Mathematics Calendar

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

April 2004

* 5–6 **The Fifth Annual Colloquiumfest**, Institut Henri Poincaré, Paris, France.
Topics: Valuation Theory in Algebraic Geometry and Model Theory.
Organizers: Z. Chatzidakis (Equipe de Logique Mathématique, Univ. Paris 7), and F.-V. Kuhlmann (Research Unit "Algebra and Logic", Mathematical Sciences Group, Univ. of Saskatchewan, currently visiting the Equipe de Géométrie et Dynamique, Institut de Mathématiques de Jussieu).
Invited Speakers: P. Roquette (Heidelberg), A. Prestel (Konstanz), B. Teissier (Inst. Math. de Jussieu), M. Spivakovsky (Toulouse), V. Cossart (Versailles-Saint Quentin), O. Piltant (Versailles-Saint Quentin), J. Koenigsmann (Basel/Freiburg), H. Knaf (Kaiserslautern), R. Cluckers (ENS Ulm, Paris).
Information: http://math.usask.ca/fvk/Mb5.htm.

* 16–17 **Eighth Annual Informal UK Meeting on Integrable Models, Conformal Field Theory and Related Topics**, ICMS, Edinburgh, UK.
Information: http://www.ma.hw.ac.uk/icms/meetings/.

* 23–24 **Workshop on Mathematical Oncology**, The Fields Institute, Toronto, Ontario, Canada.
Information: http://www.fields.utoronto.ca/programs/scientific/03-04/mathoncology/.

* 23–25 **The Third Duke Mathematical Journal Conference**, Duke University, Durham, North Carolina.
Description: There will be eight talks by prominent "younger" mathematicians representing a cross-section of areas frequently appearing in the journal: D. Auroux (MIT), symplectic geometry; M. Bhargava (Clay Institute and Princeton), number theory; A. Borodin (Clay Institute and CalTech), integrable systems; T. Colding (Courant Institute, NYU), differential geometry; A. Huber (Leipzig), arithmetic geometry; E. Miller (Minnesota), combinatorics; M. Mustata (Clay Institute), algebraic geometry; G. Staffilani (MIT), partial differential equations.
Information: http://www.math.duke.edu/conferences/dmj04/.

May 2004

* 5–9 **Workshop on the Representation Theory of p-Adic Groups**, Ottawa University, Ottawa, Ontario, Canada.
Information: http://www.fields.utoronto.ca/programs/scientific/03-04/p-adic/.

* 7–8 **Interdisciplinary Seminar (I)—Law, Probability and Risk**, ICMS, Edinburgh, UK.
Information: http://www.ma.hw.ac.uk/icms/meetings/.

* 10–14 **PIMS-MITACS Graduate Industrial Mathematics Modelling Camp**, University of Victoria, Victoria, British Columbia, Ontario, Canada.
Deadline: Apply: March 15, 2004.
Information: http://www.pims.math.ca/industrial/2004/gimmc/; email: gimmc@pims.math.ca.

* 12–14 **Workshop: Shape Optimization and Applications**, University of Ottawa, Ontario, Canada.
Information: http://www.fields.utoronto.ca/programs/scientific/03-04/shape_theory/.

* 12–15 **Workshop on Large Scale Nonlinear and Semidefinite**

This section contains announcements of meetings and conferences of interest to some segment of the mathematical public, including ad hoc, local, or regional meetings, and meetings and symposia devoted to specialized topics, as well as announcements of regularly scheduled meetings of national or international mathematical organizations. A complete list of meetings of the Society can be found on the last page of each issue.
An announcement will be published in the *Notices* if it contains a call for papers and specifies the place, date, subject (when applicable), and the speakers; a second announcement will be published only if there are changes or necessary additional information. Once an announcement has appeared, the event will be briefly noted in every third issue until it has been held and a reference will be given in parentheses to the month, year, and page of the issue in which the complete information appeared. Asterisks (*) mark those announcements containing new or revised information.
In general, announcements of meetings and conferences held in North America carry only the date, title of meeting, place of meeting, names of speakers (or sometimes a general statement on the program), deadlines for abstracts or contributed papers, and source of further information. Meetings held outside the North American area may carry more detailed information. In any case, if there is any application deadline with respect to participation in the meeting, this fact should be noted. All communications on meetings and conferences in the mathematical sciences should be sent to the Editor of the *Notices* in care of the American Mathematical Society in Providence or electronically to notices@ams.org or mathcal@ams.org.
In order to allow participants to arrange their travel plans, organizers of meetings are urged to submit information for these listings early enough to allow them to appear in more than one issue of the *Notices* prior to the meeting in question. To achieve this, listings should be received in Providence **eight months** prior to the scheduled date of the meeting.
The complete listing of the Mathematics Calendar will be published only in the September issue of the *Notices*. The March, June, and December issues will include, along with new announcements, references to any previously announced meetings and conferences occurring within the twelve-month period following the month of those issues. New information about meetings and conferences that will occur later than the twelve-month period will be announced once in full and will not be repeated until the date of the conference or meeting falls within the twelve-month period.
The Mathematics Calendar, as well as Meetings and Conferences of the AMS, is now available electronically through the AMS website on the World Wide Web. To access the AMS website, use the URL: http://www.ams.org/.

