

Mathematics Calendar

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

October 1999

- * 12-15 **Pseudorandomness and Explicit Combinatorial Constructions**, DIMACS Center, Rutgers University, Piscataway, New Jersey.

Organizers: R. Impagliazzo (Univ. of California at Berkeley), A. Ta-Shma (International Computer Science Institute), and D. Zuckerman (Univ. of Texas at Austin and Univ. of California at Berkeley).

Focus: The two topics appearing in the title of this workshop represent important and closely linked research directions within, respectively, computer science and combinatorics. This workshop will focus on this common area of interest, focusing on problems and techniques for construction of combinatorial objects arising in computer science, graph theory, and coding theory. In recent years, these techniques have included methods from such diverse areas as representation theory and algebraic geometry, and one aim of the workshop is to expose a broader range of researchers to these techniques.

Information: D. Zuckerman, Univ. of Texas at Austin and Univ. of California at Berkeley, diz@cs.berkeley.edu. Local arrangements: P. Pravato, DIMACS Center, pravato@dimacs.rutgers.edu, tel: 732-445-5929. WWW: <http://dimacs.rutgers.edu/Workshops/index.html>.

[rutgers.edu/Workshops/index.html](http://dimacs.rutgers.edu/Workshops/index.html).

- * 21-24 **Dynamical Systems and Related Topics**, Penn State University, University Park, Pennsylvania.

Organizers: M. Levi, Y. Pesin, G. Swiatek, H. Weiss.

Focus: A regular meeting dedicated to recent results in the theory of smooth dynamical systems, ergodic theory, symbolic dynamics, topological dynamics, Hamiltonian mechanics and related areas in differential geometry, differential equations and Lie theory.

Information: See <http://www.math.psu.edu/dynsys/ws99.html>, or send e-mail to dsws@math.psu.edu.

November 1999

- * 5-7 **Midwest Arithmetical Geometry in Cryptography (MAGC) Workshop**, University of Illinois, Urbana, Illinois.

Main Speakers: N. Koblitz, J. Silverman, N. Smart.

Information: <http://www.math.uiuc.edu/~boston/magc.html>.

- * 13-14 **Fall 1999 Pacific Northwest Geometry Seminar**, Oregon State University, Corvallis, Oregon.

Information: <http://www.math.washington.edu/~lee/PNGS/>.

[washington.edu/~lee/PNGS/](http://www.math.washington.edu/~lee/PNGS/).

- * 14-17 **IMA Minisymposium: Mathematical Investigations of Models in Combustion**, Institute for Mathematics and its Applications, University of Minnesota, Minneapolis, Minnesota.

Organizers: J. Bebernes (Univ. of Colorado), L. Caffarelli (Univ. of Texas, Austin).

Information: Institute for Mathematics and its Applications, Univ. of Minnesota, 207 Church St. SE, 400 Lind Hall, Minneapolis, MN 55455; tel: 612-624-6066; e-mail: staff@ima.umn.edu; Web page: <http://www.ima.umn.edu/reactive/fall/ms2.html>.

December 1999

- * 1-10 **First Southern African Summer School and Workshop on Logic, Universal Algebra, and Theoretical Computer Science (LUATCS'99)**, Rand Afrikaans University, Johannesburg, South Africa.

Advisory Board: S. Abramsky (Edinburgh), H. Andreka (Hungarian Acad. of Sciences), J. van Benthem, chair (Amsterdam), C. Brink (Wollongong), R. Hirsch (London), W. Hodges (Queen Mary and Westfield), B. Jonsson (Vanderbilt), I. Nemeti (Hungarian Acad. of Sciences), J. Zucker (McMaster).

Organizing Committee: I. Burger (Rand Afrikaans Univ.), V. Goranko (Rand Afrikaans Univ.).

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 e-MATH on the World Wide Web. To access e-MATH, use the URL: <http://e-math.ams.org/> (or <http://www.ams.org/>). (For those with VT100-type terminals or for those without WWW browsing software, connect to e-MATH via Telnet (telnet e-math.ams.org; login and password e-math) and use the Lynx option from the main menu.)

Univ.), P. Jipsen (Cape Town).

Introductory Courses: Dec. 1–4, RAU-Island (Vaal Dam). Each course will comprise four sessions and will give a general background into the subject(s) necessary to follow the advanced courses: P. Blackburn (Saarland), Logic; H. P. Gumm (Marburg), Universal Algebra (UA) and Theoretical Computer Science (TCS); A. Melton (Kent State), TCS; H. Schlingloff (Bremen), Logic and TCS; M. Valeriote (McMaster), UA; Y. Venema (Amsterdam), Logic and UA.

