
Mathematics Calendar

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

March 2003

3–7 **Computational Aspects of Algebraic Curves, and Cryptography**, Gainesville, Florida. (Feb. 2003, p. 290)

3–7 **Mini-courses in Cryptography**, Gainesville, Florida. (Feb. 2003, p. 290)

6–8 **Sixth New Mexico Analysis Seminar**, University of New Mexico, Albuquerque, New Mexico. (Jan. 2003, p. 79)

10–12 **International Conference on Mathematics and Its Applications**, Kuwait University, Kuwait. (Sept. 2002, p. 998)

10–14 **International Conference on High Performance Scientific Computing**, Hanoi, Vietnam. (Feb. 2003, p. 290)

11 **IMA Tutorial: Semidefinite Programming and Robust Optimization**, Minneapolis, Minnesota. (Sept. 2002, p. 998)

12–14 **DIMACS Working Group Meeting on Mathematical and Computational Aspects Related to the Study of the Tree of Life**, DIMACS Center, Rutgers University, Piscataway, New Jersey. (Jan. 2003, p. 79)

12–19 **IMA Workshop 5: Semidefinite Programming and Robust Optimization**, Minneapolis, Minnesota. (Sept. 2002, p. 998)

14–16 **AMS Southeastern Section Meeting**, Louisiana State University, Baton Rouge, Louisiana. (Sept. 2002, p. 998)

15–19 **Arizona Winter School on “Logic and Number Theory”**, University of Arizona, Tucson, Arizona. (Jan. 2003, p. 79)

15–20 **Recent Developments in Superstring Theory**, Banff International Research Station, Banff, Alberta, Canada. (Dec. 2002, p. 1418)

*16–17 **13th Iranian Seminar of Analysis and Its Application**, University of Isfahan, Isfahan, Iran.

Organizer: M. R. Pouryayevali.

Information: email: analysis@ui.ac.ir.

17–19 **DIMACS Workshop on Network Information Theory**, DIMACS Center, Rutgers University, Piscataway, New Jersey. (Feb. 2003, p. 290)

17–20 (REVISED) **SIAM Conference on Mathematical and Computational Issues in the Geosciences**, Radisson Hotel and Suites Austin, Austin, Texas. (Sept. 2002, p. 998)

17–June 13 **Symplectic Geometry and Physics**, Institute for Pure and Applied Mathematics, Los Angeles, California. (Oct. 2002, p. 1134)

20–22 **Spring Topology and Dynamical Systems Conference 2003**, Texas Tech University, Lubbock, Texas. (Oct. 2002, p. 1134)

21–23 **Fourth International Conference on Intelligent Data Engineering and Automated Learning (IDEAL'03)**, Hong Kong Convention and Exhibition Centre, Hong Kong, P.R. China. (Feb. 2003, p. 291)

*21–23 **Number Theory and Combinatorics in Physics**, University of Florida, Gainesville, Florida.

Conference Topics: q-Hypergeometric functions, Rogers-Ramanujan identities, exact integrable models and conformal field theory; Quantum computing; Riemann zeta-function and random matrices; Enumerative combinatorics and lattice models; Alternating sign matrices and determinants.

Plenary Speakers: G. Andrews, Penn. State Univ.; R. Calderbank, Amer. AT&T Lab. Res.; P. Di Francesco, CEA, Saclay; D. Gottesman,

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 **six 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/>.

Berkeley and Perimeter Inst. in Waterloo; B. McCoy, Stony Brook; T. Miwa, RIMS, Kyoto; J. Propp, Univ. of Wisconsin; M. Rubinstein, AIM, Palo Alto; Y. Stroganov, IHEP, Protvino; F. Y. Wu, Northeastern Univ.

Organizers: F. Garvan and K. A. Muttalib.

Information: <http://www.math.ufl.edu/~frank/qmiftconf.html>.

22–27 **Scattering and Inverse Scattering**, Banff International Research Station, Banff, Alberta, Canada. (Dec. 2002, p. 1418)

23–29 **INGO2003: Invariant Theory and Its Interactions with Related Fields**, University of Göttingen, Germany. (Jan. 2003, p. 79)

24–26 **The 2nd International Conference “Functional Spaces. Differential Operators. Problems of Mathematical Education”**, Russian People Friendship University (RPFU), Moscow, Russia. (Feb. 2003, p. 291)

24–28 **Mathematical Theory of Hyperbolic Systems of Conservation Laws**, Newton Institute of Mathematical Sciences, Cambridge, UK. (Jan. 2003, p. 79)

24–28 **Symplectic Geometry and Physics: Workshop I: Symplectic Geometry**, Institute for Pure and Applied Mathematics, UCLA, Los Angeles, California. (Oct. 2002, p. 1134)

* 24–28 **Workshop on Proof Theory and Algorithms**, International Centre for Mathematical Sciences, Edinburgh, UK.

Program: The aim of the workshop is to promote interaction between traditional proof theory and a more structural mathematical proof theory. The organisers hope to encourage the application-oriented to consider their tools more abstractedly and those with a foundational leaning to focus on possible applications.

Participation: The meeting is by invitation only (numbers are strictly limited).

Information: <http://www.ma.hw.ac.uk/icms/meetings/2003/proof/>.

27–30 **Quadrature Domains and Related Topics**, University of California, Santa Barbara. (Sept. 2002, p. 998)

27–30 **Sixth IMACS International Symposium on Iterative Methods in Scientific Computing**, University of Colorado, Denver, Colorado. (Oct. 2002, p. 1134)

28–30 **Southeast Geometry Conference**, College of Charleston, Charleston, South Carolina. (Nov. 2002, p. 1287)

29–April 3 **Commutative Algebra and Geometry**, Banff International Research Station, Banff, Alberta, Canada. (Dec. 2002, p. 1418)

* 30–April 5 **Workshop on SDEs and SPDEs: Numerical Methods and Applications**, International Centre for Mathematical Science, Edinburgh, UK.

Program: The workshop will focus on recent advances in stochastic (partial) differential equations, especially numerical methods and applications.

Deadline: The application period closes on January 10, 2003.

Information: <http://www.ma.hw.ac.uk/icms/meetings/2003/sde/>.

31–April 2 **Tutorial on Olfaction, Audition, and the Sensory Motor System**, Mathematical Biosciences Institute (MBI), The Ohio State University, Columbus, Ohio. (Feb. 2003, p. 291)

31–April 4 **Multiphase Fluid Flows and Multi-dimensional Hyperbolic Problems**, Newton Institute of Mathematical Sciences, Cambridge, UK. (Feb. 2003, p. 291)

April 2003

2–4 **DIMACS Workshop on Medical Applications in Computational Geometry**, DIMACS Center, Rutgers University, Piscataway, New Jersey. (Feb. 2003, p. 291)

3–5 **Workshop on Olfaction**, Mathematical Biosciences Institute (MBI), The Ohio State University, Columbus, Ohio. (Feb. 2003, p. 291)

4–6 **AMS Central Section Meeting**, Indiana University, Bloomington, Indiana. (Sept. 2002, p. 999)

* 5 **Announcement and Call for Participation: East Coast Computer Algebra Day 2003**, Clemson University, South Carolina.

Themes: Algebraic algorithms, hybrid symbolic-numeric computation, computer algebra systems and generic programming, mathematical communication, complexity of algebraic problems.

Organizers: S. Gao, sgao@math.clemson.edu; D. Jacobs, dpj@cs.clemson.edu.

Invited Speakers: R. Brent, Oxford Univ., England, Primitive and almost primitive trinomials over $GF(2)$; J. Johnson, Drexel Univ., USA, TBA; W. Schreiner, Johannes Kepler Univ., Austria, Distributed Maple—Lessons Learned on Parallel Computer Algebra in Distributed Environments.

Deadlines: Room reservations: February 19, 2003. Submitting poster abstracts: March 22, 2003. Travel support: February 19, 2003. Registration begins: February 1, 2003.

Information: <http://www.math.clemson.edu/~sgao/ECCAD03/>.

5–6 **CombinaTexas: Combinatorics Conference in the South-Central U.S.**, Southwest Texas State University, San Marcos, Texas. (Jan. 2003, p. 80)

5–10 **BIRS Workshop on Noncommutative Geometry**, Banff International Research Station, Banff, Alberta, Canada. (Dec. 2002, p. 1419)

6 **IMA Tutorial: Network Management and Design**, Minneapolis, Minnesota. (Sept. 2002, p. 999)

7–11 **EuroConference—Multiscale Modelling, Multiresolution and Adaptivity**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England. (Feb. 2003, p. 291)

7–11 **IMA Workshop 6: Network Management and Design**, Minneapolis, Minnesota. (Sept. 2002, p. 999)

10–13 **Louisiana Conference on Mathematical Control Theory**, Louisiana State University, Baton Rouge, Louisiana. (Oct. 2002, p. 1134)

12–13 **AMS Eastern Section Meeting**, Courant Institute, New York, New York. (Sept. 2002, p. 999)

12–17 **Quantum Mechanics on the Large Scale**, Banff International Research Station, Banff, Alberta, Canada. (Dec. 2002, p. 1419)

14–17 **Numerical Methods for Free Boundary Problems**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England. (Feb. 2003, p. 291)

17–19 **The Sixth Asian Symposium on Computer Mathematics (ASCM 2003)**, Beijing, China. (Sept. 2002, p. 999)

19–24 **Computational Fuel Cell Dynamics-II**, Banff International Research Station, Banff, Alberta, Canada. (Dec. 2002, p. 1419)

26–May 1 **The Many Aspects of Mahler’s Measure**, Banff International Research Station, Banff, Alberta, Canada. (Dec. 2002, p. 1419)

* 27–May 3 **Spring School on Analysis: Variational Analysis**, Paseky nad Jizerou, Czech Republic.

Topics: Eigenvalue optimization, nonsmooth analysis, analysis of value functions, variational analysis in metric spaces, sequential variational analysis in infinite dimensions.

Main Speakers: A. Ioffe (Technion Univ.), A. Lewis (Simon Fraser Univ.), B. S. Mordukhovich (Wayne State Univ.), J.-P. Penot (Univ. of Pau, France).

Organizers: J. Lukes, M. Fabian, J. Outrata (Charles Univ. and Acad. of Sci., Prague, Czech Republic).

Deadlines: For a reduced fee and support: January 15, 2003. Grants: Probably support for a limited number of students.

Information: email: paseky@karlin.mff.cuni.cz; <http://www.karlin.mff.cuni.cz/katedry/kma/ss/apr03/ss.htm>.

28–June 20 **Bimestre Intensivo: Microlocal Analysis and Related Subjects**, University of Torino, and Politecnico of Torino, Italy. (Feb. 2003, p. 291)

May 2003

1–3 (REVISED) **SIAM International Conference on Data Mining**, Cathedral Hill Hotel, San Francisco, California. (Sept. 2002, p. 999)

* 1–4 **Great Lakes Geometry Conference**, University of Wisconsin-Madison.

Focus: On geometric analysis and will be held in honor of E. Calabi's 80th birthday.

Invited speakers: J. P. Bourguignon (IHES); H. Bray (MIT); J. Y. Chen (UBC); T. Colding (Courant Institute); F. Hirzebruch (MPI); J. Jost (MPI); B. Lawson (SUNY at Stony Brook); Z. Lu (UC at Irvine); J. Milgram (Stanford); X. Rong (Rutgers); Y. T. Siu (Harvard); C. L. Terng (Northeastern Univ.); G. Tian (MIT); J. P. Wang (Univ. of Minnesota).

