probability and statistics. In particular, papers (both theoretical and applied) combining probability and statistics with fuzzy logic, applications of the Dempster-Shafer theory, generalized theories of uncertainty,

generalized random elements, generalized probabilities, and so on will be welcome.

Call for Papers: Full papers of 5–8 pages (A4) written in English should be submitted by email no later than February 15, 2004, to com2smps@correo.uniovi.es.

Main Speakers: L. A. Zadeh, I. S. Molchanov, H. T. Nguyen, Y. Ogura, and D. A. Ralescu.

Organizers (general chairs): M. A. Gil and M. Lopez-Díaz.

Information: <http://web.uniovi.es/SMPS>; email: smps2004@correo.uniovi.es.

7 **The DIMACS Symposium on Phylogenetics and Rapidly Evolving Pathogens**, Aotea Centre, Auckland, New Zealand. (June/July 2004, p. 686)

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.rodriigo@auckland.ac.nz; Mike Steel, Univ. of Canterbury, email: M.Steel@math.canterbury.ac.nz.

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/July, and December issues will include, along with new announcements, references to any previously announced meetings and conferences occurring within the twelve-month period following the month of those issues. New information about meetings and conferences that will occur later than the twelve-month period will be announced once in full and will not be repeated until the date of the conference or meeting falls within the twelve-month period.

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

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/>.

7–10 International Conference on PDE Methods in Applied Mathematics and Image Processing, Sunny Beach, Bulgaria. (Aug. 2004, p. 830)

Purpose: To bring together people interested in partial differential equations and their applications, with a special emphasis on their novel applications in image processing.

Organizers: Ognyan Kounchev, email: kounchev@math.bas.bg, <http://www.math.bas.bg/~kounchev>; Svetozar Margenov, email: margenov@parallel.bas.bg, <http://parallel.bas.bg/~margenov>.

Deadline: For submissions of abstracts is July 31, 2004.

Information: http://www.math.bas.bg/~kounchev/2004_conference/HomePage2004.html.

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

Information: <http://www.math.ist.utl.pt/galg/WAGP04/>.

7–11 International Workshop on Analysis and Its Application, Mersin University, Mersin, Turkey. (Aug. 2004, p. 830)

Workshop Fields: Approximation Theory, Complex Analysis, Functional Analysis, Ordinary Differential Equations, Partial Differential Equations, Theoretical Physics, Theory of Functions.

Invited Speakers: V. V. Andrievskii (Kent Univ., USA); H. P. Blatt (Kath. Univ. of Eichstatt, Germany); Z. Ditzian (Univ. of Alberta, Canada); V. V. Goryainov (Volgograd Univ., Russia); N. Kerimov (Baku State Univ., Azerbaijan); K. Kopotun (Univ. of Manitoba, Canada); D. Leviatan (Tel-Aviv Univ., Israel); R. Petrishin (Chernivtsi Nath. Univ., Ukraine); R. Rzayev (Baku Econ. Univ., Azerbaijan); A. M. Samoilenko (Math. Inst., Ukraine); I. A. Shevchuk (Kyiv Nath. Univ., Ukraine); A. I. Stepanets (Math. Inst., Ukraine).

Information: <http://mathworkshop.mersin.edu.tr>.

9–12 CabriWorld 2004: Third CabriGeometry International Conference, University of Rome “La Sapienza”, Rome, Italy. (Aug. 2004, p. 830)

Description: The conference is dedicated to the teaching and learning of geometry through the use of dynamic geometry software and is addressed to the needs of mathematics teachers at all levels, researchers, mathematicians, and others interested in the use of new technologies in the teaching of mathematics.

Information: <http://italia2004.cabriworld.com>.

9–12 Recent Trends in Additive Combinatorics, AIM Research Conference Center, Palo Alto, California. (Jun/Jul. 2004, p. 686)

Topics: This workshop, sponsored by AIM and the NSF, will focus on four interrelated themes: (1) Long arithmetic progressions and the Szemerédi regularity lemma; (2) the Erdős-Szemerédi sum-product conjecture, the Erdős distance set problem, and Szemerédi-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)

Aim: The aim of ICNAAM 2004 is to bring together leading scientists of the international numerical and applied mathematics community and to attract original research papers of very high quality. The topics to be covered include (but are not limited to): all the research areas of numerical analysis and computational mathematics, and all the research areas of applied mathematics (see <http://www.uop.gr/~icnaam/res8/aimscope.htm>).

Chairmen and Organizers: T. E. Simos, Department of Comput. Sci. and Tech., Faculty of Sci. and Tech., Univ. of Peloponnese, Greece; and Ch. Tsitouras, Technological Educational Inst. of Chalkis, Greece. Vice-Chairman: G. Psihoyios, Anglia Polytechnic University, Cambridge, UK.

Scientific Committee: G. van den Berghe, Belgium; P. E. Bjorstad, Norway; J. Cash, UK; R. Cools, Belgium; A. Cuyt, Belgium; B. Fischer, Germany; R. W. Freund, USA; I. Gladwell, USA; B. Hendrickson, USA; A. Klar, Germany; W. F. Mitchell, USA; T. E. Simos, Greece; W. Sproessig, Germany; Ch. Tsitouras, Greece; G. Alistair Watson, UK.

Information: Secretary ICNAAM, email: icnaam@uop.gr; 26 Menelaou Street, Amfitheta Paleon Faliron, GR-175 64, Athens, Greece; fax: +30210 94 20 091; <http://www.uop.gr/~icnaam/>.

12–17 CR Geometry and Partial Differential Equations, Grand Hotel Bellavista, Levico Terme, Trento, Italy. (Aug. 2004, p. 830)

Scientific Organizers: Marco Peloso (Polit. Torino), Dmitri Zaitsev (Trinity Coll. Dublin), Giuseppe Zampieri (Univ. Padova).

Information: email: michelet@science.unitn.it; <http://www.science.unitn.it/cirm/>; <http://www.science.unitn.it/cirm/listCRGeometry.html>.

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

Information: <http://www.ptmat.fc.ul.pt/~hso2004/>.

14–16 4th WSEAS International Conference on Simulation, Modeling and Optimization (ICOSMO 2004), Izmir, Turkey. (Jun/Jul. 2004, p. 686)

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)

Description: As well as discussing recent developments in the theory and numerical analysis of boundary integral equations, the conference will strive to encompass applications of contemporary relevance such as direct and inverse (medium and high) frequency scattering, electromagnetics and moving boundary problems in hydrodynamics. Continuing progress in key computational techniques such as multipole, wavelets and panel clustering, together with innovative algorithm design, will be an additional theme.

Conference Organizing and Scientific Committee: S. Amini (Univ. of Salford), S. Chandler-Wilde (Brunel Univ., chair), K. Chen (Univ. of Liverpool), P. Davies (Univ. of Strathclyde), I. Graham (Univ. of Bath), P. Martin (Colorado School of Mines).

Information: <http://www.ima.org.uk/mathematics/boundary.htm>.

16–18 ADG 2004 (5th International Workshop on Automated Deduction in Geometry), University of Florida, Gainesville, Florida. (Aug. 2004, p. 830)

Information: <http://www.math.ufl.edu/~white/ADG2004.html>.

16–18 Fluid Mechanics: A Workshop in Honor of Amable Liñán, Fundación Euroárabe, Granada, Spain. (Aug. 2004, p. 830)

Topics: Fluid mechanics, combustion, turbulence, electrohydrodynamics, applied mathematics.

Invited Speakers and Participants: A. Barrero, A. Bermudez de Castro, L. L. Bonilla, P. Clavin, A. Crespo, I. Diaz, J. Dold, C. Dopazo, J. L. Fernandez de la Mora, A. C. Fernandez Pello, P. L. Garcia Ybarra, M. A. Herrero, J. Jimenez, G. Joulin, J. C. Lasheras, M. Martinez

Sanchez, P. Moin, N. Peters, E. Sanchez Palencia, J. R. Sanmartin, G. Sivashinsky, C. Trevino, M. G. Velarde, F. A. Williams.

Information: <http://www.ugr.es/local/kinetic/amable>; email: kinetic@ugr.es.

16–19 Algebraic Cycles, K-Theory, and Modular Representation Theory (in Honor of the 60th Birthday of Eric Friedlander), Northwestern University, Evanston, Illinois. (Jun/Jul. 2004, p. 686)

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. (Jun/Jul. 2004, p. 686)

Description: An interdisciplinary dialogue on science, mathematics, philosophy, and art involving the number π .

Organizers: Hael Yxxs and J. V. Schmidt.

Information: <http://www.zirkumferenz.de>.

17–19 Yamabe Symposium on “Geometry and Physics”, University of Minnesota, Minneapolis, Minnesota. (Aug. 2004, p. 830)

Invited Speakers: Robert Bryant, Duke Univ.; Kefeng Liu, U.C.L.A.; Duong Phong, Columbia Univ.; Yongbin Ruan, Univ. of Wisconsin; Isadore M. Singer, M.I.T.; Karen Uhlenbeck, Univ. of Texas; Shing-Tung Yau, Harvard Univ.

Organizers: Robert Gulliver, Nai-Chung Leung, Tian-Jun Li, and Jiaping Wang.

Financial Support: We have funding to defray workshop expenses for a number of participants, with highest preference given to younger scientists (grad students, postdocs, young faculty at most five years after Ph.D.), although all active people are eligible. Women and minorities are especially encouraged to apply. Apply to the organizers at email: yamabe@math.umn.edu.

Deadlines: July 15, 2004, for full consideration for funding and for guaranteed hotel rooms.

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

18–20 Workshop on Harmonic Analysis and Number Theory, University of Exeter, Exeter, United Kingdom. (Jun/Jul. 2004, p. 686)

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)

Aim: The aim of this conference is to create an interdisciplinary forum for all scientists concerning complexity.

Information: <http://www.chbg.unicaen.fr/lusac/csimta>.

19–25 7th Volterra-CIRM International School Quantum Probability and Spectral Analysis on Large Graphs, Grand Hotel Bellavista, Levico Terme, Trento, Italy. (Aug. 2004, p. 830)

Scientific Organizers: L. Accardi (Roma II), A. Hora (Okayama), N. Obata (Tohoku).

Information: email: michelet@science.unitn.it; <http://www.science.unitn.it/cirm/>.

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

Description: ECC 2004 is the eighth in a series of annual workshops dedicated to the study of elliptic curve cryptography and related areas.

Main Themes: The discrete logarithm problem, efficient parameter generation and point counting, provably secure cryptographic protocols, efficient software and hardware implementation, side-channel attacks, deployment of elliptic curve cryptography.

Goal: It is hoped that the meeting will continue to encourage and stimulate further research on the security and implementation of elliptic curve cryptosystems and related areas, and encourage collaboration between mathematicians, computer scientists, and engineers in the academic, industry, and government sectors. There will be approximately 15 invited lectures (and no contributed talks), with the remaining time used for informal discussions. There will be both survey lectures as well as lectures on the latest research developments.

