Mathematics Calendar

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

May 2006

* 5–6 **Operator Algebra Workshop 2006**, Queen's University Belfast, Belfast, Northern Ireland.
Information: A two-day workshop dedicated to all aspects of operator algebras, both selfadjoint and non-selfadjoint, will be held in the Department of Pure Mathematics of Queen's University Belfast on Friday, 5 May and Saturday, 6 May 2006.
Organizers: Martin Mathieu and Ivan Todorov.
Details: http://www.qub.ac.uk/opaw2006; email: opaw2006@qub.ac.uk.

* 5–7 **2006 Midwest Geometry Conference**, The University of Oklahoma, Norman, Oklahoma.
Main topics include (but not limited to): P-harmonic geometry; Geometric flows; Complex and Riemannian geometry; Conformal geometry; Convex Geometry; Minimal varieties, symmetric criticality and algebraic geometry; PDEs, geometric measure theory and mathematical physics.
Organizers: Chair: Shihshu Walter Wei (University of Oklahoma); co-chairs: Thomas Branson (University of Iowa), Marilyn Breen (University of Oklahoma), Andrzej Derdzinski (Ohio State University), Robert M. Hardt (Rice University), Ralph Howard (University of South Carolina), Weiping Li (Oklahoma State University), Gerard Walschap (University of Oklahoma), and Meijun Zhu (University of Oklahoma).
Information: More information will be posted on the conference homepage as it becomes available at http://www.math.ou.edu/~wwei/mgc06.html.

* 11–13 **Fluids and Waves–Recent Trends in Applied Analysis**, University of Memphis, Memphis, Tennessee.
Conference Description: This conference will explore new developments in applied analysis as they relate to fluid flow and wave motion, both from a theoretical and applied point of view. It will intensify scientific interactions between the two different groups of researchers, expose junior mathematicians to state-of-the-art developments in analysis and its applications and provide a stage for the dissemination of research results.
Organizers: Fernanda Botelho, Thomas Hagen, Jim Jamison.
Information: http://www.msci.memphis.edu/fluidsandwaves/.

* 13 **Graph Theory Day 51**, Montclair State University, Montclair, New Jersey.
Host: The Department of Mathematical Sciences, Montclair State University.
Sponsor: The Mathematics Section of the New York Academy of Sciences. This one day meeting is to stimulate activity among graph theorists. Papers for contributed presentations (15 minutes) are invited.
Information: http://www.csam.montclair.edu/~lia/gtday51/.

* 14–18 **3rd International Conference: Chebyshev's Mathematical Ideas and Applications to the Modern Science**, Obninsk State University, Russia.
Description: On May 16, 2006 we shall celebrate the 185th birthday of the Great Russian mathematician P. L. Chebyshev. Chebyshev was a famous scientist, and on a historical level we can say that he was really the scientific "father" of the Russian St. Petersburg Mathematical School.
Topics: Functions theory and spectral theory of operators. Theory of approximations. Probability methods and theory of numbers. Mathematical physics. Small parameter methods, inverse and ill-

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

posed problems. Difference equations and methods. Mathematical simulation. Computer simulation in problems of nuclear power engineering and physics. Problem of modern natural-scientific education and scientific inheritance of the academician P. L. Chebyshev. Ordinary differential equations.

Applications: Please submit your application form to the Conference via the website http://www.amath.ru. Additionally you can write directly to the Organizing Committee: CHEBYSHEV-2006, Professor V. A. Galkin, Head of Department of Applied Mathematics, Obninsk State University, Studgorodok, 1, Obninsk, 249040, Russia; email: cheb@amath.ru; phone: +(48439)37908; fax: +(48439)70822.

Languages: Russian and English.

Information: http://www.amath.ru; http://www.mathsoc.spb.ru/pantheon/chebyshe/index.html.

* 17–20 **Combinatorial and Additive Number Theory (CANT 2006)**, CUNY Graduate Center, New York, New York.

Description: This is the fourth in a series of annual workshops sponsored by the New York Number Theory Seminar on problems in combinatorial and additive number theory and related parts of mathematics. A list of invited and confirmed lecturers will be posted on the conference website. Mathematicians who wish to speak at the meeting should submit a title and abstract by email to: NewYorkNumberTheory@gmail.com.

Support: It is expected that there will be some financial support, especially for graduate students and young faculty.

Organizer: Mel Nathanson.

Information: http://theoryofnumbers.com/CANT/2006/cant_2006.htm, or email: NewYorkNumberTheory@gmail.com.

* 19–20 **Groups in Galway 2006**, National University of Ireland, Galway, Ireland.

Scope: Covers all areas of group theory, applications, and related fields.

Provisional List of Speakers: Cédric Bonnafé (Univ. de Franche-Comté, France), Peter Cameron (Queen Mary, Univ. of London, UK), Rod Gow (UC Dublin, Ireland), John Murray (NUI, Maynooth, Ireland), Shane O'Rourke (Cork Inst. of Tech., Ireland), Gretchen Ostheimer (Hofstra University, USA), Götz Pfeiffer (NUI, Galway, Ireland), Martyn Quick (St. Andrews, UK), Sarah Rees (Univ. of Newcastle, UK), Chiara Tamburini (Univ. Cattolica del Sacro Cuore, Italy).

Information: Details of the talks and their scheduling will be posted at http://www.maths.nuigalway.ie/gig06.html closer to the event. For further information, please contact one of the conference organizers, Rachel Quinlan (rachel.quinlan@nuigalway.ie) or Dane Flannery (dane.flannery@nuigalway.ie).