Programming, University of Waterloo, Waterloo, Ontario, Canada.
Information: http://orion.math.uwaterloo.ca/\%7Ehwolkowi/w04workshop.d/readme.html.

*12–16 **The Coxeter Legacy: Reflections and Projections**, The Fields Institute, Toronto, Ontario, Canada.
Description: Conference in honour of H.S.M. Coxeter. We intend to reflect on Coxeter's legacy, emphasizing his main achievements, demonstrating the impact of Coxeter's ideas on current research, and exploring future directions. During the conference there will be talks by invited principal speakers and sessions for contributed talks.
Information: http://www.fields.utoronto.ca/programs/scientific/03-04/coxeterlegacy/.

*17–21 **PIMS-MITACS Industrial Problem Solving Workshop**, University of British Columbia, Vancouver, BC, Canada.
Information: http://www.pims.math.ca/industrial/2004/ipsw/; email: ipsw@pims.math.ca.

*17–21 **Workshop on Integrable and Near-Integrable Hamiltonian PDE**, The Fields Institute, Toronto, Ontario, Canada.
Sponsors: Joint with the CRM.
Organizing Committee: W. Craig (chair), P. Deift, S. Kuksin, P. Olver, J. Toth, P. Winternitz.
Information: email: abrand@fields.utoronto.ca.

*19–23 **Canadian Operator Symposium (COSy) 2004**, University of Waterloo, Waterloo, Ontario, Canada.
Topics: Operator theory, operator algebras, abstract harmonic analysis.
Organizers: K. R. Davidson, L. W. Marcoux, A. M. Nica, N. Spronk.
Speakers: D. V. Voiculescu (main speaker) (Univ. Calif., Berkeley); K. J. Dykema (Texas A&M); G. Elliott (Univ. Toronto); A. T. M. Lau (Univ. Alberta); S. C. Power (Lancaster Univ.); I. Putnam (Univ. Victoria); Z. J. Ruan (Univ. Illinois–Urbana); R. Speicher (Queen's Univ.).
Information: http://www.math.uwaterloo.ca/~cosy.html; email: cosy@math.uwaterloo.ca.

*20–22 **PIMS Seminar on Stochastic Processes 2004**, University of British Columbia, Vancouver, BC, Canada.
Invited Speakers: R. Carmona (Princeton), R. Dalang (EPF Lausanne), A. Guionnet (École Normale Superieure de Lyon), Y. Le Jan (Orsay), B. Virag (Univ. of Toronto).
Information: http://www.pims.math.ca/science/2004/ssp/.

*23–27 **Geometry and Topology of String Theory**, Northwestern University, Evanston, Illinois.
Description: During the 2003–04 academic year, the Department of Mathematics of Northwestern University is hosting a special year in the geometry and topology of string theory. As a culmination of this activity, we have organized a conference bringing together mathematicians and physicists working in different areas related to string theory.
Organizers: E. Getzler and E. Zaslow, Dept. of Math., Northwestern Univ.
Speakers: M. Aganagic (Washington), A. Bondal (IUM), T. Bridgeland (Edinburgh), R. Bryant (Duke), T. Coates (Harvard), E. Diaconescu (Rutgers), K. Fukaya (Kyoto), A. Givental (Berkeley), S. Gukov (Harvard), K. Hori (Toronto), A. Kapustin (CalTech), M. Liu (Harvard), M. Marino (CERN), N. Nekrasov (IHES), Y.-G. Oh (Wisconsin), R. Pandharipande (Princeton), A. Polishchuk (Oregon), P. Seidel (Chicago), R. Thomas (Imperial College)
Workshop: In the two weeks before the conference, we will organize a workshop built around minicourses on background material relevant to recent developments in string theory. These will be suitable for graduate students as well as faculty in other fields of mathematics.
Information: Further information, including details of the program and information on accommodations, will be posted at http://math.northwestern.edu/Strings as it becomes available.

*25–June 25 **PIMS Summer School in Probability**, University of British Columbia, Vancouver, BC, Canada.
Program: This summer school will consist of two advanced graduate courses, given by M. T. Barlow (UBC) and G. F. Lawler (Duke University).
Information: http://www.pims.math.ca/science/2004/ssprob/.