Organizers: A. Adem (Univ. Wisconsin-Madison); X. X. Chen (Univ. Wisconsin-Madison); J. Cheeger (Courant Institute); H. Glucker (Univ. of Pennsylvania).

Information: Blocks of rooms have been reserved at Friedrich Center, 1950 Willow Drive, phone: 608-231-1341 and Lowell Hall, 610 Langdon St., phone: 608-256-2621. Participants are responsible for making their own lodging arrangements.

Deadline: The deadline for making reservations is March 30, 2003.

* 2–13 **International Conference and Spring School in Conjunction with the 18th Shanks Lectures on "Noncommutative Geometry and Applications"**, Vanderbilt University, Nashville, Tennessee.

Description: The meeting will feature a lecture series by A. Connes and several minicourses by leading experts in noncommutative geometry and its applications to physics and geometry. In addition there will be a number of invited research talks and short contributions. Graduate students and postdocs are especially encouraged to participate. We expect that (partial) funding will be available.

Principal Speaker: A. Connes, IHES and College de France.

Invited Speakers: J. Bellissard, Georgia Inst. of Tech.; J. Cuntz, Univ. of Muenster; N. Higson, Penn State Univ.; G. Kasparov, Vanderbilt Univ.; A. Konechny, Hebrew Univ.; D. Kreimer, Boston Univ.; H. Moscovici, Ohio State Univ.; M. Pimsner, Univ. of Pennsylvania; M. Rieffel, UC Berkeley; J. Roe, Penn State Univ.; J. Varilly, Univ. de Costa Rica.

Organizers: D. Bisch, B. Hughes, G. Kasparov, and G. Yu.

Information: <http://atlas.math.vanderbilt.edu/~shanks/>.

3–4 **AMS Western Section Meeting**, San Francisco State University, California. (Sept. 2002, p. 999)

3–5 **First International Conference on Smarandache Geometries**, Griffith Univ., Gold Coast Campus, Australia. (Dec. 2001, p. 1368)

3–8 **Recent Advances in Algebraic and Enumerative Combinatorics**, Banff International Research Station, Banff, Alberta, Canada. (Dec. 2002, p. 1419)

5 **IMA Tutorial: Data Analysis and Optimization**, Minneapolis, Minnesota. (Sept. 2002, p. 999)

5–9 **Théorie des Nombres et Applications**, Université Hassan II of Casablanca and Université de Marrakech, Morocco. (Feb. 2003, p. 291)

5–9 **Workshop on the Auditory System**, Mathematical Biosciences Institute (MBI), The Ohio State University, Columbus, Ohio. (Feb. 2003, p. 292)

6–9 **IMA Workshop 7: Data Analysis and Optimization**, Minneapolis, Minnesota. (Sept. 2002, p. 999)

10–15 **Statistical Mechanics of Polymer Models**, Banff International Research Station, Banff, Alberta, Canada. (Dec. 2002, p. 1419)

11–16 **International Conference on General Control Problems and Applications (GCP 2003): Dedicated to the 100th Anniversary of A. N. Kolmogorov**, Tambov State University, Tambov, Russia. (Sept. 2002, p. 999)

11–18 **Conference on Topological Algebras, Their Applications, and Related Topics**, Poznan, Poland. (Sept. 2002, p. 999)

12–14 **CMEN 2003: Eleventh International Conference on Computational Methods and Experimental Measurements**, Halkidiki, Greece. (Dec. 2002, p. 1419)

15–16 **Partial Differential Equations and Computational Material Science and Solid Mechanics**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England. (Feb. 2003, p. 292)

18–21 **Second International Workshop on Computer Graphics and Geometric Modeling, CGGM'2003**, Delta Centreville Hotel, Montreal, Canada. (Jan. 2003, p. 80)

18–23 **Applied Inverse Problems: Theoretical and Computational Aspects**, Institute for Pure and Applied Mathematics, UCLA, Los Angeles, California. (Oct. 2002, p. 1134)

19–21 **OPTI 2003: Eighth International Conference on Computer Aided Optimum Design of Structures**, Detroit, Illinois. (Dec. 2002, p. 1419)

19–21 **BETECH 2003: 15th International Conference on Boundary Element Technology**, Detroit, Illinois. (Dec. 2002, p. 1419)

19–22 **Workshop on Dynamics and Bifurcations of Patterns in Dissipative Systems**, Colorado State University, Fort Collins, Colorado. (Jan. 2003, p. 80)

* 19–23 **International Turbulence Workshop**, University of Central Florida, Orlando, Florida.

Announcement: Turbulence arises in practically all flow situations that occur naturally or in modern technological systems. On the other hand, the turbulence problem poses many formidable intellectual challenges and occupies a central place in modern nonlinear mathematics and statistical physics. The American Mathematical Society has listed the turbulence problem as one of the four top unsolved problems of mathematics. But, deep problems still remain to challenge conventional methodologies and concepts. There is also an ongoing need to bridge the gap between the grand theories of idealized turbulence and the harsh realities of practical applications. The turbulence problem continues to command the attention of physicists, applied mathematicians and engineers.

The workshop program envisages introductory overviews, specialist talks, contributed talks, as well as group discussions (one every day) to insure a positive experience for graduate students. We propose to bring out a document containing these summaries as well as overview talks for the benefit of the turbulence research community at large. We propose also to incorporate several intersession breaks in the Workshop program to provide excellent opportunities for graduate students and junior researchers to interact with leading researchers in the subject.

Invited Speakers: E. Bodenschatz (Cornell), G. Carnevale (Scripps Institution), P. Constantin (Univ. Chicago), G. Eyink (Univ. Arizona), G. Falkovich (Weizmann Institute), T. Gatski (NASA Langley), J. Gibbon (Imperial College), S. Girimaji (Texas A&M), J. Gollub (Haverford), S. Grossmann (Univ. Marburg), J. Herring (NCAR), D. Holm (Los Alamos), F. Hussain (Univ. Houston), S. Kida (Nagoya Univ.), J. Krommes (Princeton), M. Lesieur (Grenoble), D. Montgomery (Dartmouth), K. Ohkitani (Kyoto Univ.), J. Riley (Univ. Washington), S. Sarkar (Univ. Calif. San Diego), E. Sharon (Univ. Texas Austin), S. Shkoller (Univ. Calif. Davis), E. Titi (Univ. Calif. Irvine), Z. Warhaft (Cornell), V. Yakhot (Boston Univ.).

Information: Contributed oral presentations as well as participation in the workshop are invited. One-page abstracts (preferably by email) will be accepted until March 14, 2003. Acceptance of abstracts

will be notified by April 1, 2003. Limited financial assistance may be available for graduate students and junior researchers. Please send all inquiries regarding the Workshop to: S. Shivamoggi, Dept. of Math., Univ. of Central Florida, Orlando, FL 32816-1384; tel: 407-823-2754; email: ijmms@pegasus.cc.ucf.edu.

19-23 **Symplectic Geometry and Physics: Workshop II: Chaotic Dynamics and Transport**, Institute for Pure and Applied Mathematics, UCLA, Los Angeles, California. (Oct. 2002, p. 1134)

19-24 **The V International Conference "Algebra and Number Theory: Modern Problems and Applications"**, Tula State Pedagogical University, Tula, Russia. (Feb. 2003, p. 292)

20-23 **31st Annual Canadian Operator Algebra Symposium**, UNB, Fredericton, New Brunswick, Canada. (Dec. 2002, p. 1419)

20-24 **31st Annual Canadian Operator Theory and Operator Algebras Symposium**, UNB, Fredericton, New Brunswick, Canada. (Sept. 2001, p. 910)

21-24 **Dynamic Systems and Applications**, Atlanta, Georgia. (Dec. 2002, p. 1419)

21-25 **Logic and Mathematics: Connections and Interactions**, University of Illinois at Urbana-Champaign. (Oct. 2002, p. 1134)

23-26 **International Conference on Numerical Analysis & Computational Mathematics (NACoM-2003)**, Anglia Polytechnic University (APU), Cambridge, United Kingdom. (Feb. 2003, p. 292)

24-29 **Constraint Programming, Belief Revision and Combinatorial Optimization**, Banff International Research Station, Banff, Alberta, Canada. (Dec. 2002, p. 1420)

24-30 **Conference in Number Theory in Honour of Professor H. C. Williams**, The Banff Center, Banff, Alberta, Canada. (Feb. 2003, p. 292)

25-29 **Dynamical Systems, Denton 2003**, University of North Texas, Denton, Texas. (Nov. 2002, p. 1287)

* 25-31 **Workshop on Singularity Theory**, International Centre for Mathematical Science, Edinburgh, UK.

Program: The major aims of the workshop are to disseminate new results and ideas, to foster new developments within singularity theory, and to seek new areas of application and interaction.

Topics: Complex and real singularities, study of discriminant spaces and Vassiliev type variations, singularities in symplectic and contact spaces, singularities in differential geometry, computer packages on singularities.

Participation: The meeting is by invitation only (numbers are strictly limited).

Information: <http://www.ma.hw.ac.uk/icms/meetings/2003/singth/>.

26-30 **SampTA03 (Sampling Theory and Applications 2003)**, Strobl, Salzburg, Austria. (Sept. 2002, p. 1000)

27-31 (REVISED) **SIAM Conference on Applications of Dynamical Systems**, Snowbird Ski and Summer Resort, Snowbird, Utah. (Sept. 2002, p. 1000)

28-30 **Lattices, Universal Algebra and Applications**, Centro de Algebra da Universidade de Lisboa, Lisboa, Portugal. (Oct. 2002, p. 1134)

28-31 **ACMS 14th Biennial Conference**, Point Loma Nazarene University, San Diego, California. (Jan. 2003, p. 81)

28-31 **Quantum and Reversible Computation**, State University of New York at Stony Brook, Stony Brook, New York. (Jan. 2003, p. 81)

* 29-June 1 **6th Panhellenic Conference in Geometry**, Limassol, Cyprus.

Description: The 6th Panhellenic Conference in Geometry will take place in Limassol, Cyprus, from May 29 to June 1, 2003. The

main topics include Riemannian, symplectic and Poisson geometry, integrable systems and Lie groups. Deadline for registration is February 29 and for abstracts, March 31.

Information: More information and online registration on the website of the conference, <http://www.ucy.ac.cy/~geom/>, or by email to geom@ucy.ac.cy.

30-June 1 **Annual Meeting of the Canadian Society for History and Philosophy of Mathematics (CSHPM)**, Dalhousie University, Halifax, Nova Scotia, Canada. (Feb. 2003, p. 292)

* 30-June 1 **Midwest Geometry Conference 2003**, Washington University, St. Louis, Missouri.

Topics: Three-manifolds, hyperbolic geometry and geometric group theory; Geometry, analysis and probability on discrete groups; Minimal submanifolds; Surface immersions in space.

Program: Each half-day session will be devoted to a topic. A list of invited speakers is on the conference website given below.

Supporters: The NSF and Washington University. Support is available for transportation and lodging for all registered participants. A registration form is available on the conference website: <http://www.math.wustl.edu/MGC2003/>.