Information: <http://www.cacr.math.uwaterloo.ca/conferences/2004/ecc2004/announcement.html>.

22 DIMACS Working Group on Reticulated Evolution, DIMACS Center, Rutgers University, Piscataway, New Jersey. (Aug. 2004, p. 830)

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)

Sponsors: IEEE Computer Society, Web Intelligence Consortium (WIC), Association for Computing Machinery (ACM).

Information: <http://www.maebashi-it.org/WI04>; <http://www.comp.hkbu.edu.hk/WI04>.

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

Description: This conference is the 12th in the series of French-German meetings which started in Oberwolfach in 1980 and was

continued in Confolant (1981), Luminy (1984), Irsee (1986), Varetz (1988), Lambrecht (1991), Dijon (1994), Trier (1996), Namur (1998), Montpellier (2000), and Cottbus (2002). Since 1998 the conference has been organized under the participation of a third European country. In 2004 the guest country will be Spain. The conference will in particular promote the contacts between researchers of the three involved countries and provide a forum for sharing recent results in theory and applications of optimization. However, scientists from other countries are also encouraged to participate.

Organizer: Group of Nonlinear Analysis and Optimization of the University of Avignon.

Topics: Smooth and nonsmooth continuous optimization problems, numerical methods for mathematical programming, optimal control and calculus of variations, differential inclusions and set-valued analysis, stochastic optimization, multicriteria optimization, game theory and equilibrium concepts, optimization models in finance and mathematical economics, optimization techniques for industrial applications. Contributions on other issues related to optimization are also welcome.

Plenary Speakers: A. Ben-Tal (Israel), E. Carrizosa (Spain), E. Casas (Spain), Lachand-Robert (France), J.-B. Lasserre (France), Y. Nesterov (Belgium), U. Rieder (Germany), R. Tichatschke (Germany), S. Tijs (The Netherlands), F. Troeltzsch (Germany), E. Zuazua (Spain).

Scientific Committee: P. Bonnans (France), J.-B. Hiriart-Urruty (France), F. Jarre (Germany), M. Lopez (Spain), J. E. Martinez-Legaz (Spain), H. Maurer (Germany), S. Pickenhain (Germany), A. Seeger (France), M. Thera (France).

Call for Papers: Contributions are solicited for presentation at the conference. Each accepted paper will be allotted a 30-minute talk (including discussion). The conference language is English. Besides the title of the proposed contribution, a short abstract (of at most 200 words) is also required. Deadline to propose a contribution is March 25, 2004. Acceptance or refusal notice to authors will be given by April 1, 2004.

Information: <http://www.fgs2004.univ-avignon.fr>; contact: A. Seeger (alberto.seeger@univ-avignon.fr).

20–24 Analysis and Applied Mathematics Summer School, Univ. Roma “La Sapienza”, Roma, Italy. (Jun/Jul. 2004, p. 686)

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. (Jun/Jul. 2004, p. 687)

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 Andalusia, Facultad de Ciencias, University of Granada, Granada, Spain. (Jun/Jul. 2004, p. 687)

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. Politécnic de Valencia, Spain), Javier Duoandikoetxea (Univ. del País Vasco, Spain), 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. Autònoma 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)

Description: StochFin2004 is an abbreviation for the Autumn School & International Conference on Stochastic Finance. The **Autumn School** will take place in Coimbra (Portugal) at the Observatório Astronómico de Coimbra, September 20–24, 2004. It is expected that its audience will consist of graduate students, young researchers, and people related to finance enterprises. The **International Conference** will take place in Lisbon (Portugal) at Instituto Superior de Economia e Gestão (ISEG), September 26–30, 2004.

Goals: (1) To present instances of interaction of finance and mathematics by means of a coherent combination of several courses, delivered by specialists in order to stimulate and reinforce the understanding of the subject; (2) to provide an opportunity for graduate students to develop some competence in financial mathematics; (3) to promote the establishment and development of interdisciplinary collaborations between researchers from different areas; (4) to bring together graduate students and specialists either from the academic or business sector, stimulating some interaction between university and business people.

Information: <http://pascal.iseg.utl.pt/~stochfin2004/about.html>.

22 DIMACS Working Group on Reticulated Evolution, DIMACS Center, Rutgers University, Piscataway, New Jersey. (Jun/Jul. 2004, p. 687)

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. (Jun/Jul. 2004, p. 687)

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. (Jun/Jul. 2004, p. 688)

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. (Jun/Jul. 2004, p. 688)

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 1 Recent Advances in Complex and Real Geometry, Grand Hotel Bellavista, Levico Terme, Trento, Italy. (Aug. 2004, p. 830)

Scientific Organizers: V. Ancona (Firenze), P. de Bartolomeis (Firenze), and A. Silva (Roma I).

Information: email: michelet@science.unitn.it; <http://www.science.unitn.it/cirm/>.

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)

Organizing Committee: M. Ando (UIUC), H. Miller (MIT), J. Morava (Johns Hopkins).

Information: email: abrand@fields.utoronto.ca.

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)

Organizing Committee: M. Ando (UIUC), H. Miller (MIT), J. Morava (Johns Hopkins).

Information: email: abrand@fields.utoronto.ca.

28–29 DIMACS Workshop on Applications of Order Theory to Homeland Defense and Computer Security, DIMACS Center, Rutgers University, Piscataway, New Jersey. (Aug. 2004, p. 830)

Short Description: The importance of the problem of terrorism can hardly be overstated. Since the Second World War it has become clear that mathematics has an important role to play in securing victory in any global conflict. This workshop will draw renowned international researchers who bring two important fields to bear in the current war on terror: Order Theory and Reflexive Theory.

Organizers: Jonathan Farley, MIT; Anthony A. Harkin, Harvard Univ., email: harkin@deas.harvard.edu; Mel Janowitz, DIMACS/Rutgers Univ., email: melj@dimacs.rutgers.edu; Hector Rosario, Univ. of Puerto Rico, email: hrosario@math.uprm.edu; Stefan Schmidt, Physical Science Lab., email: schmidt@psl.nmsu.edu.

Local Arrangements: Maria Mercado, DIMACS Center, email: mercado@dimacs.rutgers.edu, 732-445-5928.

Information: <http://dimacs.rutgers.edu/Workshops/Defense/>

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

Director: K. Horadam; email: kathy.horadam@ems.rmit.edu.au.

Information: <http://www.ma.rmit.edu.au/austms04>.

29–30 CLIMA V: Fifth International Workshop on Computational Logic in Multi-agent Systems, Lisbon, Portugal. (Aug. 2004, p. 831)

Purpose: To discuss techniques, based on computational logic, for representing, programming, and reasoning about multi-agent systems in a formal way.

Call for Papers: We solicit unpublished papers that address formal approaches to multi-agent systems. The approaches as well as being formal must make a significant contribution to the practice of multi-agent systems.

Organizers: J. Leite, New Univ. of Lisbon, Portugal (jleite@di.fct.unl.pt); P. Torroni, Univ. of Bologna, Italy (ptorroni@deis.unibo.it). Please send program suggestions and inquiries to either of the organizers.

Submission Instructions: We welcome and encourage the submission of high-quality, original papers which are not simultaneously submitted for publication elsewhere. Please refer to the workshop webpages for further instructions concerning the submission procedures.

Important Dates: Submission of Abstracts: June 20, 2004. Submission of Papers: June 25, 2004. Notification of Acceptance: July 30, 2004. Final version due: September 6, 2004. CLIMA IV: September 29–30, 2004.

Information: <http://centria.di.fct.unl.pt/~jleite/climaV/index.htm>.

30 DIMACS Working Group on Applications of Order Theory to Homeland Defense and Computer Security, DIMACS Center, Rutgers University, Piscataway, New Jersey. (Aug. 2004, p. 831)

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Organizers: Jonathan Farley, MIT; Anthony A. Harkin, Harvard Univ., email: harkin@deas.harvard.edu; Mel Janowitz, DIMACS/Rutgers Univ., email: melj@dimacs.rutgers.edu; Hector Rosario, Univ. of Puerto Rico, email: hrosario@math.uprm.edu; Stefan Schmidt, Physical Science Lab., email: schmidt@psl.nmsu.edu.

Local Arrangements: Maria Mercado, DIMACS Center, email: mercado@dimacs.rutgers.edu, 732-445-5928.

Participation: This working group is by invitation only. Invitations may be obtained by contacting Mel Janowitz, email: melj@dimacs.rutgers.edu or Hector Rosario, email: hrosario@math.uprm.edu.

Information: <http://dimacs.rutgers.edu/Workshops/DefenseWG/>.

October 2004

2-6 Workshop on Algebraic K-Theory 2004, Centre de Recherches Mathématiques, Université de Montréal, Montréal, Québec, Canada. (Aug. 2004, p. 831)

Organizers: Eric Friedlander, Dan Grayson, Rick Jardine, Manfred Kolster.

Topics: The topics covered at this meeting include the most recent developments in algebraic K-theory and the closely allied areas of motivic homotopy theory, algebraic cycles, and motivic cohomology theory, along with applications in other areas of mathematics.

4-8 Mathematical Hydrodynamics: Models and Methods, Dedicated to the 70th Anniversary of Professor V. Yudovich, Rostov State University, Rostov-on-Don, Russia. (Aug. 2004, p. 831)

Goal: The main goal of the conference is mathematical hydrodynamics in a broad context. The scope of the conference includes but is not limited to the following topics.

Topics: Mathematical theory of fluid dynamics: solvability and uniqueness; Analytical dynamics and geometric-differential methods in hydrodynamics; Stability of flows for ideal and viscous fluids; Convective flows; Asymptotics in hydrodynamics, Vibrodynamics, Parametric resonance, Boundary layers; Spectral theory in the stability problems of hydrodynamics; Qualitative and numerical methods; Bifurcation analysis, Transitions, Systems with symmetry and cosymmetry; Computer experiment methods and results.

Organization Committee: Rostov State Univ.: V. N. Govorukhin, L. G. Kurakin, A. B. Morgulis, M. V. Norkin, V. G. Tsybulin, O. A. Tsyvenkova.

Information: Secretary: S. V. Revina; Rostov State University, Mechanical Mathematical Department, Zorge St., 5, Rostov-on-Don, 344090, Russia; email: kvm@math.rsu.ru; phone: (8632)-221312; <http://kvm.math.rsu.ru/conf2004/ENGLISH/>.

6-9 HYKE Conference on Complex Flows, Centre de Recerca Matemàtica, Bellaterra, Italy. (Jun/Jul. 2004, p. 688)

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. Desvillettes (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. Sjögreen (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. (Jun/Jul. 2004, p. 688)

Scientific Committee: L. Caffarelli, P. Markowich, H. Shahgholian.

Organizing Committee: A. Hakobyan, M. Poghosyan.