*26–27 **Workshop on Electronic Voting—Theory and Practice**, DIMACS Center, Rutgers University, Piscataway, New Jersey.
Description: To many technologists, electronic voting represents a seemingly simple exercise in system design. In reality, the many requirements it imposes with regard to correctness, anonymity, and availability pose an unusually thorny collection of problems, and the security risks associated with electronic voting, especially remotely over the Internet, are numerous and complex, posing major technological challenges for computer scientists. The problems range from the threat of denial-of-service-attacks to the need for careful selection of techniques to enforce private, and correct, tallying of ballots. Other possible requirements for electronic voting schemes are resistance to vote buying; defenses against malfunctioning software, viruses; and related problems; audit ability; and the development of user-friendly and universally accessible interfaces.
Goal: To bring together and foster an interplay of ideas among researchers and practitioners in different areas of relevance to voting. For example, the workshop will investigate prevention of penetration attacks that involve the use of a delivery mechanism to transport a malicious payload to the target host. This could be in the form of a "Trojan horse" or remote control program. It will also investigate vulnerabilities of the communication path between the voting client (the devices where a voter votes) and the server (where votes are tallied). Especially in the case of remote voting, the path must be "trusted", and a challenge is to maintain an authenticated communications linkage.

Although not specifically a security issue, reliability issues are closely related and will also be considered. The workshop will consider issues dealing with random hardware and software failures (as opposed to deliberate, intelligent attack). A key difference between voting and electronic commerce is that in the former, one wants to irreversibly sever the link between the ballot and the voter. The workshop will discuss audit trails as a way of ensuring this. The workshop will also investigate methods for minimizing coercion and fraud, e.g., schemes to allow a voter to vote more than once and having only the last vote count.
Organizers: M. Jakobsson, RSA Laboratories, email: mjakobsson@rsasecurity.com; A. Juels, RSA Laboratories, email: ajuels@rsasecurity.com.
Local Arrangements: M. Mercado, DIMACS Center, mercado@dimacs.rutgers.edu, 732-445-5928.
Information: http://dimacs.rutgers.edu/Workshops/Voting/.

*31–June 11 **10th European Intensive Course on "Complex Analysis and Its Generalizations (with applications to partial differential equations)"**, University of Coimbra, Coimbra, Portugal.
Description: This intensive course will have a total of 40 hours of lectures and is at postgraduate level. It is organized by the Universities of Coimbra and Aveiro with the same goals as the ones organized under the programme Socrates and is open to all young mathematicians interested in complex analysis and its applications.
Lecturers: W. Van Assche (Katholieke Univ. Leuven, Belgium); A. Martinez (Univ. de Almeŕia, Spain); S. Bernstein (Univ. of Weimar/Univ. of Freiberg, Germany); M. Mackey (Univ. College, Dublin, Ireland).

Organizers: H. Malonek, A. Branquinho, J. Carvalho e Silva, P. Cerejeiras.
Information: Email: ajplb@mat.uc.pt, hrmalon@mat.ua.pt, jaimecs@mat.uc.pt, pceres@mat.ua.pt.

June 2004

* 5–26 **Clay Mathematics Institute Summer School: Floer Homology, Gauge Theory, and Low Dimensional Topology**, Alfréd Rényi Institute of Mathematics, Budapest, Hungary.
Overview: The Clay Mathematics Institute is organizing a summer school, Floer Homology, Gauge Theory, and Low Dimensional Topology in June 2004. The school will be held at the Alfréd Rényi Institute of Mathematics and will be aimed at graduate students and mathematicians within five years of their Ph.D. The school will consist of two weeks of foundational courses and one week of minicourses focusing on more advanced topics and recent developments. These courses will concentrate on recent activity at the crossroads of mathematical disciplines around low-dimensional topology, the theory of holomorphic curves, gauge theory, knot theory, smooth four-manifold topology, and contact geometry. The aim of this summer school is to provide a comprehensive introduction to these exciting areas through weeklong courses in Heegaard Floer theory of three- and four-manifolds, Seiberg-Witten theory, contact topology, and knot theory. The third week of advanced courses will focus on the frontiers of research in these areas.
Partial List of Participants: Lecturers will include J. Etnyre, R. Fintushel, C. Gordon, P. Ozsvath, A. Stipsicz, and Z. Szabo.
Organizing Committee: D. Ellwood, P. Ozsvath, A. Stipsicz, Z. Szabo.
Mathematical Preparation: While there are no formal prerequisites, preference will be given to applicants with some prior knowledge of topology or symplectic geometry.
Application Forms: The application form is available online at http://www.claymath.org/summerschool. Completed application forms will be accepted by mail or fax. The application deadline is March 31, 2004.
Graduate and Postdoctoral Funding: Funding is available for graduate students and postdoctoral fellows (within 5 years of their Ph.D.). Standard support amounts will include funds for local expenses and accommodations plus economy travel.
Information: http://www.claymath.org/summerschool; email: summerschool@claymath.org.