Organizers: R. Roberts, email: roberts@math.wustl.edu; R. Feres, email: feres@math.wustl.edu; Q.-S. Chi, email: chi@math.wustl.edu; G. Jensen, email: gary@math.wustl.edu.

Information: The conference website provides more information and more details about the conference. If you have additional questions, please contact the conference secretary, T. Schneider, email: terri@math.wustl.edu or one of the organizers.

31-June 5 **Symmetry and Bifurcation in Biology**, Banff International Research Station, Banff, Alberta, Canada. (Dec. 2002, p. 1420)

June 2003

1-4 **2003 ASL Annual Meeting**, University of Illinois at Chicago, Chicago, Illinois. (Sept. 2002, p. 1000)

1-6 **International Conference on Group Theory: Combinatorial, Geometric, and Dynamical Aspects of Infinite Groups**, Gaeta, Italy. (Sept. 2002, p. 1000)

* 1-7 **Spring School in Analysis: Function Spaces and Applications**, Paseky nad Jizerou, Czech Republic.

Topics: Function spaces, integral inequalities, Schrödinger operator, rearrangement estimates, Sobolev inequalities.

Main Speakers: I. Verbitsky (Univ. of Missouri), L.-I. Hedberg (Univ. of Linköping, Sweden).

Organizers: J. Lukes, L. Pick (Charles Univ., Prague, Czech Republic).

Deadlines: For a reduced fee and support: February 15, 2003. Grants: Probably support for a limited number of students.

Information: email: pasejune@karlin.mff.cuni.cz; <http://www.karlin.mff.cuni.cz/katedry/kma/ss/jun03/ss.htm>.

* 1-30 **Statistical Methods in Microarray Analysis**, Institute for Mathematical Sciences, National University of Singapore, Singapore.

Organizing Committee: Chair: T. Speed (Univ. of California at Berkeley, and Walter & Eliza Hall Inst. of Medical Research, Australia); Co-chairs: M.-Y. Leung (Univ. of Texas at San Antonio) and L. Zhang (National Univ. of Singapore).

Members: A. Kuk (National Univ. of Singapore), A. Owen (Stanford Univ.), S. Richardson (Imperial College), and W. H. Wong (Harvard Univ.).

Program: The development and applications of the microarray technology have given rise to many problems that need to be addressed by the collective knowledge and skills of the mathematical and biological scientists. This program aims to study the many new statistical methods tailored to microarrays that is being developed and adapted in the last few years. Its main objective is to bring together a group of leading researchers in microarrays to discuss among themselves as well as with local researchers their

current work and exchange ideas for addressing the main statistical challenges in the future.

Format: The program will consist of a tutorial on background material and a workshop at research level, in addition to seminars and informal discussions. The tutorial will be held from June 16 to 19, 2003, and the workshop from June 23 to 27, 2003.

Registration: Registration forms for the tutorial/workshop are available at <http://www.ims.nus.edu.sg/Programs/microarray/index.htm> and should be received at least one month before commencement of each activity. Registration is free. Membership is not required for participation.

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

Contacts: For general enquiries, please send email to ims@nus.edu.sg, while for enquiries on scientific aspects of the program, please email Ming-Ying Leung at MLEung@utsa.edu or L. Zhang at matzlx@nus.edu.sg. More information is available at <http://www.ims.nus.edu.sg/Programs/microarray/index.htm>.

2-4 International Workshop on Computer Algebra Systems and Their Applications, CASA'2003, Saint Petersburg, Russian Federation. (Jan. 2003, p. 81)

2-4 Technical Session on Computer Graphics, TSCG'2003, Saint Petersburg, Russian Federation. (Jan. 2003, p. 81)

* **2-6 Conference on Representation Theory for Algebraic Groups**, University of Aarhus, Aarhus, Denmark.

Sponsor: Danish Natural Science Research Council.

Information: P. Abrahamsen, Dept. of Math., Univ. of Aarhus, Ny Munkegade, DK8000 Aarhus C, Denmark.

2-6 Symplectic Geometry and Physics: Workshop III: Symplectic Geometry and String Theory, Institute for Pure and Applied Mathematics, UCLA, Los Angeles, California. (Oct. 2002, p. 1135)

5-8 Call for Papers: Hawaii International Conference on Statistics and Related Fields, Sheraton Waikiki Hotel, Honolulu, Hawaii. (Jan. 2003, p. 81)

* **7-12 Applicable Harmonic Analysis**, Banff International Research Station, Banff, Alberta, Canada.

Organizers: R. Jia (Univ. Alberta), S. Riemenschneider (West Virginia Univ.), M. Wickerhauser (Washington Univ.).

Information: <http://www.pims.math.ca/birs/>.

* **8-15 41st International Symposium on Functional Equations**, de la Motte Castle, Noszvaj, Hungary.

Topics: Functional equations and inequalities; mean values; functional equations on algebraic structures; Hyers-Ulam stability; regularity properties of solutions; conditional functional equations; iteration theory; functional-differential equations; applications of the above, in particular to the natural, social, and behavioral sciences.

Organizer: Z. Páles, Inst. of Math. and Inform., Univ. of Debrecen, Pf.12, H-4010 Debrecen, Hungary (pales@math.klte.hu).

Scientific Committee: J. Aczél (Honorary Chair; Waterloo, ON, Canada), Z. Daróczy (Debrecen, Hungary), R. Ger (Katowice, Poland), J. Rätz (Chair; Bern, Switzerland), L. Reich (Graz, Austria), and A. Sklar (Chicago, IL, USA).

Information: Participation at these annual symposia is by invitation only. Those wishing to be invited should send details of their interest and, preferably, publications (paper copies) and/or manuscripts, and their postal and email addresses to: Professor Jürg Rätz, Math. Inst., Univ. Bern, Sidlerstr. 5, CH-3012 Bern, Switzerland (math@math-stat.unibe.ch) before April 7, 2003. A short history of the symposia can be found on the websites <http://riesz.math.klte.hu/~isfe/> and <http://riesz.math.klte.hu/~isfe41/>.

9-13 Workshop on the Sensory Motor System, Mathematical Biosciences Institute (MBI), The Ohio State University, Columbus,

Ohio. (Feb. 2003, p. 292)

* **9-14 29th International Summer School "Application of Mathematics in Engineering and Economics"**, Sozopol, Bulgaria.

Organizer: Faculty of Applied Mathematics and Informatics, Technical University of Sofia, Sofia, Bulgaria.

Chairman: M. Marinov (chair); L. Karandzhulov (vice chair).

Organizing Committee: M. Hardalov, V. Pasheva, K. Peeva, I. Petrov, K. Prodanova, M. Slavkova, E. Varbanova, G. Venkov.

Description: The program of the 29th Summer School will focus on the present purpose and results, and future perspectives of application of mathematics in different fields of engineering and economics.

Deadlines: March 31, 2003: abstract submission; April 30, 2003: declaration of participation; May 15, 2003: reservation form; October 1, 2003: full paper submission.

Topics: Mathematical analysis and application, Differential equations and application, Geometry and topology, Probability and statistics, Numerical methods and operations research, Mathematical modelling and simulation, Information technologies, Education in applied mathematics. There will be two types of lecturers: the first type could be considered as an introduction in large research domains, and the second type will be authors' contributions.

Submission: Potential participants are invited to submit a full paper describing their work to be presented at the Summer School. The submitted papers will be reviewed by members of the scientific committee for presentation and will be published in the proceedings volume of the Summer School.

Information: Details available from: <http://www.tu-sofia.acad.bg/FPMI/school29/amee03.html>.

10-14 Fifth Dublin Differential Equations Conference, Dublin City University, Dublin, Ireland. (Feb. 2003, p. 292)

10-14 Groups and Group Rings X, Wisla, Poland. (Feb. 2003, p. 292)

10-14 XIX Rolf Nevanlinna Colloquium, University of Jyväskylä, Jyväskylä, Finland. (Dec. 2002, p. 1420)

* **11-14 Curvature in Geometry, in Honour of Prof. L. Vanhecke**, Grand Hotel Tiziano e dei Congressi, Lecce, Italy.

Information: <http://www.diffgeo.unile.it>.

* **11-16 Conference on Partial Differential Equations and Applications in Celebration of Aizik I. Volpert's 80th Birthday**, Technion-I.I.T., Haifa, Israel.

Information: See <http://www.math.technion.ac.il/~shafir/volpert.html>.

13-22 Poisson Geometry, Deformation Quantisation and Group Representations (PQR2003), Universersité Libre de Bruxelles, Belgium. (Jan. 2003, p. 82)

* **14-19 Integration on Arc Spaces, Elliptic Genus and Chiral de Rham Complex**, Banff International Research Station, Banff, Alberta, Canada.

Organizers: M. Kapranov (Univ. Toronto), A. Libgober (Univ. Illinois at Chicago), F. Loeser (École Normale Supérieure).

Information: <http://www.pims.math.ca/birs/>.

* **15-22 Functional Analysis VIII**, IUC, Dubrovnik, Croatia.

Topics: Operator theory, representation theory, probability theory, harmonic analysis.

Organizer: Department of Mathematics, Univ. of Zagreb, Croatia.

Deadline: For submitting an abstract: March 1, 2003.

Information: <http://www.math.hr/~congress/Dubrovnik03/>.

16-20 2003 SIAM Annual Meeting, Queen Elizabeth Hotel, Montreal, Quebec, Canada. (Sept. 2002, p. 1000)

16-21 International Conference: Kolmogorov and Contemporary Mathematics, Moscow, Russia. (Sept. 2002, p. 1000)