* 24–26 **DIMACS Workshop on Polyhedral Combinatorics of Random Utility**, DIMACS Center, CoRE Bldg, Rutgers University, Piscataway, NJ.

Organizers: Jean-Paul Doignon, Univ. Libre de Bruxelles, email: doignon@ulb.ac.be; Aleksandar Pekec, Fuqua School of Business, Duke University, email: pekec@duke.edu.

Local Arrangements: Workshop Coordinator, DIMACS Center, email: workshop@dimacs.rutgers.edu; 732-445-5928.

Description: Utility functions have a long history in economics and psychology but have recently caught the attention of computer scientists in various applications. Random utility approaches have been extensively used in the soccial sciences. The fundamental idea is that utilities of agents could be hard or even impossible to precisely assess or elicit, so one should model these utilities as random variables. This modeling approach could turn out to be useful in developing and solving optimization problems and algorithms for which there is no time to or where it is is impossible to assess/obtain input data precisely.

* 25–31 **NSM2006 "Nonstandard Methods and Applications in Mathematics"**, Pisa, Italy.

Description: This Congress continues the tradition of biennial meetings focused on nonstandard methods. While the fields of application of nonstandard analysis are diverse, the common methodologies and ideas make it appropriate to consider nonstandard methods as a unified mathematical field of research.

Invited Speakers: S. Albeverio*, R. Anderson, J. Bell, V. Benci, I. van den Berg, N. Cutland, A. Enayat, M. Forti, E. Gordon, K. Hrbacek, R. Jin, J. Keisler, R. Kossak, S. Leth, T. Lindstrom, P. Loeb, W. Luxemburg*, A. Macintyre, T. Nakamura, V. Neves*, D. Ross, T. Sari, Y. Sun, K. Tanaka, M. Wolff*, A. Zemanian [* denotes that the acceptance is provisional].

Information: http://www.dm.unipi.it/~nsm2006.

* 29–June 2 **International School on Partial Differential Equations**, Depto. Matemáticas y Mecánica, IIMAS Universidad Nacional Autónoma de México (UNAM), Mexico City, Mexico.

Description: This one-week school is organized around 6 short courses on various problems involving nonlinear PDEs and it is intended that young researchers and graduate students will be well-informed on the trend and current states of research in the fields. Short presentation by other participants are also encouraged.

Invited speakers: Luis Caffarelli, Irene Gamba, Frank Morgan, Takayoshi Ogawa, Peter Sternberg, Eiji Yanagida. Organizer: Padilla Pablo (UNAM).

Information: http://www.fenomec.unam.mx/.

June 2006

* 2–14 **Approximation Algorithms**, Centre de Recherches Mathematiques, Montreal, Canada.

Description: The workshop will include lectures on the latest developments in the field of approximation algorithms, on both the approximability and the inapproximability sides.

Organizers: Joseph Cheriyan (Waterloo), Michel Goemans (MIT).

Invited Speakers: Please see website below.

Information: http://www.crm.umontreal.ca/Approximation06/.

* 5–9 **Workshop on Fourier Analysis, Geometric Measure Theory and Applications**, Centre de Recerca Matemàtica, Barcelona, Spain.

Co-ordinators: José Maria Martell (Universidad Autónoma de Madrid), Joan Mateu (Universitat Autònoma de Barcelona), Alberto Ruiz (Universidad Autónoma de Madrid), Xavier Tolsa (Universitat Autònoma de Barcelona), Ana Vargas (Universidad Autónoma de Madrid), Joan Verdera (Universitat Autònoma de Barcelona).

Information: http://www.crm.es/Conferences/0506/Fourier/default.htm.

* 9–11 **Logic and Mathematics 2006**, University of Illinois at Urbana-Champaign, Urbana, Illinois.

Organizers: C. Ward Henson and Slawomir Solecki.

Meeting Topics: The focus of the meeting will be on descriptive set theory and its connections (with algebra, topology, measure theory, topological dynamics, combinatorics, etc). In part, the meeting is organized to honor Alexander S. Kechris of CalTech on the occasion of his 60th birthday.

Meeting Webpage: http://www.math.uiuc.edu/Bulletin/lm2006.html. Check here for later information including titles of talks and abstracts.

* 10–16 **Discontinuous change in behavior issues in partial differential equations**, Anogia Acdademic Village, Crete, Greece.

Organizers: I. Athanasopoulos, L. A. Caffarelli.

Main Speakers: D. Christodoulou, I. Gamba, R. Nochetto, S. Salsa, M. Soner, P. Souganidis, T. Zariphopoulou.

Support: In part by European Commission under FP6. Available grants: at least 43.

Information: E. Kafatos and T. Pheidas; math.uoc.gr.

*12–15 (REVISED) **Conference on 3-manifold topology in honour of Peter Shalen's 60th birthday**, Centre de Recherches Mathematiques, Montreal, Canada. (Feb. 2006, p. 286)
Organizers: Steve Boyer, Dick Canary, Marc Culler, Nathan Dunfield, Benson Farb.
Speakers (*tentative): Ian Agol (Univ. of Illinois at Chicago), Mladen Bestvina (Univ. of Utah), Marc Culler (Univ. of Illinois at Chicago), Nathan Dunfield (Caltech), Cameron Gordon (Univ. of Texas), *Alex Lubotzky (Hebrew Univ. of Jerusalem), Yair Minsky (Yale Univ.), *Maryam Mirzakhani (Princeton Univ./Clay Institute), John Morgan (Columbia Univ.), *Lenhard Ng (Stanford Univ. /AIM), Peter Ozsvath (Columbia Univ.), Jake Rasmussen (Princeton Univ.), Michah Sageev (Technion).
Information: http://www.crm.umontreal.ca/Shalenfest/.