* 7–11 **Computational and Statistical Aspects of Microarray Analysis**, Bressanone, Italy.
Description: This five-day, highly interactive advanced course (halfway to a workshop) is aimed at scientists that are already involved in analyzing genomic data.
Focus: The focus will be on analyzing and interpreting DNA microarray data, but other topics will also be covered. Among these: visualization, machine learning, and exploratory analyses will be emphasized. Methods for quality control and for making use of biological metadata in a structured way will be demonstrated. Attendees should bring with them data or specific methodological innovations that they want to work on in collaboration with the organizers and other attendees. Participants should have sufficient minimal background on biological, statistical, and computational aspects of microarray data and preferably be used to the R statistical environment. The maximum number of participants is 30.
Organizers: R. Gentleman, Dept. of Biostatistics, Harvard School of Public Health, Boston, Massachusetts, USA (member of the Bioconductor research project) and W. Huber, Dept. for Molecular Genome Analysis, DKFZ (German Cancer Research Center), Heidelberg, Germany (also a member of the Bioconductor research project).
Information: email: stefano.iacus@unimi.it; http://www.economia.unimi.it/marray/.

* 7–26 **Probability Models and Statistical Analyses for Ranking Data**, University of Ottawa, Ontario, Canada.
Information: http://www.fields.utoronto.ca/programs/scientific/03-04/shape_theory/.

* 8–9 **DIMACS Workshop on Genomic Instability in Cancer: Biological and Mathematical Approaches**, Institute for Advanced Study, Princeton, New Jersey.
Description: Many cancers are characterized by genomic instability. This often involves gross chromosomal abnormalities such as deletion and duplication of chromosomes or chromosome parts, chromosomal rearrangements and mitotic recombinations, generally termed as "chromosomal instability". Other types of genomic instability are characterized by an increased rate of small-scale genetic changes (such as microsatellite instability). The role of genomic instability (GI) for cancer progression is a very important yet unresolved question.
Sponsors: DIMACS and Institute for Advanced Study.
Information: http://dimacs.rutgers.edu/Workshops/Genomic/.

* 14–18 (REVISED) **Conference on Surface Water Waves**, The Fields Institute, Toronto, Ontario, Canada.
Organizing Committee: J. Carter (Colorado), W. Craig (McMaster), B. Deconinck (Colorado State), J. Hammack (Pennsylvania State), D. Henderson (Pennsylvania State), D. Nicholls (Minnesota), H. Segur (Colorado), C. Sulem (Toronto).
Information: email: abrand@fields.utoronto.ca.

* 15–17 **DIMACS Workshop on Mobile and Wireless Security**, DIMACS Center, Rutgers University, Piscataway, New Jersey.
Description: 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.
Information: http://dimacs.rutgers.edu/Workshops/MobileWireless/.

* 17–18 **Analysis, Probability, and Logic: A Conference in Honor of Edward Nelson**, University of British Columbia, Vancouver, BC, Canada.
Background: Edward Nelson, professor at Princeton University, has done beautiful and influential work in probability, functional analysis, mathematical physics, nonstandard analysis, stochastic mechanics, and logic. This conference will be an occasion where his students, colleagues, and friends can meet for an overall look at his work and its influence on current research. The experience is intended to be serious, illuminating, and enjoyable.
Program: The mathematics department at the University of British Columbia, in conjunction with the Pacific Institute of Mathematical Sciences, will host the meeting. The program will include review talks on Nelson's research and a few invited talks on current directions in the areas of his interest.
Organizing Committee: D. Brydges (UBC), E. Carlen (Georgia Tech), B. Faris (Arizona), and G. Lawler (Cornell).
Plenary Speakers: S. Buss (UCSD), E. Carlen (Georgia Tech), L. Gross (Cornell), G. Lawler (Cornell), B. Simon (CalTech), C. Villani (ENS de Lyon).
Contact: email: nelson04@math.gatech.edu.
Information: http://www.pims.math.ca/science/2004/nelson04/.

* 17–19 **Conference in Honour of Dale Brownawell**, University of Waterloo, Waterloo, Ontario, Canada.
Information: http://www.fields.utoronto.ca/programs/scientific/03-04/brownawell/.

*19–24 **Symmetries and Integrability of Difference Equations—EuroConference on Analytic Difference Equations, Special Functions and Quantum Models on the Lattice**, Helsinki, Finland.
Description: This meeting is the second in a series of two devoted to discrete systems and their integrability and symmetries (the first took place in Giens, France, in 2002). This second conference will emphasize linear and nonlinear special functions, and associated quantum problems and geometry. The topics covered in this meeting will include: analytic difference equations and spectral theory; difference bispectral problems; difference Galois theory; Q-hypergeometric and elliptic modular functions; representation theory and orthogonal polynomials; algebraic curves and addition formulae of Abelian functions; discrete and quantum geometry; quantum models on the lattice; quantum mappings.
Chair: J. Hietarinta (Turku Univ., FI); Vice-Chair: F. W. Nijhoff (Leeds Univ., UK).
Invited Speakers: K. Aomoto (Nagoya, JP); R. Askey (Wisconsin-Madison, US); A. Bobenko (TU Berlin, DE); A. Doliwa (Warsaw, PL); S. Elaydi (Trinity, San Antonio, Texas, US); V. Enolskii (Heriot-Watt, Edinburgh, UK); L. Faddeev (Steklov, St. Petersburg, RU); A. Grunbaum (Berkeley, US); L. Haine (Louvain, BE); M. Ismail (Univ. South Florida, US); T. Koornwinder (Amsterdam, NL); I. Krichever (Columbia, US); I. Laine (Joensuu, FI); F. Marcellan (Univ. Carlos III, Madrid, ES); M. Noumi (Kobe, JP); O. Ragnisco (Roma Tre, IT); J.-P. Ramis (Univ. Paul Sabatier, FR); V. Roubtsov (Angers, FR); S. Ruijsenaars (CWI, NL); P. Santini (Roma La Sapienza, IT); M. van der Put (Groningen, NL); J. Felipe van Diejen (Talca, CL); P. Vanhaecke (Poitiers, FR); A. Zhedanov (Donetsk, UA).
Deadline: March 19, 2004.
Information: Full program and application form available on the Euresco website at http://www.esf.org/euresco/04/pc04185.