Tentative List of Speakers: A. Aftalion (France), I. Athanassopoulos (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)

Description: Recent advances in information technology and its rapid acceptance by the business community have allowed for expediting complex business transactions. The most prominent example involves use of auctions in corporate procurement and in government deregulation efforts. When many items with interrelated values are being sold, economic efficiency can be increased by allowing bids on combinations of items. Procedures for auctioning combinations of items have inherent computational problems to overcome, and the emergence of these issues has sparked considerable research activity in the computer science and combinatorial optimization communities. The most prominent example is combinatorial auctions in which multiple goods are auctioned and bidders have and wish to express different valuations on which goods complement each other and which goods substitute for each other. Allowing bidders to submit "all-or-nothing" bids for combinations of goods yields NP-complete allocation problems that need to be solved efficiently when proper care is given to designing an auction. Furthermore, bidders face computational and communication problems in combinatorial auctions since they might not be feasibly able to express all possible preferences for all subsets of goods. Another area of auction design that has been developing rapidly in research and in practice is short-term electricity auctions in which allowing bidders to make bids that reflect their nonconvex costs requires solving large mixed integer programming problems and finding prices that support decentralized generation and transmission operations.

Organizers: J. Kalagnanam, IBM Watson Lab, email: jayant@us.ibm.com; E. Maskin, Inst. for Advanced Study, email: maskin@ias.edu; D. Parkes, Harvard Univ., email: parkes@eecs.harvard.edu; A. Pekec, Duke Univ., email: pekec@duke.edu; M. Rothkopf, Rutgers Univ., email: rothkopf@rutcor.rutgers.edu.

Local Arrangements: M. Mercado, DIMACS Center, mercado@dimacs.rutgers.edu, 732-445-5928.

Information: <http://dimacs.rutgers.edu/Workshops/AuctionDesign/>.

12-15 3rd WSEAS International Conference on Applied Mathematics and Computer Science (AMCOS 2004), Copacabana, Rio de Janeiro, Brazil. (Jun/Jul. 2004, p. 688)

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)

Information: <http://www.fields.utoronto.ca/programs/scientific/04-05/arthurconf/>.

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

Description: Recent advances in information technology and its rapid acceptance by the business community have allowed for expediting complex business transactions. The most prominent

example involves use of auctions in corporate procurement and in government deregulation efforts. In addition to the research community, the combinatorial and optimization problems that are involved with auction design and general microeconomic considerations have generated interest from IT businesses such as IBM, industrial users of combinatorial procurement auctions such as Mars, Inc., and government agencies such as the FCC and the FERC-regulated electricity system operators PJM and NYISO (see <http://www.pjm.com> and <http://www.nyiso.com>). This workshop will bring together researchers in computer science, optimization, operations research, and economics who are working on computational aspects of auction design. The aim is to discuss the most prominent issues in auction design and try to design implementable and efficient auction procedures that allow for a large preference space while maintaining several desirable properties such as fairness, failure-freeness, and computational feasibility for all participants.

Organizer: D. Boneh, Stanford, dabo@cs.stanford.edu.

Local Arrangements: M. Mercado, DIMACS Center, mercado@dimacs.rutgers.edu, 732-445-5928.

Information: <http://dimacs.rutgers.edu/Workshops/Practice/>.

14–15 Seventh New Mexico Analysis Seminar, University of New Mexico, Albuquerque, New Mexico. (Jun/Jul. 2004, p. 688)

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)

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

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

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

18–20 DIMACS/DIMATIA/Renyi Working Group on Extremal Combinatorics II, DIMACS Center, Rutgers University, Piscataway, New Jersey. (Aug. 2004, p. 831)

Short Description: This meeting will continue the work of the working group on two general topics: extremal graph theory and extremal problems arising from combinatorial search and testing.

Participation: The working group will be by invitation only. If you are interested in participating, please contact the organizers.

Sponsors: DIMACS/DIMATIA/Renyi.

Organizers: Janos Komlos, Rutgers Univ., komlos@math.rutgers.edu; Endre Szemerédi, Rutgers Univ., szemered@cs.rutgers.edu.

Local Arrangements: Maria Mercado, DIMACS Center, mercado@dimacs.rutgers.edu, 732-445-5928.

Information: <http://dimacs.rutgers.edu/Workshops/Extremal2/>.

***21–23 Wolfram Technology Conference 2004**, Hawthorn Suites, Champaign, Illinois.

Host: Wolfram Research, Inc.

Description: This intensive three-day event will assemble leaders from around the world in technical computing and other related fields for presentations on the latest advances in Mathematica and other Wolfram technologies. The conference will also feature tutorials, problem-solving clinics, contributed talks, an unscripted programming event, hands-on workshops, a live programming competition, and one-on-one discussion sessions with top Wolfram executives.

Topics: Scientific computing, algorithm development, distributed computing, visualization, educational technology, modeling and simulation, experimental mathematics, technical business analysis, web technologies, symbolic document processing, programming methodologies, user interface technology, biocomputing, computer-assisted art.

Information and Registration: <http://www.wolfram.com/techconf2004>. Contact: phone: 1-800-WOLFRAM (965-3726) or +1-217-398-0700; email: conference-info@wolfram.com.

22–23 Twenty-Fourth Annual Southeastern-Atlantic Regional Conference on Differential Equations (Aug. 2004, p. 831), University of Tennessee at Chattanooga, Chattanooga, Tennessee.

Principal Speakers: Ravi P. Agarwal (Florida Institute of Technology), Recent Trends in Singular Boundary Value Problems for Ordinary Differential Equations; Johnny Henderson (Baylor Univ., Texas), Topological Transversality and Boundary Value Problems on Time Scales; Peter Kuchment (Texas A&M Univ.), Differential Operators on Graphs and Their Applications; David R. Russell (Virginia Tech), Spline Interpolation and Approximation as a Discrete Dynamical System.

Information: In addition to the principal speakers, there will also be sessions of twenty-minute contributed talks. Pending funding from the National Science Foundation, travel support funds will be available for advanced graduate students and recent Ph.D. recipients. Women and minority participants are especially encouraged to participate in this conference and to apply for support. Please go to the conference website, <http://www.utc.edu/Academic/Mathematics/search-04/index.html>, to get instructions on registration, lodging, submission of abstracts, and application for support; or send email to Boris-Belinskiy@utc.edu; phone: 423-425-4748.

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

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

24–30 Partial Differential Equations in Mathematical Physics, in Memory of Olga A. Ladyzhenskaya, Grand Hotel Bellavista, Levico Terme, Trento, Italy. (Aug. 2004, p. 831)

Scientific Committee: H. Beirao da Veiga (Pisa), G. Seregin (St. Petersburg), V. Solonnikov (Ferrara), N. Uraltseva (St. Petersburg), A. Valli (Trento).

Information: email: michelet@science.unitn.it; <http://www.science.unitn.it/cirm/>; <http://www.science.unitn.it/cirm/Ladylecture.html>.

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

Description: The aim of the meeting is to bring together leading scientists in group analysis and mathematical modelling. The main emphasis of the conference will be on applications of group methods in investigating nonlinear wave and diffusion phenomena; mathematical models in biology; integrable systems; as well as the classical heritage, historical aspects and new theoretical developments in group analysis. The conference will also highlight educational aspects.

Organizing Committee: N. H. Ibragimov, C. Sophocleous, P. A. Damianou.

Information: <http://www.ucy.ac.cy/~mogran10>.

25–29 **IMA Workshop: Singularities in Materials**, University of Minnesota, Minneapolis, Minnesota. (Jun/Jul. 2004, p. 688)

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. (Jun/Jul. 2004, p. 689)

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)

Organizer: Society for Experimental Mechanics, Inc., 7 School Street, Bethel, CT 06801.

Abstracts due: June 28, 2004.

Information: Phone: 203-790-6373; fax 203-790-4472; email: sem@sem1.com; <http://www.sem.org>.

* 30–31 **70th birthday celebration conference in honor of John W. Neuberger**, Environmental Education, Science and Technology (ENV/EESAT) building on the University of North Texas Campus, Dallas-Fort Worth, Texas.

Information: Title and abstract deadline October 1, 2004, to Joseph Iaia at email: iaia@unt.edu.

November 2004

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

Topics: Topics related to the design, analysis, and implementation of data mining theory, systems, and applications are of interest.

Sponsor: IEEE Computer Society.

Deadline: June 1, 2004.

Information: R. Rastogi, Room 2B-301, 700 Mountain Avenue, Murray Hill, NJ 07974; phone: +1-908-582-3728; fax: +1-908-582-1239; email: rastogi@research.bell-labs.com; <http://icdm04.cs.uni-dortmund.de>.

1–5 **Recent Developments in Spectral Geometry**, Blossin (near Berlin), Germany. (Jun/Jul. 2004, p. 688)

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. (Jun/Jul. 2004, p. 689)

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)

Information: G. Alsfeld; email: gma@ams.org; <http://www.ams.org/amsmtgs/sectional.html>.

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

Description: The conference, in honour of the sixtieth birthday of Ed Saff, will focus on all areas of constructive function theory, and their applications. In particular, there will be a focus on orthogonal polynomials, potential theory, approximation theory, numerical analysis, wavelets, and Riemann-Hilbert methods.

Invited Speakers: S. Aptekarev (Russ. Acad. of Sci.); J. Baik (Ann Arbor, Michigan); L. Baratchart (INRIA, France); W. Dahmen (Aachen, Germany); R. DeVore (Columbia, South Carolina); A. Kuijlaars (Leuven, Belgium); A. Martinez-Finkelshtein (Almeria, Spain); E. Levin (Open Univ., Israel); H. Mhaskar (California State Univ., Los Angeles); I. Pritsker (Stillwater, Oklahoma); A. Ron (Madison, Wisconsin); B. Simon (Caltech); I. Sloan (Univ. of New South Wales, Australia); H. Stahl (TFH, Berlin, Germany); N. Stylianopoulos (Univ. of Cyprus); V. Totik (Bolyai Institute, Hungary); R. Varga (Kent State Univ.); Y. Xu (Eugene, Oregon).

Organizing Committee: L. Baratchart, R. DeVore, J. Geronimo, A. Kroo, X. Li, Eli Levin, D. Lubinsky, N. Papamichael, I. Pritsker, S. Ruscheweyh, V. Totik, R. Varga.

Information: Preliminary registration can be completed online (without payment) at <http://www.math.gatech.edu/news/conferences/at04/>. Further information is available there, and will be updated periodically.

8–10 **Models of Financial Market Microstructure**, MIT, Cambridge, Massachusetts. (Aug. 2004, p. 832)

Program: This is a special session at the 2nd IASTED International Conference on Financial Engineering and Applications.

Topics: The goal of this session is to draw together researchers across disciplinary boundaries whose work and interests span the spectrum from methodological innovations (e.g. agent-based models on evolving interaction networks), empirical investigations (e.g. simulations and statistical analyses of high-frequency transaction data) to policy implications (e.g. optimal design of auctions and related market mechanisms). A unifying theme for the session is the risk management of equity market making and its effects on the global network of financial interactions.

Organizer: Ted Theodosopoulos, Drexel Univ.

Deadlines: Contributed paper submission: June 28, 2004. Notification of acceptance: July 15, 2004. Final manuscripts due: September 10, 2004. Registration: September 15, 2004.