*12–16 **Permutation Patterns 2006**, Reykjavik University, Reykjavik, Iceland.
Conference Themes: Include (but are not limited to) enumeration questions, excluded pattern questions, study of the involvement order, algorithms for computing with permutation patterns, applications and generalisations of permutation patterns, and others.
Information: http://www.cs.otago.ac.nz/staffpriv/mike/PP2006/Home.html.

*12–17 **Boltzmann Equation and Fluidodynamic Limits**, SISSA-ISAS, Trieste, Italy.
Aims and Scope: The conference wishes to provide an up-to-date overview of the recent results and open problems related to the study of the Boltzmann equation and of the connections between the macroscopic and mesoscopic description of gas dynamics.
Organizing Committee: Fabio Ancona (University of Bologna, Italy), Stefano Bianchini (SISSA-ISAS, Trieste, Italy), Camillo De Lellis (University of Zürich, Switzerland), Andrea Marson (University of Padova, Italy).
Deadlines: Registration: May 25, 2006. Financial support: April 30, 2006.
Informations: http://www.sissa.it/boltzmann/.

*21–24 **"Views on ODEs" Conference in Honor of Arrigo Cellina and James A. Yorke on the Occasion of their 65th Birthdays**, Aveiro University, Aveiro, Portugal.
Conference: "Views on ODEs" will celebrate the 65th birthdays of Professors Arrigo Cellina and James A. Yorke and aims to bring together those enrolled in research activities related with ordinary differential equations, differential inclusions and their applications.
Main Topics: Dynamical systems; Bifurcations; Invariant measures; Chaotic attractors; Prevalence; Population dynamics; Markov operators; Semigroups; Viscosity solutions; Hamilton-Jacobi equations; Hyperbolic systems; Optimal control and differential inclusions; Variational and topological methods.
Information: http://ww.divp-proj.org/.

*26–29 **Special session on "Coding theory and cryptography"**, Varna, Bulgaria.
Organizers: Stefan Dodunekov, (Bulgarian Academy of Sciences), Tony Shaska, (Oakland University).
Overview: As technology becomes increasingly involved in communication, coding theory and cryptography also become increasingly important. The goal of this session is to bring together researchers in all aspects of coding theory, cryptography and related areas and explore the use of computational algebra in such areas.
Contact: T. Shaska (shaska@oakland.edu); http://ww.oakland.edu/~shaska/cod_06.html.

*26–July 8 **Advanced Course on Limit Cycles of Differential Equations**, Centre de Recerca Matemàtica, Barcelona, Spain.
Speakers: Colin Christopher (University of Plymouth, United Kingdom): Around the Center-Focus Problem; Chengzhi Li (Peking University, China): Abelian integrals and application to weak Hilbert's 16th problem; Sergei Yakovenko (The Weizmann Institute of Science, Israel): Algebraic Solutions of Polynomial Vector Fields;
Co-ordinators: Armengol Gasull (Universitat Autònoma de Barcelona), Jaume Llibre (Universitat Autònoma de Barcelona).
Registration and payment: Fee: 200 euros; Deadline: May 26, 2006.
Grants: The CRM offers a limited number of grants for registration and/or accommodation addressed to young researchers. The deadline for application is April 26, 2006.
Further information:http://www.crm.es/ACDifEquations, email: ACDifEquations@crm.es.

*28–30 **Workshop From Lie Algebras to Quantum Groups**, Universidade de Coimbra, Portugal.
Speakers and Members of the Scientific Committee are: Helena Albuquerque, Universidade de Coimbra (Portugal), Georgia Benkart (University of Wisconsin-Madison), Alberto Elduque (Universidad de Zaragoza, Spain), George Lusztig (Massachusetts Institute of Technology), Shahn Majid (University of London (UK)), Michael Semenov-Tian-Shansky, Université de Bourgogne (France).
Talks: There will be plenary talks (50 min), section talks (20-25 min) and a poster session. Proceedings will be published by the International Center of Mathematics (CIM) and will contain contributions by all the participants, after revision by the Scientific Committee.
Deadline: April 30, 2006. For more details, including the Conference Program and information on accommodation in Coimbra, please refer to http://www.aim.estt.ipt.pt/~jmmp/CIM/Lie/index.htm. We regret to inform that we cannot offer the participants any financial support.
Information: Persons interested in participating are kindly asked to register at the conference website http://www.aim.estt.ipt.pt/~jmmp/CIM/Lie/index.htm as well as to submit an abstract for a section talk or a poster. The registration fee is 100 Euros, and there will be a reduced student fee of 50 Euros.

July 2006

*3–7 **Iwasawa 2006 Congress**, Université de Limoges, Limoges, France.
Program: Recent advances in Iwasawa Theory.
Organizing Committee: François Laubie, Abbas Movahhedi, Alain Salinier, Stéphane Vinatier.
Information: http://www.unilim.fr/laco/iwasawa2006.

*9–15 **Which Mathematics for Biology?**, Anogia Academic Village, Crete, Greece.
Organizers: A. Deutsch, D. Manoussaki, B. Perthame.
Main Speakers: A. Deutsch, E. Grenier, Y. Kevrekidis, H. Metz, P. Maini, C. J. Weijer.
Support: In part by European Commission under FP6. Available grants: at least 43.
Information: E. Kafatos and T. Pheidas: math.uoc.gr.