- 17–21 **Fourth Geoffrey J. Butler Memorial Conference**, University of Alberta, Edmonton, Alberta, Canada. (Sept. 2002, p. 1000)
- 17–24 **Furstenfest—Conference on Probability in Mathematics in Honor of H. Furstenberg**, Jerusalem and Beer Sheva, Israel. (Feb. 2003, p. 293)
- 18–21 **First Joint International Meeting between the American Mathematical Society and the Real Sociedad Matemática Española**, Seville, Spain. (Sept. 2002, p. 1000)
- *18–28 **Instructional Conference in the Mathematical Analysis of Hydrodynamics**, International Centre for Mathematical Science, Edinburgh, UK.
Program: The aim of this 10-day course is to instruct young mathematicians in topics involving mathematical analysis of hydrodynamics. The conference takes the form of a series of courses (each course being made up of between two and four 1-hour lectures), the courses being structured so that the more basic material is presented during the first week, leading to more advanced lectures in the second week. The courses are supplemented by single research-level talks on recent advances.
Topics: Euler equations, quasi-geostrophic equations, statistical hydrodynamics, related models, mathematical aspects of physical turbulence, water waves.
Deadline: Registration closes on February 3, 2003.
Information: Please register using the website <http://www.ma.hw.ac.uk/icms/meetings/2003/hydro/>.
- 19–26 **Some Intermediate Questions of Model Theory and Universal Algebra: ERLOGOL-2003**, Novosibirsk State Technical University, Novosibirsk, Siberia/Russia. (Dec. 2002, p. 1420)
- 21–24 **Mathematics of Finite Elements and Applications: Satellite Conference at Brunel University**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England. (Feb. 2003, p. 293)
- *21–26 **Point Processes—Theory and Applications**, Banff International Research Station, Banff, Alberta, Canada.
Organizers: P. Guttoro (Univ. Washington), B. Smith (Dalhousie Univ.).
Information: <http://www.pims.math.ca/birs/>.
- 22–25 **IEEE Symposium on Logic in Computer Science 2003: Call for Workshop Proposals**, Ottawa, Ontario, Canada. (Dec. 2002, p. 1420)
- 23–25 **SIAM Conference on Mathematics for Industry: Challenges and Frontiers**, The Metropolitan Hotel, Toronto, Ontario, Canada. (Nov. 2002, p. 1287)
- 23–27 **15th International Conference on Formal Power Series and Algebraic Combinatorics**, Linköping University, Vadstena, Sweden. (Jan. 2003, p. 82)
- 23–27 **Hyperbolic Models in Astrophysics and Cosmology**, Newton Institute of Mathematical Sciences, Cambridge, UK. (Jan. 2003, p. 82)
- 23–27 **Workshop on Extremal Graph Theory (Miklos Simonovits Is 60)**, Lake Balaton, Hungary. (Oct. 2002, p. 1135)
- 23–27 **Workshop on Harmonic Analysis and Partial Differential Equations**, Puerto Vallarta, Mexico. (Oct. 2002, p. 1135)
- 23–28 **Tools for Mathematical Modelling**, Saint-Petersburg State Technical University, Saint-Petersburg, Russia. (Nov. 2002, p. 1287)
- 23–29 **Symmetry in Nonlinear Mathematical Physics**, Institute of Mathematics, Kiev, Ukraine. (Feb. 2003, p. 293)
- 24–26 **Fluid Structure Interaction 2003**, Cadiz, Spain. (Dec. 2002, p. 1420)
- 24–27 **Day on Diffraction-2003 (DD'03)**, St. Petersburg Univ., St. Petersburg, Russia. (Oct. 2002, p. 1135)
- *24–28 **Nonlinear Modeling and Control, an International Seminar**, Nayanova University, Samara, Russia.
Purpose: The seminar's aim is the exchange of information about recent trends in mathematical modeling and control theory and their applications to various problems in physics, chemistry, biology, medicine, economics, and industrial concerns.
Call for Papers: Original papers related to the aim of the seminar are solicited. Potential speakers should submit an abstract before April 30. The cover page should contain title, affiliation, and email address of each author. Electronic submissions in \LaTeX are encouraged.
Sponsors: Samara Municipal Nayanova Univ., Samara State Univ., Russian Academy of Natural Sciences, International Federation of Nonlinear Analysts, Univ. College Cork (Ireland).
Organizers: A. Pokrovskii (Cork, Ireland), V. Sobolev (Samara, Russia).
Information and Submission: V. Sobolev (sable@ssu.samara.ru) or H. Gorelova (seminar coordinator, e-mail: gorhel@ssu.samara.ru); Nayanova Univ., Molodogvardeiskaya 196, Samara 443001, Russia.
- *25–28 **Current Geometry 2003**, Palazzo Serra di Cassano, Naples, Italy.
Topics: Current Geometry 2003, the IV edition of the international conference on problems and trends of contemporary geometry.
Invited Speakers (preliminary list): E. Arbarello (Rome), M. Berger (Paris), Ph. Griffiths (Princeton), V. Kac (Boston), K. O'Grady (Rome), C. Procesi (Rome), J. Stasheff (Chapel Hill), A. Vinogradov (Salerno).
Scientific Committee: E. Arbarello (Rome), F. Baldassarri (Padova), U. Bruzzo (Trieste), C. Ciliberto (Rome), A. Collino (Torino), M. Cornalba (Pavia), C. De Concini (Rome), B. Dubrovin (Trieste), L. van Geemen (Pavia), Ph. Griffiths (Princeton), V. Kac (Boston), K. O'Grady (Rome), C. Procesi (Rome), J. Stasheff (Chapel Hill), A. Vinogradov (Salerno).
Sponsors: Istituto Italiano per gli Studi Filosofici, Naples; Università degli studi di Salerno; Gruppo Nazionale per le Strutture Algebriche, Geometriche, e le loro Applicazioni; Dipartimento di Matematica ed Applicazioni dell'Università degli studi di Napoli "Federico II".
Organizing Committee: A. De Paris (Naples), G. Rotondaro (Naples), G. Sparano (Salerno), A. Vinogradov (Salerno), R. Vitolo (Lecce).
Deadline: May 15, 2003.
Information: <http://www.diffiety.ac.ru/conf/curgeo03/> or <http://www.diffiety.org/conf/curgeo03/>; email: curgeo@diffiety.org or curgeo@diffiety.ac.ru; surface mail: Prof. A. M. Vinogradov, Dipartimento di Matematica e Informatica, Università di Salerno, Via Salvador Allende, 84081 Baronissi (SA), Italy; fax: +39 089 965226; phone: +39 089 965395.
- 25–28 (REVISED) **Mathematics in XXI Century**, Novosibirsk University, Novosibirsk, Russia. (Sept. 2002, p. 1000)
- *25–30 **2003 International Workshop on Small Sets in Analysis**, Center for Mathematical Sciences, Technion-Israel Institute of Technology, Haifa, Israel.
Brief Description: In recent years there has developed a growing interest in the role of small sets in (infinite-dimensional) analysis. Such sets can be small in several senses, e.g., measure-theoretic (Gauss null sets, Haar null sets), topological (sets of the first Baire category), a combination of both (Gamma-null sets), and metric (sigma-porous sets). These concepts have found application in many areas of analysis, e.g., approximation theory, the calculus of variations, convexity, differentiability theory, Fourier analysis, the geometry of Banach spaces, nonlinear analysis, and optimization. The purpose of this workshop is to bring together researchers to present and discuss recent developments and to assess future directions.
Organizing Committee: E. Matouskova, S. Reich, and A. Zaslavski.
Participants: Y. Benyamini, J. Borwein, A. Cellina, S. Cobzas, M. Csornyei, B. Dacorogna, F. De Blasi, R. Deville, T. Dominguez Benavides, V. Fonf, A. Ioffe, S. Konyagin, J. Lindenstrauss, G. Lopez

Acedo, R. Lucchetti, P. Mankiewicz, J. Myjak, G. Pianigiani, D. Preiss, J. Revalski, A. Rubinov, S. Solecki, T. Szarek, J. Tiser, L. Zajicek, and M. Zeleny.

Information: S. Schur (workshop coordinator), Dept. of Math., Technion-Israel Inst. of Tech., 32000 Haifa, Israel; email: cms@math.technion.ac.il.

*28-July 3 **Joint Dynamics**, Banff International Research Station, Banff, Alberta, Canada.

Organizers: D. Lind (Univ. Washington), D. Rudolph (Univ. Maryland), K. Schmidt (Univ. Vienna), B. Solomyak (Univ. Washington).

Information: <http://www.pims.math.ca/birs/>.

*29-July 4 **BCC19: 19th British Combinatorial Conference**, University of Wales, Bangor, North Wales, UK.

Description: The British Combinatorial Conference is held every two years at one of the UK universities. All areas of combinatorics are covered. The conference has been invited to Bangor in 2003 to honour the 100th anniversary of the birth of D. E. Littlewood, professor of mathematics at Bangor from 1948 until 1970.

Organizers: The British Combinatorial Committee; local organizer: C. Wensley.

Invited Speakers: L. Andersen (Aalborg), S. Blackburn (Royal Holloway), A. Borovik (UMIST), P. Hell (Simon Fraser), D. Jungnickel (Augsburg), I. Leader (Cambridge), A. Ram (Wisconsin-Madison), A. Street (Queensland), G. Ziegler (TU, Berlin). See the website for titles and abstracts. The invited speakers will contribute survey articles to the conference book *Surveys in Combinatorics, 2003*, London Math. Soc. Lecture Note Series, published by Cambridge Univ. Press, which will be distributed to all participants at the conference.

Call for Papers: Contributed talks of 15 minutes in length are invited. See the website for submission details.

Financial Support: The London Mathematical Society.

Information: email: bcc2003@informatics.bangor.ac.uk, or visit <http://www.informatics.bangor.ac.uk/public/mathematics/bcc2003/>.

*29-July 19 **IAS/Park City Mathematics Institute 13th Annual Summer Session**, Park City, Utah.

Description: Annual 3-week Summer Session for researchers, graduate students, undergraduate students, high school teachers, college teaching faculty, and math education researchers.

Topic: Mathematics research topic for 2003: Harmonic analysis and partial differential equations.

Organizers: M. Christ, C. Kenig, W. Schalm.

Deadline and Support: Application deadline is February 15, 2003. Financial support is available.

Information: Program information and applications are available at <http://www.ias.edu/parkcity/>.

July 2003

1-December 31 **Mathematics and Computation in Imaging Sciences and Information Processing**, Institute for Mathematical Sciences (IMS), National University of Singapore, Singapore. (Dec. 2002, p. 1420)

*1-4 **International T. I. Amanov Memorial Conference "Theory of Functions, Functional Analysis and Applications"**, Shakarim Semipalatinsk State University, Semipalatinsk, Kazakhstan.

Description: The conference honors T. I. Amanov (25.8.1923-21.6.1978), corresponding member of Academy of Science (AS) of the Kazakh Republic, a well-known mathematician all over the world for his significant contribution to the theory of functional spaces.

Workshop Topics: Function theory; Functional analysis; Differential equations and the equations of mathematical physics; Algebra, geometry and mathematical logics; Fundamental issues in the study of physical processes; Computational mathematics and its

applications; Theory and the contemporary technology of teaching the basics of physical and mathematical sciences.

Speakers: S. M. Nikolski (Russia), O. V. Besov (Russia), Yu. G. Reshetnyak (Russia), V. N. Burenkov (England), U. M. Sultangazin (Kazakhstan), M. O. Otelbaev (Kazakhstan), A. A. Zhensykbayev (Kazakhstan), N. K. Bliev (Kazakhstan), S. K. Vodopyanov (Russia), G. A. Kalyabin (Russia).

Deadlines: Registration forms deadline: February 1, 2003. Electronic version of abstracts (up to 5 pages) deadline: March 1, 2003.

Registration Fee: \$10 for participants from Kazakhstan and CIS (in KZT according to exchange rate of NBRK) and \$50 for participants from other countries; should be paid upon registration.

Information: M. A. Prmagambetovich (executive secretary), Semipalatinsk State Univ., 1 Tanirbergenov Street, Semipalatinsk, 490035 Kazakhstan; email: amanov@semgu.kz; phone/fax: (3222) 458466, (3222) 665764; <http://www.semgu.kz/amanov.html>.

1-5 **EuroConference VBAC 2003: Dedicated to Andrei Tyurin**, Porto, Portugal. (Feb. 2003, p. 293)

1-10 **PI-Rings: Structure and Combinatorial Aspects (Summer Course)**, Bellaterra, Barcelona, Spain. (Jan. 2003, p. 82)

*3-8 **Wavelets and Splines**, Euler International Mathematical Institute, St. Petersburg, Russia.

Topics: Wavelets and wavelet methods, signal analysis and processing, wavelet bases and frames, spline theory and its applications, related topics in approximation theory and functional analysis.

Organizers: St. Petersburg Dept. of Steklov Inst. of Math., St. Petersburg State Univ.

Program Committee: A. Averbuch (Israel), O. Davydov (Germany), Yu. Demjanovich (Russia), R. DeVore (USA), L. Gori (Italy), D. Leviatan (Israel), V. Malozemov (Russia), I. Novikov (Russia), A. Petukhov (USA), V. Zheludev (Israel), V. Zhuk (Russia).