Information: <http://www.iasted.org/conferences/2004/cambridge/fea-specsess.htm>.

* **13 Graph Theory Day 48**, Mount Saint Mary College, Newburgh, New York.

Invited Speakers: Jeff Dinitz (University of Vermont), Designing schedules for sports leagues and tournaments; Steven B. Horton (United States Military Academy), Some problems related to domination in graphs.

Description: The Program will include time for informal exchange of graph theory information and contributions to a "Graph Theory Notes" Session. Written contributions will be considered for inclusion in "Graph Theory Notes of New York".

Information: Mike Daven, email: daven@msmc.edu, 845-569-3265; Lee Fothergill, email: fothergi@msmc.edu, 845-569-3347.

Organizing Committee: Mike Daven (MSMC), Lee Fothergill (MSMC), Naomi Russo (Stevens Institute of Technology), John W. Kennedy (Queens College, CUNY), and Louis V. Quintas (Pace University).

14-17 Multiscale Rheological Models for Fluids, Centre de Recherches Mathématiques, Université de Montréal, Montréal, Québec, Canada. (Aug. 2004, p. 832)

Organizer: C. Le Bris (Cermics, ENPC, Paris).

Description: This workshop will address the multiscale modeling of non-Newtonian fluids. Models for such systems could be built via constitutive laws, but those are typically very difficult to obtain and validate rigorously. An alternative strategy is to use kinetic theory to simulate the micro-structures that govern the fluid behaviour. (For polymeric fluids, those micro-structures would be polymer chains; for other fluids, it could be particles in suspension.) One then couples this microscopic description with macroscopic continuum equations for the fluid. This workshop will be an opportunity to discuss recent developments along these lines.

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. (Jun/Jul. 2004, p. 689)

Organizer: N. Hitchin, Mathematical Institute, Oxford.

Information: email: abrand@fields.utoronto.ca.

18-20 IMA Workshop: Future Challenges in Multiscale Modeling and Simulation, University of Minnesota, Minneapolis, Minnesota. (Jun/Jul. 2004, p. 689)

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, Amfitea 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. (Jun/Jul. 2004, p. 689)

Organizing Committee: D. Auroux, M. Gross, K. Hori, N. Yui.

Information: email: abrand@fields.utoronto.ca.

24-January 23 Program Announcement on Nanoscale Material Interfaces: Experiment, Theory and Simulation, Institute for Mathematical Sciences, National University of Singapore, Singapore. (Aug. 2004, p. 832)

Program: This is a program of the Institute for Mathematical Sciences at the National University of Singapore. The main objectives of the program are to (i) review the recent development in the research on material surfaces and interfaces, from experiment to theory to stimulation; (ii) identify critical scientific issues in the understanding of the fundamental principles and basic mechanisms of interfacial dynamics in different kinds of materials systems, particularly those that are characterized by fluctuation, multiscale, and nonequilibrium; and (iii) accelerate the interaction of applied mathematics and computational science with physics and materials science, and promote the highly interdisciplinary research on new material interface problems with emerging applications.

Activities: The program will consist of a tutorial and two workshops, with ample opportunities for collaborative research among local and international participants in areas of physics, materials science, applied mathematics, and computational science. The tutorial lectures will be given by distinguished researchers on topics closely related to the main themes of the program in materials physics, computational materials science, and applied mathematics. The first workshop will focus on basic properties of material interfaces in nanoscale systems, while the second workshop will focus more on the mathematical and computational aspects of the underlying researches.

Registration: Registration forms for participation in the tutorial or workshop are available at <http://www.ims.nus.edu.sg/Programs/nanoscale/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.

Institute Membership: Membership application for visiting the institute under the program is also available from the website above. Members of the Institute do not need to register for specific activities.

Contacts: For general enquiries, please email ims@nus.edu.sg, while for enquiries on scientific aspects of the program, please email Jian-Guo Liu at jliu@math.umd.edu. More information about the program is available at the website <http://www.ims.nus.edu.sg/Programs/nanoscale/index.htm>.

26-29 Foundations of the Formal Sciences V: Infinite Games,

Mathematisches Institut, Rheinische Friedrich-Wilhelms-Universität Bonn, Bonn, Germany. (Aug. 2004, p. 832)

Topics: Infinite Games in Algebraic Logic, Infinite Games in Higher Set Theory, Infinite Games in Set-Theoretic Topology, Infinite Games & Computer Science, Infinite Games in Philosophy, Infinite Evolutionary Games.

Invited Speakers: S. Abramsky (Oxford, UK), A. Andretta (Torino), N. Dobrinen (State College, PA), I. Hodkinson (London, UK), K. Kelly (Pittsburgh, PA), H. Sabourian (Cambridge, UK), M. Scheepers (Boise, ID), B. Skyrms (Irvine, CA).

Organizers: Stefan Bold (Bonn/Denton, TX), Boudewijn de Bruin (Amsterdam), Peter Koepke (Bonn), Benedikt Löwe (Amsterdam/Bonn, coordinator), Thoralf Räsch (Potsdam), Johan van Benthem (Amsterdam).

Deadline: Submission of Papers: September 15, 2004.

Information: <http://www.math.uni-bonn.de/people/fotfs/V/>; email: fotfs@math.uni-bonn.de.

*29–December 1 **Partial Differential Equations and Functional Analysis**, Technische Universiteit Delft, Delft, the Netherlands.

Information: See <http://fa.its.tudelft.nl/philippe/> for information.

December 2004

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

Scope: New trends and activities in the theory and applications of nonlinear partial differential equations. Topics include free boundary problems, applications of nonlinear pde's in fluids and geometry, inverse problems in pde's, stochastic and kinetic pde's, fully nonlinear pde's.

Sponsors: Institute for Studies in Theoretical Physics and Mathematics (IPM) (<http://www.ipm.ir>), Tehran, Iran; Wolfgang Pauli Institute (WPI) (<http://www.wpi.ac.at>), Vienna, Austria.

Organizers: P. A. Markowich (WPI), M. Shahshahani (IPM).

Scientific Committee: H. W. Engl (Linz, Austria), P. A. Markowich (WPI, Vienna), H. Shahgholian (KTH, Sweden), M. M. Shahshahani (IPM, Tehran), S. Tahvildarzadeh (Rutgers, USA), N. Uraltseva (St. Petersburg, Russia).

Call for Papers: Papers will be accepted for presentation at the workshop subject to approval by the Scientific Committee. Please send submissions (extended abstract) electronically (preferably in PDF format) to one of the organizers at an email address listed below.

Contact: M. M. Shahshahani (mehrdads@ipm.ir); P. A. Markowich (wittgenstein.mathematik@univie.ac.at).

6–10 **III Joint Meeting Japan-Mexico in Topology and Its Applications**, Oaxaca, Mexico. (Jun/Jul. 2004, p. 690)

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. (Jun/Jul. 2004, p. 690)

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>.

9–11 **Discrete Mathematics and Its Applications**, Amrita Vishwa Vidyapeetham, Ettimadai, Coimbatore, TamilNadu, India. (Aug. 2004, p. 832)

Description: Discrete mathematics is a vibrant branch of the mathematical sciences in both theory and its applications. Its application areas include pure and applied mathematics such as computational algebra, number theory, graphs and combinatorial optimisation, coding theory, cryptography, topology, geometry, as well as biology. Probabilistic coding theory, efficient representations of elements of finite fields for VLSI design of cryptographic hardware, and the study of properties of various nonlinear pseudorandom number generators are some of the emerging interdisciplinary areas which are posing new challenges to discrete mathematicians.

Some Themes: Discrete mathematics, graph theory, coding theory, cryptology.

Cosponsor: Ramanujan Mathematical Society.

Invited Speakers: B. D. Acharya (Advisor, DST), R. Balakrishnan (Bharathidasan Univ.), R. Balasubramanian (Matscience), Bimal Roy (ISI Kolkata), S. A. Choudam (IIT Chennai), K. D. Joshi (IIT Bombay), Navin Singhi (TIFR), C. Pandu Rangan (IIT Chennai), K. R. Parthasarathi (IIT Chennai), S. B. Rao (ISI Kolkata), E. Sampathkumar (Univ. of Mysore), R. K. Shyam Sundar (TIFR), B. Sundar Rajan (IISc), T. Thirvikraman (Cochin Univ. of Sci. & Tech.), and C. E. Veni Madhavan (IISc).

Important Dates: Submission of abstracts: August 15, 2004; Notification of decision: September 15, 2004; Receipt of full papers: November 15, 2004.

Contact: M. Sethumadhavan, Organising Secretary, National Conference on Discrete Mathematics and Its Applications, Department of Mathematics, Amrita Institute of Technology, Amrita Vishwa Vidyapeetham, Ettimadai, Coimbatore-641 105, Tamil Nadu, India; email: dma@amrita.edu; <http://www.amrita.edu>.

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

p. 461)

Program: This annual conference will cover a broad range of topics on the application and use of technology in mathematics research and teaching. Researchers, mathematicians, educators, and teachers are invited to share their knowledge in the area of using technology to engage learners and empower teachers of mathematics or to enable research in any field of mathematics.

Organizers: National Institute of Education, Singapore; ATCM Inc.

Deadlines: Submission of abstracts: June 15, 2004. Submission of full papers: July 15, 2004. Early-bird registration: October 15, 2004.

Information: <http://math.nie.edu.sg/atcm> or <http://www.atcminc.com>; email: atcm2004@nie.edu.sg or wyang@radford.edu.

13-17 Recent Advances in Core Model Theory, AIM Research Conference Center, Palo Alto, California. (Jun/Jul. 2004, p. 690)

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), Cophornes-Manuels, Lake Taupo, New Zealand. (Jun/Jul. 2004, p. 690)

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. (Jun/Jul. 2004, p. 690)

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. (Jun/Jul. 2004, p. 690)

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@indiashm.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. (Jun/Jul. 2004, p. 691)

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)

Description: A Smarandache n -structure on a set S means a weak structure w_0 on S such that there exists a chain of proper subsets $P_{n-1} \subset P_{n-2} \subset \dots \subset P_2 \subset P_1 \subset S$ whose corresponding structures verify the inverse chain $w_{n-1} \succ w_{n-2} \succ \dots \succ w_2 \succ w_1 \succ w_0$, where \succ signifies "strictly stronger" (i.e., structure satisfying more axioms).

Program: (1) Smarandache-type groupoids, semigroups, rings, fields; (2) Smarandache-type k -modules, vector spaces, linear algebra, fuzzy algebra.

Organizer: W. B. Vasantha Kandasamy.

Speakers: R. Padilla, M. Khoshnevisan, M. Popescu.

Deadline: November 30, 2004.

Information: <http://www.gallup.unm.edu/~smarandache/eBooks-otherformats.htm>.

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)

Description: The triennial Congress is hosted by institutions in Mainland China, Taiwan, Hong Kong, and Singapore in a rotating basis. The first two ICCM's were held in 1998 and 2001 with great success.