*10–15 **6th Czech-Slovak International Symposium on Combinatorics, Graph Theory, Algorithms and Applications: Honoring the 60th Birthday of J. Nesetril**, Prague, Czech republic.
Description: The program will be devoted (but not restricted) to subjects in contemporary Combinatorics and Graph Theory involving also relationships and applications in Algebra, Algorithms, Topology, Probability and Statistics, Mathematical Logic, Computer Science and other fields.
Invited Speakers: Martin Aigner, Noga Alon, Peter Cameron, Shalom Eliahou, Isidoro Gitler, Ron Graham, Pavol Hell, László Lovász, Jiøí Matouek, Patrice Ossona de Mendez, André Raspaud, Vojtìch Rödl, Gert Sabidussi, Oriol Serra, Jozef Firáò, Paul Seymour, Endre Szemerédi, Claude Tardif, Robin Thomas, Carsten Thomassen, Vera T. Sós, Herbert Wilf, Peter Winkler, Xuding Zhu.
Organizer: DIMATIA Charles University, Prague.
Deadlines: Early registration: May 15, 2006. Abstract submission: May 30, 2006.

Information: http://kam.mff.cuni.cz/cs06.

*10–15 **Conference on Recent Developments in the Arithmetic of Shimura Varieties and Arakelov Geometry (An EMS Marie Curie Conference, supported by the European Commission)**, Centre de Recerca Matemàtica, Bellaterra, Spain.
Speakers: Ahmed Abbes (Univ. de Paris XIII, France), Pascal Boyer (Univ. de Paris VI, France), Jan H. Bruinier (Univ. Köln, Germany), Laurent Clozel (Univ. de Paris XI), Henri Darmon (McGill Univ., Canada), Jürg Kramer (Humboldt Univ. zu Berlin, Germany), Elena Mantovan (Harvard Univ., USA), Sophie Morel (Univ. de Paris XI, France), Bao Chau Ngo (Univ. de Paris XI, France), Michael Rapoport (Univ. Bonn), Damian Roessler (Univ. de Paris VII, France), Christophe Soulé (CNRS–IHÉS, France).
Information: http://www.crm.es/SVAG; email: SVAG@crm.es.

*11–12 **DIMACS Workshop on Machine Learning Techniques in Bioinformatics**, DIMACS Center, CoRE Bldg, Rutgers University, Piscataway, New Jersey.
Description: Bioinformatics aims to solve biological problems by using techniques from mathematics, statistics, computer science, and machine learning. Recent years have observed the essential use of these techniques in this rapidly growing field. Examples of such applications include those to gene expression data analysis, gene-protein interactions, protein folding and structure prediction, genetic and molecular networks, sequence and structural motifs, genomics and proteomics, text mining in bioinformatics, and so on.
Organizers: Dechang Chen, Uniformed Services University of the Health Services, email: dchen@usuhs.mil; Xue-Wen Chen, University of Kansas, email: xwchen@ku.edu; Sorin Draghici, Wayne State University, email: sod@cs.wayne.edu.
Local Arrangements: Workshop Coordinator, DIMACS Center, email: workshop@dimacs.rutgers.edu; 732-445-5928.
Information: http://imacs.rutgers.edu/Workshops/MLTechniques/.

*12–16 **Anomalous Transport: Experimental Results and Theoretical Challenges**, Physikzentrum Bad Honnef near Bonn, Germany.
Scope: Anomalous transport phenomena such as sub- and superdiffusion, non-Gaussian probability distributions, aging and dynamical localization form a rapidly growing research area within nonequilibrium statistical physics. The seminar will provide a unique opportunity to learn about topics ranging from mathematical foundations of anomalous dynamics to the most recent experimental results in this field.
Invited Speakers: R. Artuso (Como), E. Barkai (Bar-Ilan), C. Beck (London), A. V. Chechkin (Kharkov), D. Del-Castillo-Negrete (Oak Ridge), P. Dieterich (Dresden), T. Geisel (Goettingen), R. Gorenflo (Berlin), R. Hilfer (Stuttgart), J. Kaerger (Leipzig), R. Kimmich (Ulm), J. Klafter (Tel Aviv), W. Kob (Montpellier), A. Kusumi (Kyoto), E. Lutz (Ulm), R. Metzler (Copenhagen), M. J. Saxton (Davis), M. Shlesinger (Arlington), S. Tasaki (Tokio), G. Vogl (Vienna), A. Vulpiani (Rome), S. Yuste (Badajoz).
Registration: Applications are welcome and should be made by using the application form on the conference web page, however, the number of attendees is limited. The seminar's registration fee is EUR 200 and will cover accommodation and meals.
Deadline: For applications is April 30, 2006.
Information: For further information please visit the conference webpage http://anotrans.physik.hu-berlin.de, or contact one of the organizers.

*13–14 **Conference on Geometric Group Theory**, Centre de Recherches Mathematiques, Montreal, Canada.
Description: **From July 3–7**: There will be five mini-courses focusing on emerging ideas in Geometric Group Theory that will be especially aimed at graduate students, but are sure to be of wider interest. **From July 10–14:** There will be a workshop featuring some of the exciting new developments in the Geometric Group Theory. We expect around twenty talks during the workshop week.
Information: http://www.crm.umontreal.ca/Geometric06/index_e.html.

*16–21 **Recent Advances in Nonlinear Partial Differential Equations: A celebration of Norman Dancer's 60th birthday**, University of New England, Armidale, NSW, Australia.
Workshop Topics: Nonlinear Partial Differential Equations, Calculus of Variations, Topological Methods in Nonlinear Analysis, Harmonic Analysis and Dynamical Systems.
Organizers: Daniel Daners, Yihong Du, Chris Radford, Shusen Yan.
Deadline: Registration deadline: March 31, 2006.
Information: http://www.maths.usyd.edu.au/u/daners/une2006/.