Deadline: Deadline for registration is March 1, 2003.

Information: ws@imi.ras.ru; <http://www.pdmi.ras.ru/EIMI/2003/ws/>.

*5-10 **Mathematical Biology**, Banff International Research Station, Banff, Alberta, Canada.

Organizers: L. Keshet (UBC), S. Levin (Princeton), M. Lewis (Univ. Alberta).

Information: <http://www.pims.math.ca/birs/>.

6-12 **Journées Arithmétiques XXIII**, Universität Graz, Graz, Austria. (Jan. 2003, p. 82)

*7-10 **Announcement and Call for Papers: Fourth Panhellenic Logic Symposium**, Thessaloniki, Greece.

Description: The Panhellenic Logic Symposium is a biannual scientific event established in 1997. It is open to researchers from all countries who work on logic broadly conceived. The language of the symposium is English. The Fourth Panhellenic Logic Symposium will be hosted at the Conference Center of the International Fair of Thessaloniki, located downtown in close proximity to the University campus. The scientific program of the symposium will consist of hour-long invited talks, tutorials, and presentations of accepted papers.

Original papers on all aspects of logic are solicited. Authors are invited to submit an extended abstract of at most five pages. In addition, the contact author of each paper should send a cover page with his/her addresses (postal and email) and a statement classifying the paper in one of the following areas: mathematical logic, set theory, logic in computer science, history of logic, philosophy of logic, other logic related area (specify).

Information: L. Kirousis, Dept. of Computer Engineering and Informatics, University of Patras, University Campus, GR-265 04 Patras, Greece; phone: +30 2610-99 7702; fax: +30 2610-99 1909; email: kirousis@ceid.upatras.gr.

- 7-11 **ICIAM 2003, 5th International Congress on Industrial and Applied Mathematics**, Sydney, Australia. (Sept. 2002, p. 1000)
- * 7-11 **International Conference on Algebraic and Topological Methods in Non-Classical Logics**, Tbilisi State University, Tbilisi, Georgia.
Information: See the conference website <http://piscopia.nmsu.edu/morandi/TbilisiConference/>.
- 7-18 **Discrete Dynamical Systems and Their Applications to Population Dynamics**, University of Wyoming, Laramie, Wyoming. (Feb. 2003, p. 293)
- * 7-18 **SMS-NATO ASI: Structural Theory of Automata, Semigroups, and Universal Algebra**, Université de Montréal, Canada.
Program: Completeness of automata; quantum finite automata; algebraic classifications of regular tree languages; profinite semigroups in computer science; definability, decidability, complexity in semigroup varieties and varieties of universal algebra.
Invited Speakers: J. Almeida, J. Dassow, R. Freivalds, J. Jezek, A. Krokhin, V. B. Kudryavtsev, A. Letichevsky, R. McKenzie, I. Rosenberg, L. N. Shevrin, M. Steinby, M. V. Volkov.
Organizers: J. Almeida, A. Korkhin, V.B. Kudryavtsev, I. Rosenberg, G. Sabidussi, Y. Saint-Aubin.
Application Deadline: February 21, 2003.
Information: <http://www.dms.umontreal.ca/sms/>; email: sms@dms.umontreal.ca.
- 8-11 **Applications of Plausible, Paradoxical, and Neutrosophical Reasoning for Information Fusion (FUSION 2003)**, Radisson Hotel, Cairns, Queensland, Australia. (Jan. 2003, p. 82)
- 9-12 **2003 Summer Conference on Topology and Its Applications**, Howard University, Washington, DC. (Jan. 2003, p. 82)
- * 12-17 **Perspectives in Differential Geometry**, Banff International Research Station, Banff, Alberta, Canada.
Organizers: R. Schoen (Stanford), G. Tian (MIT), J. Chen (UBC).
Information: <http://www.pims.math.ca/birs/>.
- 12-17 **What Comes beyond the Standard Model? Symmetries beyond the Standard Model**, Hotel Histron, Portoroz, Slovenia. (Jan. 2003, p. 82)
- 14-15 **Mathematics of Computation and Approximation: A Conference in Honour of the 65th Birthday of Professor Ian Sloan**, University of New South Wales, Sydney, Australia. (Nov. 2002, p. 1287)
- 14-18 (NEW DATE) **International Conference on Algebras, Modules and Rings**, University of Lisbon, Lisbon, Portugal. (Oct. 2002, p. 1135)
- 14-18 **Wavelet Theory and Applications: New Directions and Challenges**, Institute for Mathematical Sciences, National University of Singapore, Singapore. (Dec. 2002, p. 1421)
- * 14-26 **Summer School on Applications of Advanced Mathematical and Computational Methods to Atmospheric and Oceanic Problems**, National Center for Atmospheric Research (NCAR), Boulder, Colorado.
Brief Description: The purpose of this interdisciplinary summer school is to bring together graduate students and young researchers on one hand and, on the other hand, specialists of meteorology and oceanography and applied mathematicians interested in geophysical fluid dynamics (GFD). It is hoped in this way, firstly, to initiate or further develop the communication and interactions between specialists of different fields working on diverse frontiers of GFD and to discuss new ideas and methods that will advance the field in the next decade. Secondly, to equip the students in these fields with the necessary tools and to bring them to the frontiers of this challenging and important field. The lectures will take place at the National Center for Atmospheric Research (NCAR), located in Boulder, Colorado, in a scenic place at the foot of the majestic Rocky Mountains.
Topics: The summer school consists of background pedagogical lectures in the mornings, invited lectures and informal discussions in the afternoons. The background pedagogical lectures cover topics in mathematical methods (nonlinear systems, functional analysis, asymptotic techniques, and stochastic methods), computational methods (multilevel modeling and adaptive methods, implicit methods, and Lagrangian methods), and science problems (atmospheric basics, Hamiltonian fluid dynamics, reduced systems, oceanography, and turbulence). The invited talks as well as the informal discussions will cover several important scientific issues in the atmospheric and oceanic sciences; both state-of-the-art knowledge and future directions will be addressed.
Coordinators: R. Temam (Indiana Univ.), J. Tribbia (NCAR), S. Wang (Indiana Univ.)
Information: Both students and young scientists in the relevant fields are encouraged to participate, and partial financial support is available. For information, contact one of the coordinators or B. Hansford at NCAR (barbm@ucar.edu), or visit <http://php.indiana.edu/~iuisc/mcao.htm>.
- * 15-19 **Complex Hyperbolic Geometry**, CIRM, Luminy, France.
Description: Following the conferences (including AMS Special Sessions) on complex hyperbolic geometry and related topics in Oklahoma in 1994, Okayama in 1998, and Washington in 2000, we will hold a similar conference in Luminy from July 15 to July 19, 2003.
Workshop Topics: Geometry of the Heisenberg group, discrete groups of complex hyperbolic isometries and their deformations, real hypersurfaces and polyhedra, generalization to other rank-1 spaces.
Organizers: E. Falbel, Univ. Pierre et Marie Curie, Paris, France; J. R. Parker, Univ. of Durham, England.
- 15-19 **SIAM Conference on Applied Linear Algebra**, William and Mary College, Williamsburg, Virginia. (Sept. 2002, p. 1001)
- * 19-24 **Differential Invariants and Invariant Differential Equations**, Banff International Research Station, Banff, Alberta, Canada.
Organizers: N. Kamran (McGill), P. Olver (Univ. Minnesota).
Information: <http://www.pims.math.ca/birs/>.
- * 20-25 **XV Latinamerican Colloquy of Algebra**, Instituto de Matemáticas, Universidad Nacional Autónoma de México, México City, México.
Information: Contact: C. Geiss, christof@math.unam.mx, or visit <http://cla.matem.unam.mx/>.
- * 20-26 **Hodge Theory in a New Century: A Euro Conference Celebrating the Centenary of Sir William Hodge (1903-1975)**, International Centre for Mathematical Science, Edinburgh, UK.
Program: Hodge theory was described by Hermann Weyl as “one of the landmarks in the history of mathematics in the 20th century.” It is fitting that a meeting to celebrate Sir William Hodge’s achievements should take place in the city of his birth and in the university where he received his undergraduate education.
The general theme will be the influence and development of Hodge theory in various branches of mathematics and physics. The meeting will also incorporate an afternoon (hosted by the London and Edinburgh Mathematical Societies) with talks tied into the general theme but suitable for a general mathematical audience.
Scientific Organizing Committee: M. Atiyah, chair (Edinburgh), S. Bloch (Chicago), J. P. Bourguignon (IHES), S. Donaldson (Imperial College), P. Griffiths (IAS), E. Witten (IAS).
Deadline: Registration closes on April 18, 2003. (Applications for financial support should be received by March 1, 2003.)
Information: You may register at: <http://www.ma.hw.ac.uk/icms/meetings/2003/HODGE/>.

21–25 **Infinite Dimensional Algebras and Quantum Integrable Systems**, Faro, Portugal. (Feb. 2003, p. 293)

21–25 **The Władysław Orlicz Centenary Conference and Function Spaces VII**, Faculty of Mathematics and Computer Science, Adam Mickiewicz University, Poznań, Poland. (Jan. 2003, p. 83)

21–August 1 **IMA 2003 Summer Program: Probability and Partial Differential Equations in Modern Applied Mathematics, Data Analysis and Optimization**, University of Minnesota, Minneapolis, Minnesota. (Dec. 2002, p. 1421)

*21–August 15 **Spaces of Kleinian Groups and Hyperbolic 3-Manifolds**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England.

Description: Kleinian groups stand at the meeting point of several different parts of mathematics. Classically, they arose as the monodromy groups of Schwarzian equations, in modern terminology projective structures, on Riemann surfaces. The action by Möbius maps on the Riemann sphere provides further intimate links not only with Riemann surfaces but also complex dynamics and fractals, while Thurston’s revolutionary insights have made hyperbolic 3-manifolds, quotients of the isometric action on hyperbolic 3-space, central to 3-dimensional topology.

Topics: Specific topics to be addressed include relationships between the analytic, combinatorial, and geometric structure of hyperbolic 3-manifolds; topology of deformation spaces and the arrangement of their components; classification of hyperbolic 3-manifolds by asymptotic invariants; complex projective structures; convex hull boundaries; cone manifolds, orbifolds, and knot groups; the combinatorial structure of Teichmüller spaces, mapping class groups, and spaces of curves on surfaces; and the challenge of extending recent advances from one punctured tori to higher genus.

Organizers: C. Series (Warwick), Y. Minsky (Stonybrook), M. Sakuma (Osaka).

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.com.ac.uk; http://www.newton.cam.ac.uk/.

*21–December 19 **Interaction and Growth in Complex Stochastic Systems**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England.

Description: Random processes are often understood by means of an asymptotic in which the number of basic random components becomes large. Classical examples of behaviour which can be manifest in such a limit are the law of large numbers and the central limit theorem. These two examples apply in contexts where the interaction between typical random components becomes negligible in the limit. However, there are many extremely important physical models, where such an asymptotic decorrelation does not hold. Such models correspond to a critical behaviour where interaction is strong and statistical scaling properties are highly nontrivial. Understanding of asymptotic properties for such systems is one of the most important problems in the modern probability theory. Renormalization group ideology, which was developed by physicists in the last 30 years, predicts appearance of the universal scaling and conformal invariant random fields characterizing statistical behaviour in critical situations. However, rigorous results in this direction were out of reach until very recently.