This third congress, ICCM 2004, will have both plenary and invited talks by distinguished researchers in every major fields, as well as contributed talks and poster sessions. Contributed papers on all major areas of mathematics are solicited. To make the congress a true worldwide gathering, all presentations will be given in English.

Information: ICCM2004, Department of Mathematics, Chinese University of Hong Kong, Shatin, NT, Hong Kong, fax: (852) 2603-5154; tel: (852) 2609-7989; email: iccm2004@math.cuhk.edu.hk; <http://www.math.cuhk.edu.hk/conference/iccm2004>.

18-20 Recent Advances in Mathematics & Its Applications (ISRAMA 2004), Kolkata (Calcutta), India. (Jun/Jul. 2004, p. 691)

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. (Jun/Jul. 2004, p. 691)

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. (Jun/Jul. 2004, p. 691)

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)

Information: <http://www.ams.org/amsmtgs/national.html>.

7–8 2004–05 ASL Winter Meeting (with Joint Mathematics Meetings), Atlanta, Georgia. (Jun/Jul. 2004, p. 691)

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)

Sponsor: The New Zealand Institute of Mathematics. It will run from January–June, 2005.

Topics: Discrete groups; Algebraic groups; Geometric group theory. Low-dimensional topology and hyperbolic geometry; Geometric function theory; Analysis and PDEs.

Speakers: B. Andrews (Canberra), C. Evans (Berkeley), M. Liebeck (Imperial College), A. Lubotzky (Jerusalem), P. Sarnak (Princeton).

Organizers: E. O'Brien, email: obrien@math.auckland.ac.nz; G. Martin, email: martin@math.auckland.ac.nz.

Information: <http://www.math.auckland.ac.nz/Conferences/2005/geometry-program/>.

9–11 2005 Hawaii International Conference on Statistics, Mathematics and Related Fields, Sheraton, Waikiki Hotel, Honolulu, Hawaii. (Aug. 2004, p. 832)

Topic Areas: All areas of statistics and/or mathematics are invited. For more information about submissions, see http://www.hicstatistics.org/cfp_stats05.htm.

Sponsors: American Statistical Association, Hawaii Chapter; East West Council for Education; Center of Asian Pacific Studies of Peking Univ.

Information: email: statistics@hicstatistics.org; <http://www.hicstatistics.org/index05.htm>.

10–14 Braid Groups, Clusters and Free Probability, AIM Research Conference Center, Palo Alto, California. (Jun/Jul. 2004, p. 691)

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)

Topics: Emphasis on Gromov-Witten invariants and open-closed duality.

Organizing Committee: E. Getzler, K. Hori, S. Katz.

Information: email: abrand@fields.utoronto.ca.

12–14 Second Joint IMS/ISBA International Conference, Bormio, Italy (Italian Alps). (Aug. 2004, p. 833)

Program: A central theme of the conference will be Markov chain Monte Carlo (MCMC) and related methods and applications in the 15 years since the publication of Gelfand and Smith (1990, JASA), the paper that introduced these methods to mainstream statisticians. The conference will also feature 3 plenary speakers and 6 invited sessions from internationally known experts covering a broad array of current and developing statistical practice: molecular biology, spatial and spatiotemporal methods, bio-informatics/genetics, MCMC algorithms/software, statistical data mining, modern non-parametrics.

Information: <http://www.eco.uninsubria.it/IMS-ISBA-05/>.

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

Description: Pure model theory. We expect further developments in the use of stability theory techniques in unstable contexts (simple theories, algebraically closed valued fields) and in nonelementary classes.

Model theory of fields with operators, and connections with arithmetic geometry. The model theory of differentially closed fields and of other fields with operators has been at the centre of model-theoretic proofs of results in arithmetic geometry. The Zil'ber programme of pseudo-analytic functions is also expected to have some interesting consequences.

O-minimality and related topics. O-minimality is a property of ordered structures, yielding results akin to traditional real analytic results, such as the classical finiteness theorems for subanalytic sets (cell decompositions, Whitney stratifications, etc.). Mathematically central, new examples of o-minimal structures have emerged, and the logical theory has had applications to Lie theory, to asymptotics, and to neural networks.

Henselian fields. Model theory of Henselian fields, and in particular of p -adic fields and Arc spaces. Connections with algebraic and analytic geometry. Study of cohomology theories and motives, aiming at uniformity results. Study of compact complex manifolds and uses of stability.

Model theory of groups. We plan to have a workshop on groups of finite Morley rank, a topic connected to the classification of finite simple groups via its techniques and its aims. The recent (and very exciting) developments in the model theory of nonabelian free groups should also be studied, depending on its degree of maturity.

Organizers: Z. Chatzidakis (Paris), A. Pillay (Illinois), A. Wilkie (Oxford).

Information: Isaac Newton Institute for Mathematical Sciences, 20 Clarkson Road, Cambridge, CB3 0EH UK; tel: +44 (0) 1223 335999; fax: +44 (0) 1223 330508; email: info@newton.cam.ac.uk; <http://www.newton.cam.ac.uk/>.

24–July 22 **Developments in Quantitative Finance**, Isaac Newton Institute for Mathematical Sciences, Cambridge, UK. (Aug. 2004, p. 833)

Description: The field of mathematical finance is comparatively young, and the modern theory can be traced back to the Black-Scholes-Merton solution of the problem of how to price a call option, a financial security whose payoff is contingent on the behaviour of an underlying asset. Over the past three decades the explosive growth in trading of financial derivatives has been reflected in a commensurate growth in the study of financial mathematics, which in turn has helped to support the increasing sophistication of financial markets.

As a branch of mathematics, finance is extremely diverse, and the subject has attracted the interest of, and generated research problems for, researchers from a broad spectrum of mathematical disciplines. The theory is based on stochastic models, and there are obvious applications from statistical analysis, but there have also been significant contributions from functional and convex analysis. There are also strong connections with numerical analysis and computational methods, not least because many of the equations which arise have long been studied by applied mathematicians. The healthy development of the subject also needs input from economists and industry professionals.

The major themes of this programme are asset price modelling and inference for financial models, market imperfections and derivative pricing in incomplete markets, insurance applications and the modelling and quantification of credit events, computational finance, and financial economics and agent interactions. The aim is that researchers from all related disciplines—from economics, physics, and finance, as well as pure and applied mathematics and statistics—should meet and interact to share their knowledge and advance their understanding.

Organizers: D. Duffie (Stanford), D. Hobson (Bath), C. Rogers (Cambridge), J. Scheinkman (Princeton).

Information: Isaac Newton Institute for Mathematical Sciences, 20 Clarkson Road, Cambridge, CB3 0EH, U.K.; tel: +44 1223 335999, fax: +44 1223 330508; email: info@newton.cam.ac.uk; <http://www.newton.cam.ac.uk/programmes/DQF/>.

26–30 **Front Propagation and Nonlinear Stochastic PDEs for Combustion and Other Applications**, Centre de Recherches Mathématiques, Université de Montréal, Montréal, Québec, Canada. (Aug. 2004, p. 833)

Organizers: A. Bourlioux (Montréal) and P. Souganidis (Texas).

Description: The development of efficient large-scale models for the numerical simulation of turbulent premixed flames requires a good understanding of the mathematical principles governing the dynamics of self-propagating fronts. One of the most challenging issues is the analysis of the complex interactions, at small scales, between advection, reaction and diffusion, including stochastic effects due to the media or the advective flow randomness. This workshop will be an opportunity for interaction between mathematicians at the forefront of this area and scientists involved in the design of models and numerical methods for various applications, in particular, turbulent combustion.

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

Topics: Modal Analysis: Theory, & Application, Nonlinear Systems Techniques & Application.

Organizer: Society for Experimental Mechanics, Inc., 7 School Street, Bethel, CT 06801.

Information: phone: 203-790-6373; fax 203-790-4472; email: sem@sem1.com; <http://www.sem.org>.

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

Organizer: Society for Experimental Mechanics, Inc., 7 School Street, Bethel, CT 06801.

Deadline: Abstracts due: June 14, 2004.

Information: phone: 203-790-6373; fax 203-790-4472; email: sem@sem1.com; <http://www.sem.org>.

February 2005

3–4 (NEW DATE) **DIMACS Workshop on Markets as Predictive Devices (Information Markets)**, DIMACS Center, Rutgers University, Piscataway, New Jersey. (Jun/Jul. 2004, p. 691)

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: jlledyard@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. (Jun/Jul. 2004, p. 691)

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)

Sponsor: The New Zealand Institute of Mathematics. It will run at The University of Auckland from January–June, 2005.

Topics: (1) Discrete groups; (2) Algebraic groups; (3) Geometric group theory.

Speakers: Marston Conder (Auckland), Rob Howlett (Sydney), William Kantor (Oregon), Laci Kovacs (Canberra), Gus Lehrer (Sydney), Martin Liebeck (Imperial College), Gunter Malle (Kassel), Colin Maclachlan (Aberdeen), Chuck Miller (Melbourne), Cheryl Praeger (University of Western Australia), Peter Schmid (Tuebingen), Akos Seress (Ohio State University), Aner Shalev (Jerusalem).

Organizers: E. O'Brien, email: o'Brien@math.auckland.ac.nz; G. Martin, email: martin@math.auckland.ac.nz.

Information: <http://www.math.auckland.ac.nz/Conferences/2005/geometry-program/>.

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)

Description: The SMRSSL'05 will serve as a forum for discussing different issues of stochastic models and methods in reliability, safety, security and logistics with respect to their applications. The

idea of this symposium is to assemble researchers and practitioners from universities, institutions, industries and government working in these fields all over the world. Common methods and models used in reliability, safety, security and logistics will be considered from a general point of view. Theoretical, modeling, computational and case study contributions will range from academic considerations to industrial applications. There will be invited talks, plenary sessions, parallel sessions, posters, and exhibitions. The symposium will pose an opportunity to Ph.D. students to participate and present their works. The talks will be selected by the Scientific Program Committee and will be included in the symposium proceedings. Selected papers after review and revision will be published in special issues of *International Journal of Reliability, Quality and Safety Engineering*, *Journal of Air Transportation, Transport and Telecommunication*, *Computer Modeling and New Technologies*, *Technological and Economic Development of Economy, and Communications in Dependability and Quality Management*.

Information: I. B. Frenkel, Industrial Engineering and Management Department, Negev Academic College of Engineering (NACE), Bialik/Bazel Sts., P.O. Box 45, Beer Sheva, 84100, Israel; tel: +972-8-6475642; fax: +972-8-6475643; email: SMRSSL05@nace.ac.il; <http://www.nace.ac.il/extra/SMRSSL05/>.

March 2005

1–2 DIMACS Short Course: A Field Guide to GenBank and NCBI Molecular Biology Resources, DIMACS Center, Rutgers University, Piscataway, New Jersey. (Jun/Jul. 2004, p. 692)

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/>.

2–5 Representing Unresolved Degrees of Freedom for the Atmosphere and Ocean, Centre de Recherches Mathématiques, Université de Montréal, Montréal, Québec, Canada. (Aug. 2004, p. 833)

Organizer: A. J. Majda (Courant).