*16–22 **Horizon of Combinatorics**, Lake Balaton, Hungary.
Topics: Horizon of Combinatorics intends to gather researchers from all areas related to combinatorics. These include amongst others: Combinatorial structures (graphs, hypergraphs, matroids, designs, permutation groups), Combinatorial optimization, Combinatorial aspects of geometry and number theory, Infinite combinatorics, Algebraic combinatorics, Algorithms in combinatorics and related fields.
Information: http://www.renyi.hu/conferences/horizon.

*17–21 **Workshop on Singularities in PDE and the Calculus of Variations**, Centre de Recherches Mathématiques, Montreal, Canada.
Focus: The development and structure of singular structures in solutions to nonlinear partial differential equations.
Participants: Amandine Aftalion (Paris VI), Giovanni Alberti (Pisa), Yaniv Almog (LSU), Leonid Berlyand (Penn State), Fabrice Bethuel (Paris VI), Rustum Choksi (SFU), Manuel DelPino (U. de Chile), Carlos Garcia-Cervera (Cal.-Santa Barbara), Stephen Gustafson (UBC), Robert Jerrard (Toronto), Shuichi Jimbo (Hokkaido), Bernd Kawohl (Koln), David Kinderlehrer (Carnegie-Mellon), Robert V. Kohn (NYU), Chun Liu (Penn State), Andrea Malchiodi (SISSA, Trieste), Vincent Millot (CMU), Alberto Montero (Toronto), Yoshihisa Morita (Ryukoku, Japan), Pablo Padilla (UNAM, Mexico), Daniel Phillips (Purdue), Xiaofeng Ren (Utah State), Maria Reznikoff (Princeton), Etienne Sandier (Paris-12), Sylvia Serfaty (NYU), Daniel Spirn (Minnesota), Edward Stredulinsky (Wisconsin-Richland), Gabriella Tarantello (Rome II).
Information: http://www.crm.umontreal.ca/Singularities06/index_e.html.

August 2006

*7–11 **Effective Randomness**, AIM Research Conference Center, Palo Alto, California.
Description: This workshop, sponsored by AIM and the NSF, will bring together researchers who have studied effective randomness at different times, with different motivations, and drawing from different academic backgrounds, with an aim toward increasing communication and collaboration, and developing broad shared research goals and a coherent research community.
Topics: For the workshop will include effective notions of randomness such as Martin–Löf randomness; measures of relative randomness; effective dimension; Kolmogorov complexity and other concepts from algorithmic information theory; and interactions with computability theory and complexity theory.
Organizers: Joseph Miller and Denis Hirschfeldt.
Deadline: May 7, 2006.
Information: http://aimath.org/ARCC/workshops/randomness.html.

*14–16 **Network Design: Optimization and Algorithmic Game Theory**, Centre de Recherches Mathématiques, Montreal, Canada.
Description: As the network infrastructure keeps changing and new applications are emerging, the mathematical models themselves

must be adapted constantly. The workshop will explore recent developments in the field and especially the relationship between combinatorial optimization and the models used in distributed network design.
Organizers: Shie Mannor (McGill) and Adrian Vetta (McGill).
Participants: Kamal Jain (Microsoft Research Center), Ramesh Johari (Stanford University), George Karakostas (McMaster University), Anna Karlin (University of Washington), Jochen Konnemann (University of Waterloo), Kate Larson (University of Waterloo), Yishay Mansour (Tel Aviv University), Peter Marbach (University of Toronto), Sean Meyn (University of Illinois), Tim Roughgarden (Stanford University), Andreas Schulz (ETH Zentrum), Nahum Shimkin (Technion), Eva Tardos (Cornell University).* (*) To be confirmed
Information: http://www.crm.umontreal.ca/Network06/.

* 21–25 **Phase Transitions in Physics, Computer Science, Combinatorics and Probability Theory**, AIM Research Conference Center, Palo Alto, Califonia.
Organizers: Persi Diaconis, Daniel Fisher, Cris Moore, and Charles Radin.
Workshop Topics: This workshop, sponsored by AIM and the NSF, will be devoted to the study of phase transitions in several traditionally separate subjects. We propose to bring together experts in different area to present the various intuitions, motivations, canonical examples and conceptual techniques of their areas, the hope being to come to agreement on a few key definitions, and perhaps thereby to bring fresh ideas to bear on open problems.
Application Deadline: May 14, 2006.
Information: http://aimath.org/ARCC/workshops/phasetransition.html.

* 30–September 1 **Recent Trends in Constructive Approximation Theory. Satellite Conference of ICM06**, Universidad Carlos III de Madrid, Legans, Spain.
Topics: Riemann-Hilbert approach to asymptotics of orthogonal polynomials, inverse problems and rational approximation, spectral theory of banded and differential operators, numerical analysis and rational approximation, integrable non linear dynamical systems, eigenvalues of random matrices, non standard orthogonal polynomials.
Main Speakers: P. Deift (Courant Institute, New York University), B. Simon (California Institute of Technology), F. A. Grunbaum (University of California, Berkeley), S. Khruschev (Atilim University, Ankara, Turkey), M. E. H. Ismail (University of Central Florida), A. B. J. Kuijlaars (Katholieke Universiteit Leuven, Belgium).
Deadlines: Submission of abstracts is May 31, 2006; Registration is June 15, 2006.
Contact: Francisco Marcellan, Departamento de Matemáticas, Universidad Carlos III de Madrid, Avenida de la Universidad 30, 28911 Leganes, Spain; email: pacomarc@ing.uc3m.es.
Information: Visit the website http://www.uc3m.es/uc3m/dpto/MATEM/OrthApprox/ICM06/uc3m_ICM06.html.