The programme will focus on problems from a number of contexts where strong random interactions give rise to non-classical limiting behaviour. These will include random walk in a random environment and interactive random walk, interfaces in growth models and equilibrium statistical mechanics, coagulation and fragmentation, conformally invariant scaling limits, random matrices.

Organizers: E. Bolthausen (Zurich), K. Khanin (BRIMS/Heriot-Watt), J. Norris (Cambridge), Y. Suhov (Cambridge), G. Lawler (Duke).

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.com.ac.uk; http://www.newton.cam.ac.uk/.

*22–26 **Equadiff 2003, International Conference on Differential Equations**, Hasselt, Belgium.

Organizing committee: F. Dumortier (Chair), H. W. Broer, J. P. Gossez, J. Mawhin, A. Vanderbauwhede, S. Verduyn Lunel.

Scientific committee: A. Ambrosetti, A. Doelman, E. Feireisl, B. Fiedler, M. Fila, J. Hale, Y. Ilyashenko, J. Palis, B. Peletier, C. Simo, F. Takens.

Invited speakers and organizers of mini-symposia include: A. Albouy, V. Araujo, P. Bonckaert, R. Farwig, M. Golubitsky, H. Hanbmann, A. J. Homburg, R. Johnson, H. Th. Jongen, V. Kaloshin, T. Kaper, A. Katok, H. Kokubu, B. Krauskopf, P. Krejci, K. Lust, R. MacKay, J. Mallet-Paret, H. Matano, A. Mielke, R. Moeckel, R. Obaya, R. Ortega, R. Peeters, P. Poláčik, D. Rand, G. Raugel, M. Roberts, R. Roussarie, B. Sandstede, K. Schmitt, G. Sell, D. Serre, J. Sotomayor, C. Stuart, P. Szmolyan, S. Terracini, J. F. Toland, F. Verhulst, M. Viana, O. J. Vrieze, M. Wiegner, Y. Yi, K. Zumbrun.

Information and registration: http://www.equadiff.be/equadiff@luc.ac.be/; http://www.equadiff.be/ or by email: equadiff@luc.ac.be.

23–24 **Workshop on Categorification and Higher-Order Geometry**, Instituto Superior Tecnico, Lisbon, Portugal. (Feb. 2003, p. 293)

23–26 **The Joint Meeting of ISAMA 2003 and the 6th Annual BRIDGES Conference**, University of Granada, Spain. (Feb. 2003, p. 293)

24–26 **First Joint ISBA-IMS Meeting**, Intercontinental Hotel, Isla Verde, San Juan, Puerto Rico. (Feb. 2003, p. 294)

*26–31 **Analysis and Geometric Measure Theory**, Banff International Research Station, Banff, Alberta, Canada.

Organizers: A. Granados (Univ. Washington), H. Pajot (Univ. Cergy-Pontoise), T. Toro (Univ. Washington).

Information: http://www.pims.math.ca/birs/.

26–31 **Algebra and Discrete Mathematics—Symmetries and Ordered Structures under the Influence of Model Theory and Combinatorics**, Hattingen, Germany. (Dec. 2002, p. 1421)

27–31 **First Announcement of the 11th International Conference on Finite or Infinite Dimensional Complex Analysis and Applications**, Chiangmai University, Chiangmai, Thailand. (Dec. 2002, p. 1421)

*27–August 2 **V International Conference “Nonassociative Algebra and Its Applications”**, Morelos State University, Cuernavaca, Morelos, Mexico.

Description: The V International Conference on Nonassociative Algebra and Its Applications will be a continuation of a 15-year-old sequence of international conferences devoted to nonassociative algebra and its applications. As in previous years it will focus on:

1. Lie algebras.
2. Nonassociative rings and algebras.
3. Quasigroups and loops (algebraic and smooth) and related systems.
4. Applications of nonassociative algebra in geometry.
5. Applications of nonassociative algebra in physics and natural sciences.

It will have 30-minute talks and a number of one-hour talks. It is our intention to publish the proceedings of the conference. This conference is a satellite conference of the XV Latino-American Algebraic Colloquium (July 0 20–25, 2003, Cocoyoc, Mexico); http://www.cla.matem.unam.mx/.

Information: http://loops.intranets.com/; email: committee@loops.intranets.com; fax: 52-777-3134466.

27–August 9 (NEW DATE) **Banach Algebras and Their Applications: Banach Algebras 2003**, Edmonton, Alberta, Canada. (Sept. 2002, p. 1001)

* 28–31 **9th International Conference on Applications of Computer Algebra**, North Carolina State University, Raleigh, North Carolina.
Organizing Committee: S. Steinberg, M. Wester.

General Chairs: H. Hong, E. Kaltofen, A. Szanto.

Program Chair: Proposals for organizing a session should be directed to: M. Giesbrecht (mwg@uwaterloo.ca).

Scientific Committee: ACA Working Group: A. G. Akritas (Greece), J. Calmet (Germany), V. Edneral (Russia), V. Ganzha (Germany), V. Gerdt (Russia), M. Giesbrecht (Canada), H. Hong (USA), E. Kaltofen (USA), I. S. Kotsireas (Canada), B. Kutzler (Austria), R. Liska (Czech Republic), B. Pletsch (USA), E. Roanes-Lozano (Spain), S. Steinberg (USA), Q.-N. Tran (USA), N. Vassiliev (Russia), M. Wester (USA).

Call for Sessions: The Scientific Committee is soliciting proposals to organize sessions at the conference. Session chairs are expected to organize four or more speakers on a theme consistent with that of the conference.

Deadlines: While there is a target date of March 1 for session proposals, organizing earlier will help guarantee your choice of session date and time in the ACA schedule. March 1, 2003: Target to submit a session proposal (see above); May 1, 2003: Target date for submission of speaker list and abstracts; May 15, 2003: Deadline to submit an application for financial support; June 15, 2003: Notification of decisions for financial support; June 15, 2003: Deadline for early registration; July 15, 2003: Deadline for regular registration.

Information: ACA'2003 conference email: aca2003@math.unm.edu. ACA'2003 conference website: <http://math.unm.edu/ACA/2003>. ACA conferences main website: <http://math.unm.edu/aca.html>. Please see <http://math.unm.edu/ACA/2003/Sessions.html> for details.

* 28–August 1 **The 8th International Conference on Difference Equations and Applications**, Brno, Czech Republic.

Sponsor: The 8th ICDEA will be held under the auspices of the International Society of Difference Equations.

Topics: All the topics included in the *Journal of Difference Equations and Applications*, including: general theory of difference equations, asymptotic behavior, oscillation theory, stability theory, discrete dynamical systems, chaotic and complex dynamics, control theory, combinatorics, bifurcation theory, iterated function systems, numerical analysis, functional equations, stochastic processes, dynamics equations on time scale, special functions and orthogonal polynomials, and discrete analogues of continuous mathematics. Applications in economic theory, biology, physics, chemistry, engineering, computer science, and other disciplines that use difference equations in a significant way.

Contacts: To get information about the conference, you may contact one of the following: B. Aulbach (aulbach@math.uni-augsburg.de), Inst. of Math., Univ. of Augsburg, D-8900 Augsburg, Germany; O. Došlý (dosly@math.muni.cz), Dept. of Math., Masaryk Univ., Janáčkovo nám. 2a, CZ-662 95 Brno, Czech Republic; G. Ladas (gladas@math.uri.edu), Dept. of Math., Univ. of Rhode Island, Kingston, RI 02881-0816; S. Elaydi (selaydi@trinity.edu), Dept. of Math., Trinity Univ., San Antonio, TX 78212-7200.

Organizers: If you are interested in organizing a special session on any of the above topics or other related topics, please send your proposal to one of the contacts listed above.

Information: For updated information on registration, housing, and deadline for abstract submission, visit <http://www.math.muni.cz/~icdea2003/>.

* 28–August 31 **Stein's Method and Applications: A Program in Honor of Charles Stein**, Institute for Mathematical Sciences, National University of Singapore, Singapore.

Program: Due to its broad range of application, Stein's method has become particularly important, not only in the future development of probability theory, but also in a wide range of other fields, some theoretical, some extremely practical. This program aims to refocus interest on understanding the essence of the method

and on the various open problems associated with it. It also seeks to foster collaboration in the many fields of application now being studied.

Format: The program will consist of a tutorial on background material and a workshop at research level, in addition to seminars and informal discussions. The tutorial will be held from August 4 to 8, 2003, and the workshop from August 11 to 15, 2003.

Confirmed Participants (as of December 17, 2002): C. Stein (Stanford Univ.), A. Baddeley (Univ. of Western Australia), Z. Bai (National Univ. of Singapore), A. D. Barbour (Univ. of Zürich), T. Brown (Australian National Univ.), L. Chen (National Univ. of Singapore), K.-P. Choi (National Univ. of Singapore), L. Devroye (McGill Univ.), P. Diaconis (Stanford Univ.), T. Erhardsson (Royal Institute of Technology, Stockholm), L. Goldstein (Univ. of Southern California), P. Hall (Australian National Univ.), S. Holmes (Stanford Univ.), L. Holst (Royal Institute of Technology, Stockholm), H. Huang (Harvard Univ.), W.-L. Loh (National Univ. of Singapore), M. Penrose (Univ. of Durham), G. Reinert (Univ. of Oxford), Y. Rinott (Hebrew Univ. of Jerusalem), V. Rotar (San Diego State Univ.), Q.-M. Shao (National Univ. of Singapore and Univ. of Oregon), J. M. Steele (Univ. of Pennsylvania), S. Utev (Univ. of Nottingham), A. Xia (Univ. of Melbourne).

Registration: Registration forms for the tutorial/workshop are available at <http://www.ims.nus.edu.sg/Programs/stein/index.htm> and should be received at least one month before commencement of each activity. Registration is free. Membership is not required for participation.

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

Information: For general enquiries, please send email to: ims@nus.edu.sg, while for enquiries on scientific aspects of the program, please email A. Barbour at adb@math.unizh.ch or L. Chen at lhychen@ims.nus.edu.sg. More information is available at <http://www.ims.nus.edu.sg/Programs/stein/index.htm>.

29–August 1 **Tenth Workshop on Logic, Language, Information and Computation (WoLLIC'2003)**, Ouro Preto, Minas Gerais, Brazil. (Feb. 2003, p. 294)

29–August 2 **IMS New Researchers Conference**, University of California, Davis, California. (Feb. 2003, p. 294)

August 2003

* 2–7 **Monge-Ampere Type Equations and Applications**, Banff International Research Station, Banff, Alberta, Canada.

Organizers: A. Chang (Princeton), P. Guan (McMaster), P. Yang (Princeton).

Information: <http://www.pims.math.ca/birs/>.

3–9 **29th Stochastic Processes and Their Applications**, Hotel do Frade, Angra dos Reis, State of Rio de Janeiro, Brazil. (Dec. 2002, p. 1421)

4–9 **4th International Algebraic Conference**, Lviv, Ukraine. (Nov. 2002, p. 1287)

* 4–9 **Transformation Groups and Related Topics: An International Conference in Honor of Sören Illman to Celebrate His 60th Birthday**, Helsinki, Finland.