Description: A central problem in attempts to understand and predict the evolution of atmospheric or oceanic flows is how best to represent the unresolved scales in these flows. In the jargon of dynamic meteorology or physical oceanography, this is called the parameterization problem, while in the jargon of turbulence it is called the closure problem. The most pertinent areas of analysis and applied mathematics are homogenization theory, probability, and nonlinear stochastic PDEs. The purpose of this workshop is to explore two complementary issues that arise in the context of the parameterization problem: (1) the extent to which modern techniques in applied mathematics can be brought to bear on its formulation and partial solution, and (2) the extent to which problems in the representation of atmospheric and oceanic flows create fertile new areas of mathematical inquiry.

* **3–5 International Conference on Environmental Fluid Mechanics (ICEFM'05)**, Indian Institute of Technology Guwahati, Guwahati, India.

Program: Program will include three/four key-note addresses, invited talks, contributed paper presentation, poster session.

Deadlines: Extended Abstract Submission: September 15, 2004; Notification of Acceptance: October 15, 2004; Submission of Camera-ready Full Paper: November 30, 2004; Acceptance of Papers after Revision: January 15, 2005; Registration: December 20, 2004; Late Registration: January 15, 2005.

Conference Topics: Atmospheric and oceanic flows; Flow over complex terrains, e.g. hills, wind breaks etc.; Two and multiphase flows; Flow in porous media; Flow in continental water bodies, e.g. lakes, rivers, reservoirs etc.; and any other topic related to environmental fluid mechanics.

Organizers: D. C. Dalal, S. N. Bora.

Information: http://www.iitg.ernet.in/scifac/maths/public_html/conference/index.htm.

7–9 DIMACS Working Group on Order Theoretic Aspects of Epidemiology, DIMACS Center, Rutgers University, Piscataway, New Jersey. (Jun/Jul. 2004, p. 692)

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. (Jun/Jul. 2004, p. 692)

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)

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

19–22 2005 ASL Annual Meeting, Stanford, California. (Jun/Jul. 2004, p. 692)

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 Extensions of Hilbert's Tenth Problem**, AIM Research Conference Center, Palo Alto, California.

Workshop topics: This workshop, sponsored by AIM and the NSF, will be devoted to extensions of Hilbert's Tenth Problem and related questions in Number Theory and Geometry. The main topics for the workshop are

1. HTP over rings and fields of algebraic numbers (in particular HTP over rational numbers, Mazur's Conjectures, elliptic curve methods)

2. HTP over function fields of arbitrary characteristic, elementary equivalence versus isomorphism problem for function fields.

3. HTP for rings and fields of meromorphic functions (both complex and p-adic).

Organizers: Bjorn Poonen, Alexandra Shlapentokh, Xavier Vidoux, and Karim Zahidi.

Deadline: November 1, 2004.

Information: <http://aimath.org/ARCC/workshops/hilberts10th.html>.

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

Organizers: M. Douglas, K. Hori, S. Sethi.

Information: email: abrand@fields.utoronto.ca.

24–27 Geometric Representation Theory, University of Arizona, Tucson, Arizona. (Aug. 2004, p. 833)

Goal: To gather leading specialists in representation theory as well as beginning researchers and advanced graduate students to create a forum where participants can exchange new ideas, communicate recent advances, and assist younger participants in developing successful research strategies. Women and minority participants are especially encouraged to apply.

Principal Speakers: S. Evens (Notre Dame), D. Gaitsgory (Chicago), V. Ginzburg (Chicago, TBC), S. Kumar (North Carolina), J. Millson (Maryland), I. Mirkovic (Amherst), K. Vilonen (Northwestern), D. Vogan (MIT).

Organizing Committee: P. Bressler, P. Foth, and K. Joshi (all from Arizona).

Information: <http://math.arizona.edu/~foth/grt.html>.

28–30 IMA Tutorial/Workshop: New Paradigms in Computation, University of Minnesota, Minneapolis, Minnesota. (Jun/Jul. 2004, p. 692)

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. (Jun/Jul. 2004, p. 692)

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)

Organizers: J. Louis, R. Myers, G. Shiu.

Information: email: abrand@fields.utoronto.ca.

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)

Description: The special semester will bring together 100 scientists from mathematics, engineering, and physics to explore new directions in time-frequency analysis. The ESI offers an ideal environment for research and interaction. In addition, the program will contain four specialized workshops and a big conference on “Progress in Time-Frequency Analysis” (May 23–28, 2005).

Main Topics: (a) Non-orthogonal expansions and representation theory, (b) Combined phase space methods: Between Gabor and wavelets, (c) Non-linear approximation theory and computational harmonic analysis, (d) Time-frequency methods and pseudodifferential operators.

Organizers: H. G. Feichtinger (Univ. of Vienna), K. Groechenig (GSF Research Center, Munich), J. J. Benedetto (Univ. of Maryland).

Information: <http://www.univie.ac.at/NuHAG/ESI05>, <http://www.esi.ac.at>; email: hans.feichtinger@univie.ac.at, email: karlheinz.groechenig@gsf.de.

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

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

6–10 Extracting Macroscopic Information from Molecular Dynamics, Centre de Recherches Mathématiques, Université de Montréal, Montréal, Québec, Canada.

Organizers: P. F. Tupper (McGill), A. M. Stuart (Warwick).

Description: Models used in molecular dynamics are high-dimensional dynamical systems (or stochastic dynamical systems) with multiple time-scales. A major challenge for computational mathematics is the extraction of accurate macroscopic information at minimal cost. This workshop will concentrate on two topics: (1) the analysis and development of standard time-stepping algorithms in the context of molecular dynamics, with the purpose of the indirect calculation of macroscopic information; and (2) the design of new algorithms aimed at extracting macroscopic information directly.

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

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

11–15 IMA Workshop: Atomic Motion to Macroscopic Models: The Problem of Disparate Temporal and Spatial Scales in Matter, University of Minnesota, Minneapolis, Minnesota. (Jun/Jul. 2004, p. 692)

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. (Jun/Jul. 2004, p. 692)

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@cs1.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)

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

18–July 13 Time at Work, Institut Henri Poincaré, Paris, France. (Aug. 2004, p. 833)

Description: A trimester on asymptotic properties of dynamical systems courses, minicourses, lectures throughout the trimester; also a one-week workshop on each of the main topics (details on <http://www.math.jussieu.fr/~baladi/ihp.html>): extended systems, Hamiltonian systems, SRB measures and their asymptotic properties, dynamical zeta functions, and quantum chaos.

Organizers: V. Baladi, J. Brémont, P. Collet, F. Ledrappier, and C. Liverani.

Information: <http://www.ihp.jussieu.fr>.

27–May 1 Multiscale Modeling in Solids, Centre de Recherches Mathématiques, Université de Montréal, Montréal, Québec, Canada. (Aug. 2004, p. 834)

Organizers: Weinan E (Princeton), E. Vanden-Eijnden (Courant).

Description: This workshop will focus on energetic and kinetic issues associated with defects, cross-slip, grain boundary migration, and phase boundary dynamics in solids. The objective is to develop mathematical models for complex multiscale phenomena such as crystal plasticity, nucleation and reconstruction of stepped surfaces, and the behaviour of nano-materials in general.

***28–30 Barrett Lectures: New Developments in Nonlinear Partial Differential Equations**, University of Tennessee, Knoxville, Tennessee.

Program: Invited lectures.

Principal Speaker: Sergiu Klainerman (Princeton).

Organizers: Grozdna Todorova todorova@math.utk.edu, Jochen Denzler denzler@math.utk.edu.

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

May 2005

2–6 IMA Workshop: Experiments in Physical Biology, Part I, University of Minnesota, Minneapolis, Minnesota. (Jun/Jul. 2004, p. 693)

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)

Organizers: C. Johnson, P. Kraus, D. Marolf, A. Peet.

Information: email: abrand@fields.utoronto.ca.

6–9 Statistical Inferences on Shape Manifolds, AIM Research Conference Center, Palo Alto, California. (Jun/Jul. 2004, p. 693)

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>.

11–15 Integrative Multiscale Modeling and Simulation in Materials Science, Fluids and Environmental Science, Centre de Recherches Mathématiques, Université de Montréal, Montréal, Québec, Canada. (Aug. 2004, p. 834)

Organizer: T. Y. Hou (Caltech).

Description: Multiscale modeling and simulation have already impacted many scientific and engineering disciplines. Numerous developments have been scattered in various disciplines, and there is a great need to integrate isolated efforts. This workshop will recapitulate previous activities, focus on the interdisciplinary interaction among these related fields, and try to develop new tools that combine mathematical analysis, multiscale modeling, and computational analysis in an integrative way.

14–15 Conference in Honor of Heydar Radjavi's 70th Birthday, Hotel Golf, Bled, Slovenia. (Aug. 2004, p. 834)

Motivation: The conference will consist of invited and contributed talks related to Heydar Radjavi's work. Radjavi's many important contributions to linear algebra and to operator theory include his seminal characterization of self-commutators of operators on Hilbert space and his definitive trace condition for simultaneous triangularizability of semigroups of matrices, which was the culmination of work on this topic by several generations of distinguished algebraists. Heydar has obtained numerous other results of broad interest on invariant subspaces, simultaneous triangularizability, products of involutions, semigroups of matrices, and many other topics. As he approaches 70, his research productivity is increasing with his age. It is hoped that this conference will reflect the breadth and influence of his research.

Deadline: Those interested in attending should register by January 15, 2005.

Organizers: M. Brešar, L. Grunenfelder, T. Košir, M. Omladič, P. Rosenthal, P. Šemrl.

Invited Speaker: P. Rosenthal.

Invited Participants: E. A. Azoff (USA), R. Bhatia (India), P. Binding (Canada), L. Grunenfelder (Canada), R. Guralnick (USA), D. Hadwin (USA), J. Holbrook (Canada), T. J. Laffey (Ireland), C. K. Li (USA), L. Livshits (USA), R. Loewy (Israel), V. Lomonosov (Canada), G. MacDonald (Canada), B. Mathes (USA), M. Mathieu (Germany), R. Meshulam (Israel), V. Müller (Czech Republic), J. Okninski (Poland), M. Radjabalipour (Iran), H. Radjavi (Canada), L. Rodman (USA), B. A. Sethuraman (USA), V. Shulman (Russia), A. Sourour (Canada), Y. Turovskii (Azerbaijan), J. Zemanek (Poland).

Information: <http://www.law05.si/hrc/>.

Secretary of the Conference: Damjana Kokol Bukovšek, Institute of Mathematics, Physics and Mechanics, Jadranska 19, 1000 Ljubljana, Slovenia; phone: +386-1-476-65-50, fax: +386-1-251-72-81, email: Damjana.Kokol@FMF.Uni-Lj.SI.

15–21 ICMI Study 15: The Professional Education and Development of Teachers of Mathematics, Águas de Lindóia, São Paulo, Brazil. (Jun/Jul. 2004, p. 693)

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. (Jun/Jul. 2004, p. 693)

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. (Jun/Jul. 2004, p. 693)

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>.