* 31–September 5 **Advanced Course on Combinatorial and Computational Geometry: Trends and topics for the future**, Centre de Recerca Matemàtica, Barcelona, Spain.
Speakers: János Pach (City College and Courant Institute, New York and Rényi Institute, Budapest, Hungary), Micha Sharir (Tel Aviv University, Israel).
Registration and Payment: Fee with dinner party: 190 ñ; Fee without dinner party: 150 ñ, Deadline: May 15, 2006.
Grants: The CRM offers a limited number of grants for registration fee and/or accommodation addressed to young researchers. The deadline for application is April 14, 2006.
Further Information: Visit http://www.crm.es/ACComGeometry; email: ACComGeometry@crm.es.

September 2006

* 1–4 **Conference on Mathematical Neuroscience**, Sant Julià de Lòira (Andorra), Madrid, Spain.
Plenary Speakers: Bard Ermentrout (University of Pittsburgh), Nancy Kopell (Boston University), John Rinzel (New York University).
Invited Speakers: Ad Aersten, Janet Best, Alla Borisyuk, Amithaba Bose, Paul Bressloff, Eric Brown, Nicolas Brunel, Carson Chow, Stephen Coombes, Gustavo Deco, Jean-Pierre Franoise, Boris Gutkin, David Hansel, John Hertz, Kresimir Josic, Peter Latham, Tim Lewis, Georgi Medvedev, Farzan Nadim, Jonathan Rubin, Michael Rudolph, María Victoria Sánchez-Vives, Walter Senn, Brian Smith, Jeffrey C. Smith, Louis Tao, Mina Teicher, Misha Tsodyks and J. Leo van Hemmen.
Information: See http://www.crm.es/CMathNeuroscience; email: CMathNeuroscience@crm.es.

* 4–8 **International Seminar on Applied Geometry in Andalusia**, University of Granada, Granada, Spain.
Organizers: A. Romero, M. Ortega, C. Ruiz, M. Gutiírrez, M. Angustias Cañadas-Pinedo, M. Fernández, A. Carriazo.
Invited Speakers: X. Gual (Univ. Jaume I), L. M. Cruz-Orive (Univ. Cantabria): "Steorology", J. M. M. Senovilla (UPV/EHU): "Geometry of submanifolds in Lorentzian geometry with applications", O. Garay, J. Arroyo (UPV/EHU), R. Lipowsky (Max Planck Institute): "Curvature energy minimizers. Applications to the physics of elastic and soft materials", R. Kamien (Univ. Pennsylvania): "Materials Geometry: An Introduction (Survey on Geometry and Physics; Geometry of Smectics)", Y. S. Cho (Ewha Women's University, Korea): "Group Actions on Gauge Theory", M. Ferri (Univ. Bologna): "Geometrical Methods in Application and Industry in Italy", L. Verstraelen (Katholieke Univ. Leuven, Belgium): "Understanding Vision through Geometry", A. Ferrández and J. Pastor (Univ. Murcia): "Geometry applied to DNA", J. Martínez Aroza (Univ. Granada): "Fractals" M. Cabrerizo (Univ. Granada): "Physics in Action", C. Ruiz (Univ. Granada): "Geometry in the Alhambra."
Information: http://gigda.ugr.es/isaga06/; email: isaga06@ugr.es.

* 4–9 **International Conference on Applied Analysis and Differential Equations**, University "Al.I.Cuza", Faculty of Mathematics, Iasi, Romania.
Purpose: Of the conference is to create a platform for international exchange of ideas and the newest results in the fields of applied analysis and differential equations.
Topics: Nonsmooth Analysis and Optimization, Ordinary Differential Equations, Partial Differential Equations, Control Theory, Stochastic Analysis.
Speakers: Please see website below.
Information: http://www.math.uaic.ro/~icaade; email: icaade@uaic.ro.

* 11–16 **XV Fall Workshop on Geometry and Physics**, Puerto de la Cruz (Tenerife, Canary Islands), Spain.
Main topics: Continuum Mechanics, Dynamical systems, Geometry Control Theory, Integrable systems, Lie algebroids (groupoids) and its applications, Poisson Geometry, Classical and Quantum Field theories, Riemannian and Lorentz Geometry and Relativity, Symplectic and Contact Geometry and Topology, String Theory, Supergravity and Supersymmetry.
Programme: Two mini-courses. Invited talks (45 minutes). Contributed talks (25 minutes). Poster Session.
Deadline: July 1, 2006.
Information: http://www.gt.matfun.ull.es/15iwgp2006/index.htm.

* 18–20 **The 10th Workshop on Elliptic Curve Cryptography (ECC 2006)**, Fields Institute, Toronto, Canada.
Information: http://www.cacr.math.uwaterloo.ca/conferences/2006/ecc2006/announcement.html.

* 18–22 **Hybrid Methods and Branching Rules in Combinatorial Optimization**, Centre de Recherches Mathématiques, Montreal,

Canada.
Description: Problems of combinatorial optimization (such as SAT, the problem of recognizing satisfiable boolean formulas in the conjunctive normal form) have been the subject of intensive study by two communities of researchers: Those in mathematical programming (often classified under "operations research") and those in constraint satisfaction programming (often classified under "artificial intelligence"). Recent years have seen increasing interaction between these two initially separate communities. One of the aims of the workshop is to foster this confluence.
Second Theme: Branching rules are another theme of the workshop. These rules are an important component of branch-and-bound-based exact algorithms and their choice may have an overwhelming impact on the efficiency of such algorithms.
Organizer: Va'úek Chvátal (Concordia).
Information: email: paradis@crm.umontreal.ca.