Invited Speakers: A. Adem, Univ. of Wisconsin-Madison; W. Browder, Princeton Univ., NJ; G. Carlsson, Stanford Univ., CA; T. tom Dieck, Georg-August-Univ., Göttingen, Germany; B. Oliver, Univ. Paris 13, France; E. K. Pedersen, State Univ. of New York at Binghamton; F. Quinn, Virginia Polytechnic Inst. and State Univ.; S. Weinberger, Univ. of Chicago.

Scientific and Organizing Committee: T. Matumoto, Chairman, Univ. of Hiroshima, Japan, email: matumoto@math.sci.hiroshima-u.ac.jp; E. Elfving, Univ. of Helsinki, Finland, email: Erik.Elfving@helsinki.fi; I. Hambleton, McMaster Univ., Ontario, Canada, email: ian@math.mcmaster.ca; B. Jahren, Univ. of Oslo, Norway, email:

bjoernj@math.uio.no; M. Kreck, Ruprecht-Karls Univ., Heidelberg, Germany, email: kreck@math.uni-heidelberg.de; M. Morimoto, Okayama Univ., Japan, email: morimoto@ems.okayama-u.ac.jp; K. Pawalowski, Adam Mickiewicz Univ., Poznan, Poland, email: kpa@main.amu.edu.pl; R. Lee (honorary member), Yale Univ., New Haven, CT.

Information: Further information will be available on the conference home page: <http://www.astagor.net/illman/>.

*5-9 **13th Capricornio Mathematical Congress**, Universidad Católica del Norte, Antofagasta, Chile.

Description: The congress will provide an opportunity for the presentation and exchange of the latest research by those mathematicians interested in topics such as dynamical systems, matrix theory, control theory, algebra, complex geometry, stochastic processes, applied mathematics, and others. The congress is planned to include short courses, plenary and subplenary talks, special invited sessions, and paper presentations.

Organizer: Dept. of Math. at Univ. Católica del Norte (R. L. Soto-Montero, head).

Preliminary List of Speakers (confirmed): R. Brualdi (Univ. of Wisconsin), W. Kliemann (Iowa State Univ.), L. S. Martin (Univ. Estadual de Campinas, Brazil), I. P. Shestakov (Univ. de Sao Paulo, Brazil), J. C. Yoccoz (Collège de France), V. Ayala (Univ. Católica de Norte, Chile), R. Correa (Univ. de Chile), G. Gatica (Univ. de Concepción, Chile), P. Iglesias (Pontificia Univ. Católica de Chile), S. Martinez (Univ. de Chile), R. Rebolledo (Pontificia Univ. Católica de Chile), J. Rivera (Univ. Católica del Norte, Chile), R. Rodriguez (Pontificia Univ. Católica de Chile).

Call for Papers: Authors are kindly invited to submit abstracts before April 15, 2003, to J. R. Letelier (comca2003.ucn.c1). The abstract should fit on one page and should include the title of the talk; the name, affiliation, full postal address, and email address of the speaker; and a summary of the talk which provides sufficient information to assess the relevance and novelty of the results. The preferred mode is electronic submission in \LaTeX (Scientific Workplace) or PostScript format.

Information: Dept. of Math., Univ. Católica del Norte, Casilla 1280, Antofagasta, Chile; phone: 56-55-355597, 56-55-355573; fax: 56-55-355599; comca2003@ucn.c1.

*5-10 **Workshops Loops '03**, Prague, Czech Republic.

Description: Lectures on quasigroups, loops and Latin squares.

Program and Organizing Committee: D. Bedford (Keele Univ.), O. Chein (Temple Univ.), A. Drapal [secretary] (Charles Univ.), M. Kinyon (Western Michigan Univ.), G. Nagy (Bolyai Institute, Szeged), M. Niemenmaa (Univ. of Oulu), H. Pflugfelder [honorary chair] (Santa Rosa), J. D. Phillips (Wabash College), V. Shcherbacov (Moldovan Academy of Sciences), P. Vojtechovsky (Univ. of Denver).
Local Organizing Committee: A. Drapal (chair), P. Jedlicka (visas), T. Kepka (finances), P. Nemeč (accommodation), D. Stanovsky (website), P. Vojtechovsky (website, registration).

Deadline: June 20, 2003.

Information: <http://www.karlin.mff.cuni.cz/~loops03/workshops.html>; email: loops03@karlin.mff.cuni.cz.

*9-14 **Combinatorics, Linear Algebra & Graph Coloring**, Tehran, Iran.

Organizers: S. Hedayat (Univ. of Illinois at Chicago); H. Kharaghani (Univ. of Lethbridge, Canada); G. B. Khosrovshahi (IPM and Univ. of Tehran, Iran); and S. Shahriari (Pomona College).

Invited Speakers: R. Brualdi, P. Cameron, Z. Füredi, C. Johnson, C. Thomassen, and R. M. Wilson.

Deadline: For contributed papers: June 15, 2003.

Information: Contact person: G. B. Khosrovshahi, rezagbk@ipm.ir; <http://www.ipm.ac.ir/combinatorics/>.

*9-16 **Defects and Their Dynamics**, Banff International Research Station, Banff, Alberta, Canada.

Organizers: P. Bates (Brigham Young), L. Bronsard (McMaster), C. Gui (Univ. Connecticut).

Information: <http://www.pims.math.ca/birs/>.

*9-16 **Localization Behavior in Reaction-Diffusion Systems and Applications to the Natural Sciences**, Banff International Research Station, Banff, Alberta, Canada.

Organizers: A. Bernoff (Harvey Mudd College), P. Fife (Univ. Utah), T. Hille (Univ. Alberta), M. Ward (UBC), J. Wei (Chinese Univ.).

Information: <http://www.pims.math.ca/birs/>.

*10-17 **Loops '03**, Prague, Czech Republic.

Information: International conference on quasigroups, loops and Latin squares.

Organizers: See Workshops Loops '03 (August 5-10).

Main Speakers: Galina B. Belyavskaya (Moldovan Academy of Sciences), Michihiko Kikkawa (Shimane University), Alexander Kreuzer (University of Hamburg), Kenneth Kunen (University of Wisconsin), Curt C. Lindner (Auburn University), Gary L. Mullen (Pennsylvania State University), Daniel A. Robinson (Georgia Institute of Technology), Jonathan D. H. Smith (Iowa State University).

Deadline for registration and abstracts: June 20, 2003.

Information: email: loops03@karlin.mff.cuni.cz, <http://www.karlin.mff.cuni.cz/~loops03>.

14-20 **2003 ASL European Summer Meeting (Logic Colloquium '03)**, Helsinki, Finland. (Sept. 2002, p. 1001)

*15-20 **12th Summer St. Petersburg Meeting in Mathematical Analysis: Dedicated to the 70th Anniversary of Victor Petrovich Havin**, Euler International Mathematical Institute, St. Petersburg, Russia.

Organizer: St. Petersburg Dept. of Steklov Inst. of Math., Euler Internat. Math. Inst.

Organizers: N. Nikolski, S. Kisliakov, V. Vasyunin.

Information: mathanal@pdmi.ras.ru; <http://www.pdmi.ras.ru/EIMI/2003/analysis12/>.

*16-21 **Current Trends in Arithmetic Geometry and Number Theory**, Banff International Research Station, Banff, Alberta, Canada.

Organizers: I. Chen (SFU), B. Conrad (Univ. Michigan), E. Goren (McGill), A. Iovita (Univ. Washington), C. Skinner (Univ. Michigan), N. Vatsal (UBC).

Information: <http://www.pims.math.ca/birs/>.

18-22 **7th International Symposium on Orthogonal Polynomials, Special Functions and Applications**, Copenhagen, Denmark. (Dec. 2002, p. 1421)

18-22 **ENUMATH 2003: The European Conference on Numerical Mathematics and Advanced Applications**, Prague, Czech Republic. (Feb. 2003, p. 294)

*23-28 **Computational Techniques for Moving Interfaces**, Banff International Research Station, Banff, Alberta, Canada.

Organizers: R. LeVeque (Univ. Washington), R. Russell (SFU), S. Ruuth (SFU).

Information: <http://www.pims.math.ca/birs/>.

*24-26 **Second St. Petersburg Days of Logic and Computability: Devoted to the Centennial of Andrei Andreevich Markov Jr.**, Euler International Mathematical Institute, St. Petersburg, Russia.

Organizer: St. Petersburg Dept. of Steklov Inst. of Math., Euler Internat. Math. Inst.

Program Committee: S. Adian (Russia); S. Artemov (Russia/USA); N. Kosovskii (Russia); M. Margenstern (France); G. Mints (USA); Y. Matiyasevich (Russia), chairman; N. Nagorny (Russia); V. Orevkov (Russia); A. Slissenko (France).

Information: LogicDays@logic.pdmi.ras.ru; <http://logic.pdmi.ras.ru/2ndDays/>.

28–30 **International Conference on Computability and Complexity in Analysis**, University of Cincinnati, Cincinnati, Ohio. (Feb. 2003, p. 294)

* 30–September 4 **A Workshop in Creative Scientific Writing**, Banff International Research Station, Banff, Alberta, Canada.
Organizers: M. Senechal (Smith College), C. Davis (Univ. Toronto).
Information: <http://www.pims.math.ca/birs/>.

* 30–September 4 **Locally Finite Lie Algebras**, Banff International Research Station, Banff, Alberta, Canada.
Organizers: Y. Bahturin (Memorial Univ.), G. Benkart (Univ. Wisconsin-Madison), I. Penkov (Univ. Calif., Riverside), H. Strade (Hamburg Univ.), A. Zaleskii (Univ. North Anglia).
Information: <http://www.pims.math.ca/birs/>.

September 2003

1–6 **The Sixth International Workshop on Differential Geometry and Its Applications and The Third German-Romanian Seminar on Geometry**, Cluj-Napoca, Romania. (Oct. 2002, p. 1135)

* 1–December 19 **Granular and Particle-Laden Flows**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England.
Description: The programme will be concerned with theoretical issues in the burgeoning areas of dry granular and particle laden flows. The flow of such materials is of considerable practical interest, with applications ranging from the geosciences to industry. In recent years it has also become a very active area in the international physics community, as it provides rich structure in the form of novel pattern-forming processes. Much of the progress that is made in these studies relies upon relatively simple mathematical modelling which is often ad hoc in nature. In all cases, a fundamental difficulty which makes essential theoretical input difficult is the availability of suitable continuum models. Indeed, appeal is often made to microscopic descriptions, although these are often limited in scope. Therefore, the time is now ripe for a workshop where mathematicians and physicists can be brought together to discuss these fundamental issues at a detailed level. Three specific topics will be addressed:

1. Localisation and type change: The mathematical issues raised at the interface between appropriate models for different flow regimes.

2. Pattern formation and chaos: The mathematical modelling of patterns and their dynamics in controlled experiments on segregation and vibrated layers.

3. Geophysical and particle-laden flows: Theoretical modelling of problems ranging from the formation of sedimentary rock to avalanching.

Organizers: N. Gray (Manchester), K. Hutter (Darmstadt), J. T. Jenkins (Cornell), T. Mullin (Manchester).