* **19–21 CTS Conference on Combinatorics and Its Applications in Honor of Frank K. Hwang's 65th Birthday**, National Chiao Tung University (NCTU), Hsin Chu, Taiwan.

Sponsoring Organization: National Center of Theoretical Sciences (CTS), Hsin Chu, Taiwan; <http://math.cts.nthu.edu.tw/Mathematics/index.html>.

Organizers: Chiu-Yuan Chen (NCTU), email: cychen@math.nctu.edu.tw; Ding-Zhu Du (Univ. of Minnesota), email: ddu@nsf.gov; Hung-Lin Fu (NCTU) email: hlfu@math.nctu.edu.tw.

Program Committee: Hung-Lin Fu (NCTU, chair), Gerard J. Chang (NTU, co-chair), Chiu-Yuan Chen (NCTU), Ding-Zhu Du (Univ. of Minnesota), Chin-Mei K. Fu (Tamkang Univ.), Hua-Ming Huang (NCU), Tayuan Huang (NCTU), Ko-Wei Lih (Academia Sinica), Chi-Wen Weng (NCTU), Xuding Zhu (NSYSU).

Invited Speakers: Bela Bollobas (The University of Memphis), Gerard J. Chang (National Taiwan University), Chin-Sui Cheng (Academia Sinica), Charles Colbourn (Arizona St. University), Ding-Zhu Du (University of Minnesota), Genhua Fan (Fochou University), Fan Chung Graham (University of California at San Diego), Jerry Griggs (University of South Carolina), Chris Rodger (Auburn University), Uri Rothblum (Technion University), Neal Sloane (Bell Labs), Joel Spencer (Courant Institute).

Information: <http://www.math.nctu.edu.tw>.

June 2005

1–5 Stochastic Modeling in Financial Mathematics (joint with SAMS), Centre de Recherches Mathématiques, Université de Montréal, Montréal, Québec, Canada. (Aug. 2004, p. 834)

Organizers: R. Sircar (Princeton), J.-P. Fouque (North Carolina State).

Description: The theme of this workshop is emerging directions in financial mathematics, with emphasis on stochastic modeling of market uncertainties, theoretical and numerical approximations to pricing, hedging and portfolio optimization control problems, and data estimation issues. The goal is to bring together researchers in a variety of disciplines (mathematics, engineering, operations research, and economics, for example) to emphasize different techniques and approaches.

6–8 SEM Annual Conference & Exposition on Experimental and Applied Mechanics, Marriott Portland Downtown, Portland, Oregon. (May 2004, p. 576)

Organizer: Society for Experimental Mechanics, Inc., 7 School Street, Bethel, CT 06801.

Deadline: Abstracts due: October 15, 2004.

Information: Phone: 203-790-6373; fax 203-790-4472; email: sem@sem1.com; <http://www.sem.org>.

6–10 Moduli Spaces of Properly Embedded Minimal Surfaces, AIM Research Conference Center, Palo Alto, California. (Jun/Jul. 2004, p. 693)

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. (Jun/Jul. 2004, p. 693)

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>.

* **12–24 Foliations 2005**, Lodz, Poland.

Description: The conference is the fourth in a series devoted to the theory of foliations. The previous three took place in 1990 (Lodz), 1995 and 2000 (Warszawa, both). The main purpose of the conference is to interchange new ideas in all aspects of foliation theory and related topics: contact and symplectic structures, confoliations, Engel and Goursat structures, groups and pseudogroups of action on manifolds, holonomy groups and pseudogroups of foliations, etc.

Format: 2 mini-courses, invited lectures and contributed talks.

Invited speakers: V. Kaimanovich (mini-course), S. Matsumoto (mini-course), J. Alvarez Lopez, M. Asaoka, S. Fenley, V. Grines, X. Gomes Mont, J. Heitsch, Y. Kordyukov, H. Minakawa, K. Richardson, E. Zhuzhoma. Confirmation of speakers is in progress, see the conference web site <http://fo12005.math.uni.lodz.pl>.

Organizers: Katedra Geometrii Uniwersytetu Lodzkiego (Lodz), Banach Centre (Warszawa).

Organizing Committee: S. Hurder (Chicago), R. Langevin (Dijon), T. Tsuboi (Tokyo), P. Walczak (Lodz) and M. Czarnecki (Lodz)-secretary.

Grants: Several EU grants for young mathematicians will probably be available.

Information: <http://fo12005.math.uni.lodz.pl>; email: fo12005@math.uni.lodz.pl.

13–18 Computational Methods and Function Theory (CMFT 2005), Joensuu, Finland. (Feb. 2004, p. 279)

Description: The general theme of the meeting concerns various aspects of interaction of complex variables and scientific computation, including related topics from function theory, approximation theory, and numerical analysis.

Program: The program consists of invited one-hour lectures, invited and contributed 25-minute talks, and poster sessions.

Organizing Committee: St. Ruscheweyh (Würzburg), E. B. Saff (Nashville), O. Martio (Helsinki), and I. Laine (Joensuu).

Remark: Limited funds available for partial support of travel/local expenses of participants from developing countries.

Contact: email: cmft@joensuu.fi.

Information: <http://www.joensuu.fi/cmft/>.

13–25 CIMPA Summer School AGAHF 2005—Arithmetic and Geometry around Hypergeometric Functions, Galatasaray University, Ortakoy, Istanbul, Turkey. (Aug. 2004, p. 834)

Objectives: The aim of the school is the presentation of hot topics in the field in a form accessible to research students, and revival of the interest in the field by highlighting possible new research directions. There will be minicourses on hypergeometric differential equations and related topics, such as discrete groups in the automorphism groups of complex balls, ball quotients, orbifolds and corresponding moduli problems of algebraic geometry.

Organizers: Ceyhan (MPIfM, Bonn), L. Chaumard (GSU, Istanbul), Ozgur Kisisel (METU, Ankara) A. M. Uludag (GSU, Istanbul), A. Ulus (GSU, Istanbul).

Scientific Advisory Board: F. Hirzebruch, R.P. Holzapfel, M. Yoshida, E. Looijenga, M. Jambu, L. D. Trang, P. Cohen, I. Dolgachev, S. Kondo.
Registration: October 2004–March 2005.

Information: Details will soon be available on the website of the school, which is under preparation.

16–19 Second Joint International Meeting with the Deutsche Mathematiker-Vereinigung (DMV) and the Oesterreichische Mathematische Gesellschaft (OMG), Mainz, Germany. (May 2004, p. 576)

Information: <http://www.ams.org/amsmtg/internmtgs.html>.

20–24 Second Conference on Self-Similarity and Applications, INSA Toulouse, Toulouse, France. (Aug. 2004, p. 834)

Scientific Committee: M. Ledoux, A. Benassi, A. Estrade, P. Flandrin, J. Istas, S. Jaffard, J. Lévy-Véhel, M. Taqqu.

Information: <http://www.lsp.ups-tlse.fr/Autosim05/indexa.html>.

20–25 Asymptotic and Probabilistic Methods in Geometric Group Theory, Geneva, Switzerland. (Jun/Jul. 2004, p. 693)

Organizers: Goulmira 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. (Jun/Jul. 2004, p. 693)

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>.

21–24 MAM 5—Fifth International Conference on Matrix Analytic Methods in Stochastic Models, Pisa, Italy.

Scope: The conference will provide an international forum for: presenting recent results on theory, algorithms and applications concerning matrix-analytic methods in stochastic models; discussing methodologies and the related algorithmic analysis; improving collaborations among researchers in applied probability, engineering and numerical analysis; tracing the current state of the art and the lines of future research, pointing out the main topics of interest.

Organizing Committee: D. A. Bini (chair), Univ. of Pisa, Italy; G. Latouche, Univ. Libre de Bruxelles, Belgium; and B. Meini, Univ. of Pisa, Italy.

Important Dates: Full paper submission: September 13, 2004; Notification of acceptance/revision/rejection: January 10, 2005; Revised version due: March 14, 2005; Final notification for papers with delayed decision: April 4, 2005.

Information: <http://www.dm.unipi.it/~mam5>; email: mam5@dm.unipi.it.

26–July 1 ERLOGOL-2005: Intermediate Problems of Model Theory and Universal Algebra, State Technical University/Mathematics Institute, Novosibirsk, Russia. (Jun/Jul. 2004, p. 694)

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, kn1958@yahoo.com.

26–July 1 30th Conference on Stochastic Processes and Their Applications, University of California at Santa Barbara (UCSB), Santa Barbara, California. (Jun/Jul. 2004, p. 694)

Information: <http://www.pstat.ucsb.edu/projects/spa05/>.

July 2005

2–7 SRTL-4: The Fourth International Research Forum on Statistical Reasoning, Thinking, and Literacy, The University of Auckland, Auckland, New Zealand. (Jun/Jul. 2004, p. 694)

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/srt14/>.

*3–9 **XXIVièmes Journées Arithmétiques**, Marseille, France.

Topics: All branches of Number Theory.

Invited Talks: 12 plenary talks
Contributed Talks: All participants are invited to present a contributed talk (20 minutes).

Organizers: Pierre Liardet, Stephane Louboutin; email: ja2005@cmi.univ-mrs.fr.

Scientific Committee: Christine Bachoc, Univ. de Bordeaux 1; Jean Marc Couveignes, Univ. Toulouse II; John Friedlander, Univ. of Toronto at Scarborough; Laurent Habsieger, Univ. Claude Bernard Lyon 1; Yuri V. Nesterenko, Moscow State Univ.; Damien Roy, Univ. of Ottawa; Imre Ruzsa, Hungarian Acad. of Sci.; Per Salberger, Göteborg Univ.; René Schoof, Univ. di Roma “Tor Vergata”; Michael Stoll, Internat. Univ. Bremen.

Deadlines: September 15, 2004: Second announcement. Opening Web pages. January 15, 2005: Third announcement. Submission of abstracts for contributed talks. April 30, 2005: early registration, higher rates apply after this date. May 31, 2005: Deadline for submission of abstracts of contributed talks. June 15, 2005: Last day for registration.

Information: <http://www.lapm.univ-mrs.fr/ja2005>.

9–11 **Joint Meeting of the Chinese Society of Probability and Statistics (CSPS) and the Institute of Mathematical Statistics (IMS)**, Beijing, China. (Aug. 2004, p. 834)

Deadline: Submissions of contributed papers are invited to the conference website until January 20, 2005.

Information: <http://math.bnu.edu.cn/statprob/CSPS-IMS2005/index.html>.

10–14 **12th International Conference on Mathematical Modelling and Applications (ICTMA12)**, City University, London, England. (Jan. 2004, p. 64)

Description: ICTMA12’s purpose is the research, teaching, and practice of mathematical modelling; this meeting will have a strong focus on transitions from the real world to the mathematical model. Mathematicians; engineers and scientists; modellers in industry, government, and finance; and teachers and researchers in schools, colleges, and universities will be attracted by the conference themes.