* 18–22 **Model Theory of Metric Structures**, AIM Research Conference Center, Palo Alto, CA.
Organizers: C. Ward Henson and Itay Ben-Yaacov.
Workshop topics: This workshop, sponsored by AIM and the NSF, will focus on the use of model theoretic ideas in analysis and metric geometry, bringing together model theorists and specialists from a few key application areas for a period of intense discussions. A diverse combination of backgrounds will allow the participants to explore from new angles certain examples, applications, and theoretical problems that define the frontier of research on the model theory of metric structures.
Application deadline: June 18, 2006.
For more information: http://aimath.org/ARCC/workshops/continuouslogic.html.

* 22–29 **Conference on Geometry and Dynamics of Groups and Spaces In Memory of Alexander Reznikov**, Max-Planck-Institut für Mathematik, Bonn, Germany.
Organizers: Mikhail Kapranov (Yale University, USA), Sergiy Kolyada (Institute of Mathematics, Ukraine), Yuri Manin (MPIM, Germany), Pieter Moree (MPIM, Germany), Leonid Potyagailo (Université de Lille, France).
Contact: email: gdgs06@mpim-bonn.mpg.de.
Topics: Alexander (Sasha) Reznikov (1960–2003) was a brilliant mathematician who died unfortunately very early. This conference in his remembrance focuses on topics Sasha made a contribution to. In particular: 1. Hyperbolic, Differential and Complex Geometry. 2. Geometric group theory. 3. Three dimensional topology. 4. Dynamical systems.

* 29–30 **16th Annual Kansas City Regional Mathematics Technology EXPO**, Rockhurst University, Kansas City, Missouri.
Forum: For mathematics instructors at both the college and secondary levels to demonstrate how they use technology successfully in their teaching, to learn about new mathematics technology, and to discuss the philosophy and future of technology in the mathematics classroom.
Invited Speakers: M. Kathleen Heid (Pennsylvania State University, University Park, PA), Doug Ensley (Shippensburg University, Shippensburg, PA).
Deadline: Submittion of proposals: April 14, 2006.
Information: Visit http://kcmathtechexpo.org; email: rgill@bluevalleyk12.org.

October 2006

* 2–6 **Quantum Cryptography and Computing Workshop**, Fields Institute, Toronto, Canada.
Information: http://www.fields.utoronto.ca/programs/scientific/06-07/crypto/quantum/.

* 7–10 **PDE Approaches to Image Processing**, Mathematical Institute, University of Cologne, Cologne, Germany.
Workshop: sponsored by the ESF Programme "Global and Geometric Aspects of Nonlinear Partial Differential Equations".
Description: Recent progress in mathematical image processing shows a surprising success when one applies numerical methods to ill-posed partial differential equations. There is hardly any theory for these equations, it lags far behind their use by engineers, and the purpose of the workshop is to learn more about the underlying mathematical questions. We shall address for instance issues like anisotropic diffusion and Perona-Malik type equations.
Organizers: Bernd Kawohl (Cologne), Felix Otto (Bonn).
Information: http://www.mi.uni-koeln.de/~jhorak/workshop/.

* 9–13 **Short-term Cardiovascular-Respiratory Control Mechanisms**, AIM Research Conference Center, Palo Alto, California.
Organizers: Franz Kappel, Vera Novak, Mette Olufsen, and Hien Tran.
Workshop: This workshop, sponsored by AIM and the NSF, will be the first highly focused attempt to tackle complex problems in cardio-respiratory physiology by bringing together researchers with expertise in physiology, mathematics, and statistics. The overall objective of this workshop is to discuss methodologies to further develop mathematical models to improve understanding, diagnosis, and treatment of clinical problems related to short-term cardiovascular-respiratory regulation.
Application deadline: July 9, 2006.
Information: http://aimath.org/ARCC/workshops/cardiocontrol.html.

* 10–13 **Data Mining and Mathematical Programming**, Centre de Recherches Mathématiques, Montreal, Canada.
Description: Data mining is a fast-growing discipline that uses techniques from several subfields of applied mathematics, including operations research and statistics. This workshop will feature applications of exact or heuristic algorithms for solving mathematical programs (linear or nonlinear, convex or nonconvex) to the fundamental problems in data mining, in particular clustering, discrimination and search for relations.
Organizers: Pierre Hansen (HÉC Montréal) and Panos Pardalos (Florida).
Information: email: paradis@crm.umontreal.ca.

* 16–20 **Subconvexity Bounds for L-functions**, AIM Research Conference Center, Palo Alto, California.
Organizers: William Duke, Philippe Michel, Andre Reznikov, and Akshay Venkatesh.
Workshop topics: This workshop, sponsored by AIM and the NSF, will be devoted to subconvexity bounds for L-functions. In recent years, there has been substantial progress towards the subconvexity problem for GL(2) L-functions, beginning with the work of Duke, Friedlander, and Iwaniec; more recently, ideas from representation theory and dynamics have been brought to bear on the problem. Subconvexity bounds for L-functions in higher rank (and, more generally, bounds for periods) remain largely elusive. The aim of the workshop is to consolidate the existing approaches and initiate analysis of the higher rank subconvexity problem.
Application deadline: July 16, 2006.
Information: http://aimath.org/ARCC/workshops/subconvexity.html.

* 17–20 **Polyhedral Computation**, Centre de Recherches Mathématiques, Montreal, Canada.
Description: The last fifteen years have seen significant progress in the development of general purpose algorithms and software for polyhedral computation (e.g. finding lattice points, enumerating vertices, extreme rays and facets and triangulating polyhedra). This workshop will bring together researchers with both theoretical and computational expertise with polyhedral computations.
Organizers: David Avis (McGill), David Bremner (New Brunswick) and Antoine Deza (McMaster).