*24–26 **Statistical Mechanics: A Conference in Honour of the 75th Birthday of Oliver Penrose**, ICMS, Edinburgh, UK.
Description: The main goal of the meeting is to present a program of first-class lectures in statistical mechanics and related fields for the benefit of British mathematicians. Most of the talks will be related to some of the many topics in statistical mechanics where Prof. Penrose has contributed greatly. For example, John Ball's talk will be related to his joint work with Prof. Penrose on applying ideas from statistical mechanics to some problems in continuum mechanics. Other topics to be covered during the meeting include nonequilibrium models, spin models, phase separation and Bose-Einstein condensation.
Program: The meeting will run for at least two full days, starting on Thursday, 24 June. Talks may continue into Saturday morning.
Speakers: J. Ball (Oxford), J. Bricmont (Louvain), P. Fratzl (Berlin), J. Lebowitz (Rutgers), M. Penrose (Bath), R. Penrose (Oxford), H. Spohn (Munich), B. Toth (Budapest).
Participation: Number of participants is strictly limited. Anyone interested in attending should contact T. Dart at ICMS email: tracey@maths.ed.ac.uk, who will forward the request to the organizers. Official invitations will be issued in February.
Information: http://www.ma.hw.ac.uk/icms/meetings/2004/penrose/index.html.

July 2004

*5–15 **Moonshine—the First Quarter Century and Beyond: A Workshop on the Moonshine Conjectures and Vertex Algebras**, International Centre for Mathematical Sciences, Edinburgh, UK.
Aims and Topics: Moonshine and related topics have been active research areas since the late 1970s. The aim of this workshop is to review the impact of this research area on mathematics and theoretical physics and to highlight possible new directions.

The first part of the meeting will be expository, including such areas as Borcherds's proof of the Conway-Norton conjecture, construction of the Monster, vertex (operator) algebras, modular moonshine, BKM algebras and automorphic forms, FLM's construction and proof of the McKay-Thompson conjecture. The second part of the meeting will consist of invited talks on current research.
Scientific Organizing Committee: A. Baker (Glasgow), A. Ivanov (Imperial College), J. Lepowsky (Rutgers), J. McKay (Concordia), V. Nikulin (Liverpool), M. Tuite (Galway).
Speakers: Expository talks will be given by the following (* awaiting confirmation); J. Bruinier (Cologne)*, C. Dong (Santa Cruz), T. Gannon (Alberta)*, R. Griess (Michigan), Y.-Z. Huang (Rutgers), E. Jurisich (Charleston), H. Li (Rutgers), A. Meurman (Lund), M. Miyamoto (Tsukuba), A. Ryba (CUNY).
Other Invited Talks: C. Cummins (Concordia), G. Mason (Santa Cruz), S. Norton (Cambridge), R. Wilson (Rutgers).
Information: http://www.ma.hw.ac.uk/icms/meetings/2004/moonshine/index.html.

*7–20 **MSRI-PIMS Summer Graduate Programme: Knots and 3-Manifolds**, University of British Columbia, Vancouver, BC, Canada.
Information: http://www.pims.math.ca/science/2004/KT3Mgrad/.

*11–17 **XI Meeting on Real Analysis and Measure Theory (CARTEMI)**, Hotel Continental Terme, Ischia, Naples, Italy.
Topics: Mathematical disciplines such as measure theory, real analysis, lattice theory, taking into consideration their role in applications to decision theory, economics, mathematical finance, and theoretical physics.
Invited Speakers: C. D. Aliprantis (Univ. of Purdue, USA), N. Fusco (Univ. Federico II, Naples, Italy), M. G. Graziano (Univ. of Calabria, Italy), D. Koelzow (Univ. of Erlangen, Germany), P. Mattila (Univ. of Helsinki, Finland), A. Olevskii (Univ. of Tel Aviv, Israel), W. Pfeffer (Univ. of California, Davis), J.D.M. Wright (Univ. of Reading, UK).
Information: http://www.dma.unina.it/~cartemi.