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

2–5 **Symposium for the Developments of the Cantorian Set Theory**, Paris, France. (Jan. 2003, p. 83)

2–6 **The Barcelona Conference on Asymptotic Statistics**, Bellaterra, Barcelona, Spain. (Jan. 2003, p. 83)

4–9 **Analytic Methods of Analysis and Differential Equations (AMADE-2003)**, Belarusian State University, Minsk, Belarus. (Jan. 2003, p. 83)

8–10 **25th World Conference on Boundary Element Methods: BEM 25: Incorporating Electromagnetic Effects on Human Beings and Equipment Seminar**, Split, Croatia. (Oct. 2002, p. 1135)

8–December 13 **Inverse Problems: Computational Methods and Emerging Applications**, Institute for Pure and Applied Mathematics, UCLA, Los Angeles, California. (Oct. 2002, p. 1135)

10–12 **Sixth International Conference on Computational Methods for the Solution of Electrical and Electromagnetic Engineering Problems: ELECTROCOMP 2003**, Split, Croatia. (Oct. 2002, p. 1135)

12–16 **International Conference of Computational Methods in Sciences and Engineering (ICCMSE 2003)**, Kastoria, Greece. (Feb. 2003, p. 294)

15–19 **Colloquium on the Occasion of the 200th Anniversary of Charles-François Sturm and Workshop on Sturm-Liouville Theory**, University of Geneva, Geneva, Switzerland. (Oct. 2002, p. 1135)

* 15–19 **IMA Tutorial: Open Week Tutorial**, University of Minnesota, Minneapolis, Minnesota.
Organizer: S. Keller-McNulty (Los Alamos National Labs), M. Newton (Wisconsin-Madison), S. Tavaré (USC).

Information: Institute for Mathematics and its Applications, Univ. of Minnesota, 207 Church St. SE, 400 Lind Hall, Minneapolis, MN 55455; phone: 612-624-6066; email: visit@ima.umn.edu; <http://www.ima.umn.edu/complex/fall/t1.html>.

16–20 **The Barcelona Conference on Set Theory**, Bellaterra, Barcelona, Spain. (Feb. 2003, p. 294)

* 22–26 **Analytic Dynamical Systems, Summability of Divergent Series and Galois Theories**, Université Paul Sabatier, Toulouse, France.

Description: International Conference on the occasion of the 60th Anniversary of Jean-Pierre Ramis.

Topics: Complex analysis, analytic dynamical systems (Painlevé equations, d-modules, differences and q-differences equations, foliations, p-adic differential equations), Summability of divergent series and applications, Galois theories.

Speakers: Y. André (Paris); J.-B. Bost (Orsay); B. Braaksma (Groningen); A. Connes (Collège de France); O. Costin (Rutgers); B. Dubrovin (Sissa); Y. Il'Yashenko (Moscou and Cornell); V. Kaloshin (Princeton); T. Kawai (RIMS-Kyoto); Y. Laurent (Grenoble); A. Lins Neto (IMPA –Rio); J. Morales (Barcelona); R. Moussu (Dijon); K. Okamoto (Tokyo); J. Sauloy (Toulouse); D. Sauzin (Paris); M. Singer (MSRI – Berkeley); H. Umemura (Nagoya); M. Van der Put (Groningen); A. Verjovski (Cuernavaca).

Organizers: A. Duval (Lille), F. Fauvet (Strasbourg), M. Loday-Richaud (Angers), M. Klughertz (Toulouse), J.-F. Mattei (Toulouse), L. Stolovitch (Toulouse).

Information: email: ramisconf@picard.ups-tlse.fr; <http://picard.ups-tlse.fr/>.

24–26 **International Conference on Differential Equations Devoted to the 100th Anniversary of K. P. Persidskii**, Institute of Mathematics of the ME&S of the RK, Almaty, Kazakhstan (CIS). (Sept. 2002, p. 1001)

* 29–October 3 **IMA Workshop 1: Statistical Methods for Gene Expression: Microarrays and Proteomics**, University of Minnesota, Minneapolis, Minnesota.

Organizers: M. A. Newton (Wisconsin-Madison), G. Parmigiani (Johns Hopkins).

Information: Institute for Mathematics and its Applications, University of Minnesota, 207 Church St. SE, 400 Lind Hall, Minneapolis, MN 55455; phone: 612-624-6066; email: visit@ima.umn.edu; <http://www.ima.umn.edu/complex/fall/c1.html>.

30–October 7 **Mathematics in Armenia—Advances and Perspectives**, Institute of Mathematics of National Academy of Sciences of Armenia, Yerevan, Armenia. (Feb. 2003, p. 295)

October 2003

11–12 **AMS Eastern Section Meeting**, SUNY-Binghamton, Binghamton, New York. (Sept. 2002, p. 1001)

13–17 **2003 IEEE/WIC International Conference on Web Intelligence (WI 2003)**, Tianlun Dynasty Hotel, Beijing, China. (Feb. 2003, p. 295)

15–20 **Von Neumann Centennial Conference: Linear Operators and Foundations of Quantum Mechanics**, Budapest, Hungary. (Sept. 2002, p. 1001)

* 20–24 **IMA Workshop 2: Comparative Genomics**, University of Minnesota, Minneapolis, Minnesota.

Organizers: J. Lagergren (Royal Inst. of Tech., Stockholm), B. Moret (UNM), D. Sankoff (Ottawa).

Information: Institute for Mathematics and its Applications, University of Minnesota, 207 Church St. SE, 400 Lind Hall, Minneapolis, MN 55455; phone: 612-624-6066; email: visit@ima.umn.edu; <http://www.ima.umn.edu/complex/fall/c2.html>.

24–25 **AMS Southeastern Section Meeting**, University of North Carolina, Chapel Hill, North Carolina. (Sept. 2002, p. 1001)

28–31 **Fourteenth International Symposium on Methodologies for Intelligent Systems**, Maebashi TERRSA, Maebashi City, Japan. (Feb. 2003, p. 295)

November 2003

3–5 **Second International Conference on Computational Methods in Multiphase Flow**, Santa Fe, New Mexico. (Oct. 2002, p. 1135)

4–6 **Seventh International Conference on Computational Modelling of Free and Moving Boundary Problems**, Santa Fe, New Mexico. (Oct. 2002, p. 1135)

10–13 **SIAM Conference on Geometric Design & Computing**, Elliott Grand Hyatt, Seattle, Washington. (Nov. 2002, p. 1287)

* 17–21 **IMA Workshop 3: Networks and the Population Dynamics of Disease Transmission**, University of Minnesota, Minneapolis, Minnesota.

Organizers: M. Morris (Washington), C. Neuhauser (UMN).

Information: Institute for Mathematics and its Applications, University of Minnesota, 207 Church St. SE, 400 Lind Hall, Minneapolis, MN 55455; phone: 612-624-6066; email: visit@ima.umn.edu; <http://www.ima.umn.edu/complex/fall/c3.html>.

December 2003

* 14–16 **International Conference on Matrix Analysis and Applications**, Nova Southeastern University, Fort Lauderdale, Florida.

Description: The aim of this meeting is to stimulate research and interaction of researchers interested in all aspects of linear algebra and matrix analysis and applications, and to provide an opportunity for researchers to exchange ideas and recent developments on the subjects.

Keynote Speaker: R. Horn, Univ. of Utah.

Organizing Committee: T. Ando (Hokkaido Univ., Japan), C.-K. Li (College of William and Mary, USA), G. P. H. Styan (McGill Univ., Canada), H. Woerdeman (College of William and Mary, USA), and Catholic Univ., Belgium), F. Zhang (Nova Southeastern Univ., USA).

Contact: ckli@math.wm.edu or zhang@nova.edu.

Information: <http://www.resnet.wm.edu/~cklix/nova03.html>.

15–19 **Numerical Methods in Imaging Science and Information Processing**, Institute for Mathematical Sciences, National University of Singapore, Singapore. (Dec. 2002, p. 1422)

17–20 **First Joint International Meeting between the American Mathematical Society and Various Indian Mathematical Societies**, Bangalore, India. (Sept. 2002, p. 1001)

January 2004

* 7–9 **IMA Short Course: The Internet for Mathematicians**, University of Minnesota, Minneapolis, Minnesota.

Organizer: W. Willinger (AT&T Research), B. Hajek (Illinois).

Information: Institute for Mathematics and its Applications, University of Minnesota, 207 Church St. SE, 400 Lind Hall, Minneapolis, MN 55455; phone: 612-624-6066; email: visit@ima.umn.edu; <http://www.ima.umn.edu/complex/winter/sc1.html>.

7–10 **Joint Mathematics Meetings**, Phoenix Civic Plaza, Phoenix, Arizona.

* 11 **IMA Tutorial: Measurement, Modeling and Analysis of the Internet**, University of Minnesota, Minneapolis, Minnesota.

Organizer: B. Hajek (Illinois), D. Towsley (Massachusetts).

Information: Institute for Mathematics and its Applications, University of Minnesota, 207 Church St. SE, 400 Lind Hall, Minneapolis, MN 55455; phone: 612-624-6066; email: visit@ima.umn.edu; <http://www.ima.umn.edu/complex/winter/t2.html>.

* 12–16 **IMA Workshop 4: Measurement, Modeling and Analysis of the Internet**, University of Minnesota, Minneapolis, Minnesota.

Organizers: B. Hajek (Illinois), D. Towsley (Massachusetts).

Information: Institute for Mathematics and its Applications, University of Minnesota, 207 Church St. SE, 400 Lind Hall, Minneapolis, MN 55455; phone: 612-624-6066; email: visit@ima.umn.edu; <http://www.ima.umn.edu/complex/winter/c4.html>.

* 19–July 9 **Statistical Mechanics of Molecular and Cellular Biological Systems**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England.

Description: The programme will be structured along four linked themes:

1. Single molecule biophysics (including protein dynamics, mechanical force spectroscopy).

2. Membrane/cortical dynamics and self-assembly (including lipid phase separation, motility and interaction with the extracellular matrix).

3. Molecular motors (including modelling of single-molecule motors in the presence of noise, cooperative behaviour, etc.).

4. Molecular and cellular aspects of gene expression (including DNA binding proteins and complexes, cell division, transmembrane signalling, networks or polymerisation and depolymerisation).

While all four will be worked on throughout the 6-month period, there will be periods of more focus on each when the theoretically based scientists and mathematicians of the long-term programme will be visited on a shorter-term basis by key experimentalists working in these areas and their boundaries.

Organizers: T. McLeish (Leeds), J. Trinick (Leeds), P. Stockley (Leeds), J. Molloy (York), W. Poon (Edinburgh), T. Duke (Cambridge).

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.com.ac.uk; <http://www.newton.cam.ac.uk/>.

* 26–July 16 **Random Matrix Approaches in Number Theory**, Isaac Newton Institute for Mathematical Sciences, Cambridge, England.

Description: The programme will mainly focus on how random matrix theory can further contribute to unanswered questions in number theory and on how to put the connection between random matrices and number theory on a rigorous footing. However, both random matrix theory and number theory individually play significant roles in theoretical physics, and probability random matrix statistics appear in the spectra of quantum systems whose classical limit is chaotic; the problem of quantum unique ergodicity has connections with the theory of modular surfaces and algebraic number theory; many of the main results on the statistics of ensembles of random matrices have been the work of probabilists; the Riemann zeta function even shows up in the theory of Brownian motion—and this is just to name a few. These themes will also be developed through focused workshops.

Organizers: B. Conrey (Palo Alto), P. Diaconis (Stanford), F. Mezzadri (Bristol), P. Sarnak (Princeton).