Information: The first announcement is now available on the ICTMA12 website: <http://www.city.ac.uk/conted/research/ictma12/index.htm>, or contact ictma12@city.ac.uk.

*10–15 **20th British Combinatorial Conference**, University of Durham, United Kingdom.

Description: The programme will comprise invited talks and parallel sessions of contributed talks covering all aspects of combinatorics. The invited talks will be published by Cambridge University Press in the London Mathematical Society Lecture Note series. Arrangements are also planned for the publication, subject to refereeing, of papers corresponding to the contributed talks.

Organizers: N. Martin (Durham), M. J. Grannell, T. S. Griggs, F. C. Holroyd, K. A. S. Quinn and B. S. Webb (Open University).

Co-Organizers: The 20th in this series of biennial conferences is being co-organized on behalf of the British Combinatorial Committee by staff at the University of Durham and at the Open University.

Invited Speakers: B. Green (Trinity College, Cambridge), O. H. King (Newcastle), P. Östergård (Helsinki), T. Penttila (Western Australia), A. D. Scott (University College, London), O. Serra (Catalunya), P. D. Seymour (Princeton), A. D. Sokal (New York), and A. Steger (Zürich).

Information: <http://mcs.open.ac.uk/bcc2005/>.

10–23 **Cornell Summer School in Probability**, Cornell University, Ithaca, New York. (Aug. 2004, p. 834)

Primary Speakers: R. Durrett (Cornell), J.-F. Le Gall (DMA-École Normale Supérieure de Paris), R. Lyons (Indiana).

Organizer: G. Lawler, email: lawler@math.cornell.edu.

Information: <http://www.math.cornell.edu/~lawler/sum2005.html>.

25–29 **IMA Workshop: Mixed Integer Programming**, University of Minnesota, Minneapolis, Minnesota. (Jun/Jul. 2004, p. 694)

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>.

August 2005

1–December 23 **Pattern Formation in Large Domains**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England. (Aug. 2004, p. 834)

Organizers: J.H.P. Dawes (Cambridge), M. Golubitsky (Houston), P.C. Matthews (Nottingham), A.M. Rucklidge (Leeds).

Information: <http://www.newton.cam.ac.uk/programmes/PFD/>; Isaac Newton Institute for Mathematical Sciences, 20 Clarkson Road, Cambridge, CB3 0EH, U.K.; tel.: +44 1223 335999, fax.: +44 1223 330508; email: info@newton.cam.ac.uk.

8–December 23 **Global Problems in Mathematical Relativity**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England. (Aug. 2004, p. 834)

Description: General relativity has been around for a long time as a physical theory and an object of mathematical study. It was a subject of intense interest in the 1960s and 1970s, when advances included the discovery of the Kerr solution, the study of black holes and singularity theorems, and the introduction of asymptopia as a framework for studying asymptotic properties, including gravitational radiation. At the same time there were many mathematical problems that resisted mathematical analysis. In recent years there have been significant advances in our understanding of the topological, geometrical, and PDE aspects of general relativity; and progress is once again becoming rapid. New results are being obtained, and older results re-proved in greater generality.

Themes: This programme will be structured around four themes: Elliptic aspects of general relativity: new methods of solving the constraint equations, developments from the solution of the Riemannian Penrose inequality, the study of static and stationary solutions including black holes. Hyperbolic aspects of general relativity: local and global evolution problems, Cosmic Censorship conjecture, and the nature of singularities. Global Lorentzian geometry: global techniques and asymptotic structure, splitting theorems and extendibility. New methods in general relativity: inverse scattering and boundary-value problems, scattering theory for linear field equations, new methods from Riemannian geometry. While all four themes will be worked on throughout the programme—and indeed it would be neither possible nor desirable to keep them rigidly separate—there will be periods of more focus on each. The overall emphasis will be on mathematical results and global properties of solutions of the Einstein equations, but it is worth noting that there is a clear motivation from physics to deepen our understanding of general relativity at a time when gravitational wave detectors around the world have started collecting data.

Organizers: P.T. Chrusciel (Tours), H. Friedrich (Golm), P. Tod (Oxford).

Information: <http://www.newton.cam.ac.uk/programmes/GMR/>; Isaac Newton Institute for Mathematical Sciences, 20 Clarkson

Road, Cambridge, CB3 0EH, U.K.; tel.: +44 1223 335999, fax.: +44 1223 330508; email: info@newton.cam.ac.uk.

January 2006

9–June 30 **Principles of the Dynamics of Non-Equilibrium Systems**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England. (Aug. 2004, p. 835)

Description: The collective behaviour of nonequilibrium systems is poorly understood compared to systems in thermal equilibrium, for which statistical mechanics provides a well-established theory. By nonequilibrium systems we refer both to systems held far from thermal equilibrium by an external driving force and the complimentary situation of systems relaxing towards thermal equilibrium. Such systems display a broad range of phenomena, such as phase transitions and slow collective dynamics, which one would like to understand at a deeper level. The study of nonequilibrium systems has arisen in many different contexts, such as reaction-diffusion processes, interacting particle systems, driven diffusive systems, and the slow dynamics of glassy systems. In recent years progress has been made towards better understanding these systems. Mathematical tools have been developed, and some exact results pertaining to specific systems have been derived. These developments bring us closer to the point where one can address fundamental questions of generality, both of techniques and results. It is anticipated that bringing together the different communities of physicists and mathematicians working in this diverse field will foster the emergence of new directions and outlooks.

Focus: Driven diffusive systems of interacting particles; coarsening and persistence; glassy, constrained dynamics and ageing. Although all of these areas will be explored throughout the programme, it is intended that there will be periods of focus on each, centered around topical workshops.

Organizers: M.R. Evans (Edinburgh), S. Franz (ICTP, Trieste), C. Godreche (SPEC, Saclay), D. Mukamel (Weizmann Inst.).

Information: <http://www.newton.cam.ac.uk/programmes/PDS/>; Isaac Newton Institute for Mathematical Sciences, 20 Clarkson Road, Cambridge, CB3 0EH, U.K.; tel.: +44 1223 335999, fax.: +44 1223 330508; email: info@newton.cam.ac.uk.

16–July 7 **Logic and Algorithms**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England. (Aug. 2004, p. 835)

Description: Theoretical computer science is broadly divided into disciplines dealing with logic, semantics and formal methods on the one hand, and algorithmics and computational complexity on the other. The programme will focus on active areas of research that cut across this divide, dealing with algorithmic and complexity aspects of logic as well as logical methods in complexity. Among the areas of focus are computer-aided verification, specifically dealing with algorithms and structures for verifying properties of computing system and the logical, combinatorial, and algebraic methods deployed in their study. **Finite Model Theory:** This draws on logic and combinatorial methods to study the expressive power of logical languages in the finite. Along with connections with complexity, the programme will explore applications in database theory, constraint satisfaction, proof complexity and process logics.

Proof Complexity: At the interface of logic and complexity theory, the study of proof complexity, both in terms of lengths of proofs and complexity of inference steps, provides powerful methods for complexity lower bounds. **Constraint Satisfaction:** This describes a class of combinatorial search problems that arise in a wide variety of areas of computer science and that have been the focus of sustained research, drawing on a rich variety of techniques from algebra, logic, and graph theory.

Games: While two-player games are used as a tool in many of the areas mentioned above, an emerging theory combines games with automata and logic into a powerful tool for the analysis of systems. Fundamental questions concern the algorithmic complexity of

determining a winner or constructing a winning strategy, given a game and a winning condition.

Organizers: A. Dawar (Cambridge), M.Y. Vardi (Rice).

Information: <http://www.newton.cam.ac.uk/programmes/LAA/>; Isaac Newton Institute for Mathematical Sciences, 20 Clarkson Road, Cambridge, CB3 0EH, U.K.; tel.: +44 1223 335999, fax.: +44 1223 330508; email: info@newton.cam.ac.uk.

July 2006

2–7 **ICOTS 7, Working Cooperatively in Statistics Education**, Salvador (Bahia), Brazil. (Mar. 2004, p. 361)

Topics: (1) Working cooperatively in statistics education: L. Cordani (Brazil), lisbethk@terra.com.br; M. Shaughnessy (USA), mike@mth.pdx.edu; (2) Statistics Education at the School Level: D. Ben-Zvi (Israel), dbenzvi@univ.haifa.ac.il; L. Pereira (Singapore), lpereira@nie.edu.sg; (3) Statistics Education at the Post Secondary Level: M. Aliaga (USA), aliaga@umich.edu; E. Svensson (Sweden), elisabeth.svensson@esi.oru.se; (4) Statistics Education/Training and the Workplace: P. Silva (Brazil), pedrosilva@ibge.gov.br; P. Martín (Spain), pilar.guzman@uam.es; (5) Statistics Education and the Wider Society: B. Phillips (Australia), bphillips@groupwise.swin.edu.au; P. Boland (Ireland), Philip. J. Boland@ucd.ie; (6) Research in Statistics Education: C. Reading (Australia), creading@metz.une.edu.au; M. Pfannkuch (New Zealand), pfannkuc@scitec.auckland.ac.nz; (7) Technology in Statistics Education: A. Blejec (Slovenia), andrej.blejec@uni-lj.si; C. Konold (USA), konold@srri.umass.edu; (8) Other Determinants and Developments in Statistics Education: T. Chadjiapadelis (Greece), chadji@polsci.auth.gr; B. Carlson (USA), bcarlson@eclac.cl; (9) An International Perspective on Statistics Education: D. North (South Africa), delian@icon.co.za; A. S. Haedo (Argentina), haedo@qb.fcen.uba.ar; (10) Contributed Papers: J. Engel (Germany), Engel_Joachim@ph-ludwigsburg.de; A. Mc Lean (Australia), alan.mclean@buseco.monash.edu.au; (11) Posters: C. E. Lopez (Brazil), celilopes@directnet.com.br.

Information: C. Batanero, batanero@ugr.es; <http://www.maths.otago.ac.nz/icots7>.

17–August 11 **Spectral Theory and Partial Differential Equations**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England. (Aug. 2004, p. 835)

Organizers: M. van den Berg (Bristol), B. Helffer (Orsay), A. Laptev (Stockholm), A.V. Sobolev (Sussex).

Information: <http://www.newton.cam.ac.uk/programmes/STP/>; Isaac Newton Institute for Mathematical Sciences, 20 Clarkson Road, Cambridge, CB3 0EH, U.K.; tel.: +44 1223 335999, fax.: +44 1223 330508; email: info@newton.cam.ac.uk.

24–December 22 **Noncommutative Geometry**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England. (Aug. 2004, p. 835)

Organizers: A. Connes (IHES), S. Majid (Queen Mary), A. Schwarz (UC Davis).

Information: <http://www.newton.cam.ac.uk/programmes/NCG/>; Isaac Newton Institute for Mathematical Sciences, 20 Clarkson Road, Cambridge, CB3 0EH, U.K.; tel.: +44 1223 335999, fax.: +44 1223 330508; email: info@newton.cam.ac.uk.