*12–16 **School on Atmospheric Sciences and Climate Dynamics**, IST, Lisbon, Portugal.
Speakers: M. Allen (Univ. of Oxford, UK), J. Ildefonso Díaz (Univ. Complutense de Madrid, Spain), M. Ghil (ENS-Paris, France, and UCLA, USA), P. Haynes (Univ. of Cambridge, UK), E. G. Tabak (Courant Inst., NYU, USA).
Organizers: J. Videman (Inst. Superior Técnico, Portugal), J. M. Urbano (Univ. de Coimbra, Portugal), D. Bresch (Univ. Joseph-Fourier, LMC-CNRS, France).
Information: http://www.mat.uc.pt/~tt2004/atmosphere/.

*16–20 **Algebraic Topology in Computer Science Workshop**, University of Western Ontario, London, Canada.
Information: http://www.math.uwo.ca/\%7Ejardine/at-csII.html.

*18–23 **International Conference on Differential Equations and Applications in Mathematical Biology**, Malaspina University College, Nanaimo, British Columbia, Canada.
Organizers: University of Calgary, University of Alberta, and Malaspina University-College Nanaimo.
Organizing Committee: E. Braverman (coordinator), M. Li, L. Idels, L. Berezansky, A. Ponosov, E. Litsyn.
Scientific Committee: R. Agarwal, E. Beretta, F. Brauer, C. Castillo-Chavez, K. L. Cooke, C. Corduneanu, J. M. Cushing, O. Diekmann, K. Gopalsamy, I. Györi, J. K. Hale, I. T. Kiguradze, V. B. Kolmanovskii, Y. Kuang, M. Lewis, A. D. Myshkis, S. Reich, I. P. Stavroulakis, J. Wu.
Information: http://web.mala.bc.ca/math/conference/.

*19 or 20 **The Second International Workshop on Declarative Agent Languages and Technologies (DALT-2004)**, The Third International Joint Conference on Autonomous Agents & Multi-Agent Systems (AAMAS 2004), New York, New York.
Overview: Building multiagent systems still calls for models and technologies that ensure system predictability, enable feature discovery and verification, and accommodate flexibility. Declarative approaches offer to satisfy precisely these properties of large-scale

multiagent systems. Recent advances in the area of computational logics provide a strong foundation for declarative languages and technologies. Equipped with such a strong foundation, declarative approaches can enable agents to reason about their interactions and their environment and hence not only establish the required tasks but also handle exceptions that arise in many systems.

Topics: (include but are not limited to): Declarative agent communication and coordination languages, Declarative approaches to the engineering of agent systems, Experimental studies of declarative technologies, Industrial and commercial experiences with declarative agent technologies, Formal methods for the specification and verification of agent systems, Computational logics in multiagent systems, Argumentation and dialectical systems, Declarative description of contracts and negotiation issues, Lessons learned from the design and implementation of agent systems, Declarative paradigms for the combination of heterogeneous agents, Constraints and agent systems, Declarative policies and security in MAS, Knowledge-based and knowledge-intensive MAS, Modeling of agent rationality.

Information: http://centria.di.fct.unl.pt/~jleite/dalt04/index.htm.

*19–22 **11th Conference of the International Linear Algebra Society**, University of Coimbra, Coimbra, Portugal.

Description: The conference is dedicated to Richard Brualdi in honor of his 65th birthday and his numerous contributions to linear algebra, ILAS, and mathematics. It includes invited speakers, special topic sessions (minisymposia), and presentations of submitted papers. A special issue of linear algebra and its applications will publish the conference proceedings (these proceedings will include research papers based on the talks given in the conference).

Plenary Speakers: R. Bhatia (Indian Statistical Institute New Delhi); H. Caswell (Woods Hole Oceanographic Institution); G. Cybenko (Dartmouth College); E, Elmroth (Umeó Univ.); S. Friedland (Univ. of Illinois Chicago); P. Gritzmann (Technical Univ. Munich); R. Guralnick (Univ. of Southern California); U. Helmke (Würzburg Univ.); W. Helton (Univ. of California San Diego); C. Krattenthaler (Claude Bernard Univ., Lyon); M. Omladic (Univ. of Ljubljana); X. Puerta (Polytechnic Univ. Catalonia); A. Ram (Univ. of Wisconsin Madison); J. Rosenthal (Notre Dame Univ.); S. Rump (Technical Univ. Hamburg-Harburg); F. Silva (Lisbon Univ.).

Special Lectures: P. Lancaster (Univ. of Calgary), H. Schneider, Prize speaker; B. Meini (Univ. of Pisa), SIAG/LA speaker; J. Moro (Carlos III Univ. Madrid), SIAG/LA speaker; P. Semrl (Univ. of Ljubljana), Taussky-Todd speaker; A. J. Hoffman (Watson Res. Center, IBM), banquet speaker.