* 30–November 3 **Computational Challenges Arising In Algorithmic Number Theory and Cryptography**, Fields, Toronto, Canada.
Information: http://www.fields.utoronto.ca/programs/scientific/06-07/crypto/number_theory/.

November 2006

* 1–5 **CCA 2006 Third International Conference on Computability and Complexity in Analysis**, University of Florida, Gainesville, Florida.
Scope: The conference is concerned with the theory of computability and complexity over real-valued data. Computable Analysis combines concepts from Analysis/Numerical Analysis and Computability/Computational Complexity and studies those functions over real-valued data, which can be realized by digital computers.
Submissions: Authors are invited to submit a PostScript or PDF version of a paper to cca-submission@FernUni-Hagen.de by July 2, 2006.
Organizing Committee: Gainesville: Paul Brodhead, Douglas Cenzer, chair, Rick Smith.
Information: Klaus Weihrauch, email: Klaus.Weihrauch@FernUni-Hagen.de, Douglas Cenzer, email: cenzer@ufl.edu; http://cca-net.de/cca2006/.

* 27–December 1 **Cryptography: Underlying Mathematics, Provability and Foundations**, Fields Institute, Toronto, Canada.
Information: http://www.fields.utoronto.ca/programs/scientific/06-07/crypto/crypto_foundations/.

December 2006

* 13–15 **Workshop on "Geometry of vector distributions, differential equations, and variational problems"**, International School for Advanced Studies (SISSA), Trieste, Italy.
Workshop topics: Equivalence problems for various geometric structures on manifolds, especially nonholonomic distributions, sub-Riemannian structures, Cauchy-Riemann (CR) structures with application to control systems, geometry of differential equations and variational problems.
Expected Participants: Andreas Cap (University of Vienna and Erwin Schrodinger Institute of Mathematical Physics), Boris Doubrov (Belorussian State University, Minsk), Svetlana Ignatovich (Kharkov National University, Ukraine), Frederic Jean (ENSTA, Paris), Piotr Mormul (Warsaw University), Pawel Nurowski (Warsaw University), Jean-Baptiste Pomet (INRIA, Sophia Antipolis, France), Jan Slovak (Masaryk University in Brno, Czech Republic), Michail Zhitomirskii (Technion -Israel Institute of Technology, Haifa, Israel).
Organizers: Andrei Agrachev (SISSA) and Igor Zelenko (SISSA).
Information: All who are interested in taking part in this activity are invited to contact Igor Zelenko, zelenko@sissa.it; http://www.sissa.it/~zelenko/CEIHomepage.html.

* 17–21 **Integral Closure, Multiplier Ideals and Cores**, AIM Research Conference Center, Palo Alto, California.
Organizers: Alberto Corso, Claudia Polini, and Bernd Ulrich.
Workshop Topics: This workshop, sponsored by AIM and the NSF, will be devoted to questions related to the notion of integral closure of ideals. Specific aspects of the workshop focus are: computation of the integral closure and its complexity; multiplicities and equisingularity theory; cores of ideals and Briancon-Skoda type theorems; multiplier ideals and test ideals; and multiplier ideals and jet schemes.
Application Deadline: September 1, 2006.
Information: http://aimath.org/ARCC/workshops/integralclosure.html.

March 2007

* 26–30 **Buildings and Combinatorial Representation Theory**, AIM Research Conference Center, Palo Alto, California.
Organizers: Monica Vazirani, Michael Kapovich, and Arun Ram.
Workshop topics and Goals: This workshop, sponsored by AIM and the NSF, will bring together researchers with different perspectives in combinatorial representation theory: combinatorial, metric, and algebro-geometric. It has emerged from recently that Bruhat–Tits buildings play an essential, not yet well-understood role in combinatorial representation theory by providing a geometric realization to existing combinatorial models and linking them to the algebro-geometric tools of representation theory. Goals for the workshop include examining and comparing the different approaches to the saturation theorem, with an emphasis on the role of buildings.
Application Deadline: December 1, 2006.
Information: http://aimath.org/ARCC/workshops/buildings.html.

April 2007

* 23–27 **Problems in Geometric Group Theory**, AIM Research Conference Center, Palo Alto, California.
Organizers: Mladen Bestvina, Tadeusz Januszkiewicz, and Richard Scott.
Workshop Topics: This workshop, sponsored by AIM and the NSF, will be devoted to compiling a list of unsolved and partially solved problems in geometric group theory. The list will be organized into various subfields of geometric group theory and other fields that have substantial overlap with geometric group theory. The problems will be annotated with special cases, relationships among the problems, broader implications, and progress to date.
Application Deadline: January 12, 2007.
Information: http://aimath.org/ARCC/workshops/geomgpthy.html.

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.

May 2007

* 7–11 **Rational Curves on Algebraic Varieties**, AIM Research Conference Center, Palo Alto, California.
Organizers: Brendan Hassett and Sandor Kovacs.
Workshop Topics and Goal: This workshop, sponsored by AIM and the NSF, will be devoted to rationally-connected varieties. The workshop will focus on the following tools: deformation theory of curves and combs; constructions of free curves with desired properties; moduli spaces of stable maps; singularity theory and rational-chain connectedness. One main goal will be to present and discuss state-of-the-art techniques in each of these areas.
Application Deadline: January 21, 2007.
Information: http://aimath.org/ARCC/workshops/rationalcurves.html.

July 2007

* 2–6 **25th Journees Arithmetiques**, University of Edinburgh, Scotland, UK.
Information: email: c.smyth@ed.ac.uk.