Minisymposia: Group representations, organized by A. P. Santana and C. André; Combinatorial Matrix Theory, organized by B. Shader; Markov methods for search engines, organized by I. Ipsen and S. Kirkland; Nonnegative matrices, organized by T. Laffey. Additional suggestions for minisymposia will be discussed by the organizing committee, taking into account scheduling constraints.

Deadlines: Submission of contributed papers: April 30, 2004. The preregistration deadline is May 31, 2004. The fees before the May 31 deadline are 130 euros for non-ILAS members, 120 euros for ILAS members, and 90 euros for graduate students. After the deadline they are 150-150-120.

Organizing Committee: D. Hershkowitz (ILAS president), H. Schneider, T. Laffey, R. Loewy, I. Zaballa, B. Shader, G. de Oliveira, J. Dias da Silva, E. Marques de Sá, J. F. Queiró (chair).

Local Organizing Committee: A. P. Santana, A. L. Duarte, C. Caldeira, J. C. Gallardo, O. Azenhas, J. F. Queiró.

Information: http://www.mat.uc.pt/ilas2004/; email: ilas2004@mat.uc.pt.

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

Information: http://www.pims.math.ca/science/2004/KT3Mwksp/.

*19–23 **Quantum Information and Quantum Control Conference**, The Fields Institute, Toronto, Ontario, Canada.

Information: http://www.fields.utoronto.ca/programs/scientific/04-05/quantumIC/.

*19–24 **School and Workshop on Oceanography, Lakes and Rivers**, IST, Lisbon, Portugal.

Speakers (School): P. Constantin (Univ. of Chicago, USA); B. Cushman-Roisin (Dartmouth College, USA); E. Grenier (ENS-Lyon, France); J. Pedlosky (Woods Hole Oceanographic Inst., USA); B. Perthame (ENS-Paris, France).

Workshop: B. Desjardins (École Polytech/CEA, France); R. Farwig (TU Darmstadt, Germany); F. Guillén-González (Univ. de Sevilha, Spain); D. Marshall (Univ. of Reading, UK); J. Teixeira (UCAR/NRL, USA); S. Wang (Indiana Univ., USA).

Organizers: J. Videman (Inst. Superior Técnico, Portugal); J. M. Urbano (Univ. de Coimbra, Portugal); D. Bresch (Univ. Joseph-Fourier, LMC-CNRS, France).

Information: http://www.mat.uc.pt/~tt2004/ocean/.

August 2004

*2–5 **CSIR-Sponsored Seminar: Recent Advances in Combinatorics, Graphs and Codes and Their Applications**, Eluru, India.

Director: R. N. Mohan (NSC2004), Sir CRR College, Eluru-534007, AP, India.

Keynote Address: Graph Theory and Applications, B. D. Acharya, Dept. of Sci. and Tech., New Delhi.

Principal Speakers: B. K. Sinha, Indian Stat. Inst., Kolkata; I. H. N. Rao, Gayarthri Vidhyapith, Visakhapatnam; G. C. Rao, Andhra Univ., Visakhapatnam; N. K. Mandal, Calcutta Univ.; M. Acharya, Delhi College of Engineering.

Information: email: vjwrnmohan@sancharnet.in.

*5–6 **Workshop on Missing Data Problems**, The Fields Institute, Toronto, Ontario, Canada.

Information: http://www.fields.utoronto.ca/programs/scientific/04-05/missing-data/.

*6–11 **17th International Conference on Multiple Criteria Decision Analysis**, Whistler, British Columbia, Canada.

Description: This conference brings together researchers and practitioners who address "Multiple Criteria Decision Making".

Theme: "New Paradigms for New Decisions" emphasizes the advancements that occur in both the development and practice of decision making. Participants are particularly welcome to submit work relevant to this theme or to any other topic related to decision making with multiple criteria. This includes measurement and mathematical formulations. In addition to the conference sessions, there are social activities and numerous networking opportunities with colleagues.

Information: email: wedley@sfu.ca.

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

Topics: Papers are invited on all topics related to Euler, his work and his times, emphasizing but not limited to the 1750s.

Keynote Address: R. Thiele, Univ. Leipzig.

Workshops: On reading Euler from original sources in French and Latin.

Deadline: Titles and abstracts due to the organizers by June 15, 2004. Earlier is better.

Organizer: E. Sandifer, sandifere@wcsu.edu.

Information: http://www.EulerSociety.org.

* 17–20 **Degenerate PDEs and Singular Geometries**, University of Potsdam, Potsdam, Germany.
Workshop Topics: Recent developments in singular analysis and geometry.
Scientific Advisory Board: S. Albeverio (Bonn), B. Fedosov (Moscow), G. Grubb (Copenhagen), G. Mendoza (Philadelphia), B.-W. Schulze (Potsdam), M. Shubin (Boston), N. Teleman (Ancona).
Organizing Committee: J. Gil (Altoona), T. Krainer (Potsdam), P. Popivanov (Sofia), L. Rodino (Torino), I. Witt (Freiberg).
Information: T. Krainer, Inst. of Math., Univ. of Potsdam, P.O. Box 60 15 53, D-14415 Potsdam, Germany; email: dpsg@math.uni-potsdam.de; http://dpsg.math.uni-potsdam.de.

* 23–September 2 **International Conference-School on Geometry and Analysis Dedicated to the 75th Anniversary of Academician Yu. G. Reshetnyak**, Sobolev Institute of Mathematics, Novosibirsk, Russia.
Goal: The main goal of the meeting is to provide students and young mathematicians with a possibility to attend lectures of internationally recognized researchers in geometry, quasiconformal analysis, nonlinear potential theory, and variational problems and to present results of their own research.
Topics: Riemannian geometry in the large, Quasiconformal analysis, Nonlinear potential theory and Sobolev spaces, Variational problems and related equations.
Scientific Program: Minicourses in geometry and analysis intended for students and young mathematicians (up to five 90-min. lectures), plenary lectures (90 min.), and short communications (20 min.).
Program Committee: M. Agranovskii (Israel), J. Ball (Great Britain), A. A. Borisenko (Ukraine), V. N. Berestovskii (Russia), Yu. D. Burago (Russia), V. I. Burenkov (Great Britain), V. N. Dubinin (Russia), F. Gehring (USA), V. Gol'dshtein (Israel), J. Heinonen (USA), T. Iwaniec (USA), S. S. Kutateladze (Russia), V. I. Kuz'minov (Russia), O. Martio (Finland), V. Maz'ya (Sweden), V. M. Miklyukov (Russia), I. Nikolaev (Russia & USA), M. Shubin (USA), V. D. Stepanov (Russia), I. A. Taimanov (Russia), V. A. Toponogov (Russia), A. M. Vershik (Russia), V. V. Vershinin (Russia).
Organizers: Sobolev Institute of Mathematics and Novosibirsk State University.
Deadlines: May 1 for registration; July 15 for submission of an abstract.
Information: Contact S. Vodopyanov (chairman of the Organizing Committee), email: angeom@math.nsc.ru; http://www.math.nsc.ru/conference/ag2004/indengl.htm.

September 2004

* 7–11 **2004 Workshop on Algebraic Geometry and Physics**, Instituto Superior Tecnico (IST), Lisbon, Portugal.
Information: http://www.math.ist.utl.pt/galg/WAGP04/.

* 27–October 2 **Workshop on Elliptic Cohomology and Its Relation to the Geometry of Loop Spaces**, The Fields Institute, Toronto, Canada.
Organizing Committee: M. Ando (UIUC), H. Miller (MIT), J. Morava (Johns Hopkins).
Information: email: abrand@fields.utoronto.ca.

* 28–October 1 **48th Annual Conference of the Australian Mathematical Society**, RMIT University, Melbourne, VIC 3001, Australia.
Director: K. Horadam; email: kathy.horadam@ems.rmit.edu.au.
Information: http://www.ma.rmit.edu.au/austms04.

October 2004

* 7–8 **DIMACS Workshop on Computational Issues in Auction Design**, DIMACS Center, Rutgers University, Piscataway, New Jersey.
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/.

* 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, Canada.
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.
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/.

November 2004

* 11–12 **DIMACS Workshop on Markets as Predictive Devices**

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

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

*15–17 **Coxeter Lecture Series**, The Fields Institute, Toronto, Ontario, Canada.
Organizer: N. Hitchin, Mathematical Institute, Oxford.
Information: email: abrand@fields.utoronto.ca.

*19–23 **Workshop on Mirror Symmetry**, The Perimeter Institute, Waterloo, Canada.
Organizing Committee: D. Auroux, M. Gross, K. Hori, N. Yui.
Information: email: abrand@fields.utoronto.ca.

December 2004

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

January 2005

*10–14 **Workshop on Topological Strings**, The Fields Institute, Toronto, Ontario, Canada.
Topics: Emphasis on Gromov-Witten invariants and open-closed duality.
Organizing Committee: E. Getzler, K. Hori, S. Katz.
Information: email: abrand@fields.utoronto.ca.

February 2005

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

*21–25 **Workshop on N=1 Compactifications**, The Fields Institute, Toronto, Ontario, Canada.
Organizers: M. Douglas, K. Hori, S. Sethi.
Information: email: abrand@fields.utoronto.ca.

*28–April 1 **Workshop on String Phenomenology**, The Perimeter Institute, Waterloo, Ontario, Canada.
Organizers: J. Louis, R. Myers, G. Shiu.
Information: email: abrand@fields.utoronto.ca.

The following new announcements will not be repeated until the criteria in the next to the last paragraph at the bottom of the first page of this section are met.

April 2005

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

May 2005

*2–6 **Workshop on Gravitational Aspects of String Theory**, The Fields Institute, Toronto, Ontario, Canada.
Organizers: C. Johnson, P. Kraus, D. Marolf, A. Peet.
Information: email: abrand@fields.utoronto.ca.