Advanced Courses: Dec. 6–10, Rand Afrikaans Univ., Johannesburg. Each of the modules listed below will consist of a tutorial part, possibly followed by a workshop part: H. Andreka, I. Nemeti (Hungarian Acad. of Sciences), Logic, relativity theory and Tarskian geometry; J. van Benthem (Amsterdam), Game theory and modal logic; Z. Chaochen (Macau), Duration calculus; A. Dawar (Cambridge), Fixed point logics and finite model theory; B. Davey (La Trobe), Advanced universal algebra; J. Farley (Vanderbilt), Exponentiation, duality, and the arithmetic of ordered sets and lattices; M. Gehrke (New Mexico State), Lattices with additional operations; R. Hirsch (Univ. Coll. London), Algebraic logic; W. Hodges (Queen Mary and Westfield), Advanced logic; B. Jacobs (Nijmegen); J. Rutten (Centre for Math and CS, Netherlands), Co-algebra, theory and applications; T. Jech (Penn State), Left-distributive algebras; M. de Rijke (Amsterdam), Computational logic and automated theorem proving; M. Vardi (Rice), Automata-theoretic approach to design verification; J. Zucker (McMaster), Computability on abstract algebras.

Information: For all correspondence, enquiries, and to be included on the mailing list, please write to: luatcs99@na.rau.ac.za. More details on the courses, tutorials, and workshops, and a detailed program of the school will be placed in due course on our Web page at <http://proof.mth.uct.ac.za/~pjipsen/luatcs99/>.

*** 2–5 The Future of Mathematical Communication 1999**, MSRI, Berkeley, California.

Sponsors: This is the first announcement for a workshop on the probable evolution of mathematical communication in coming years. It is presently sponsored by the Mathematical Sciences Research Institute (MSRI), the Centre de Recherches Mathématiques (CRM), The Fields Institute (FI), the Pacific Institute for the Mathematical Sciences (PIMS), and the International Mathematical Union (IMU).

Focus: The workshop will take place almost exactly five years after the 1994 MSRI meeting on “The Future of Mathematical Communication” and is intended to provide a snapshot at the start of the millennium of the present state of mathematical communication and a provocative look at the future from various perspectives and engaging diverse stakeholder groups. It is hoped that this will provide a useful precursor to worldwide mathematical activities in

the World Mathematical Year (WMy 2000), as the IMU has designated the year 2000. The workshop will be preceded by a half-day training workshop on the use of streaming video and followed by a day of working sessions of the IMU’s Committee on Electronic Information and Communication (CEIC).

Scientific Committee: F. Bergeron (CRM), bergeron@lacim.uqam.ca; J. Borwein (PIMS & CEIC, co-chair), borwein@cecm.sfu.ca; J. Buhler (MSRI, co-chair), jpb@msri.org; M. Groetschel (IMU & CEIC), groetschel@zib.de; B. Hart (FI), hartb@mcmaster.ca; P. Michor (EMS & CEIC), Peter.Michor@esi.ac.at; A. Odlyzko, amo@research.att.com.

Financial Support: A limited amount of funding is available for partial support of people wishing to attend. Students, recent Ph.D.s, women, and minorities are particularly encouraged to apply. To apply for funding, send a letter explaining your interest in the workshop together with a vita or bibliography and estimated travel and/or living expenses. If you are a student, also solicit a letter from a faculty advisor. This information should be sent to one of the co-chairs of the conference.

Information: For more information, visit <http://www.msri.org/>.

*** 20–23 65th Annual Conference of Indian Mathematical Society**, Awadhesh Pratap Singh University, Rewa, India.

Topics: The conference will be attended by some of the leading experts in the fields of functional analysis, algebraic topology, modern differential geometry, measure theory, mechanics, differential equations, statistics, information theory, graph theory, bio-mathematics, theory of relativity and cosmology, operation research, applied mathematics, computer science, etc., from all over India and abroad.

Information: C. K. Sharma, Dean, Faculty of Science, Dept. of Mathematical Sciences, A.P.S. University, Rewa-486003 (M.P.), India.

January 2000

*** 7–9 2nd Mediterranean Conference on Mathematics Education**, Nicosia, Cyprus.

Organizers: Pedagogical Institute of the Ministry of Education and Culture of Cyprus and Cyprus Mathematical Society in cooperation with the Department of Education and the Department of Mathematics and Statistics of the Univ. of Cyprus, the Hellenic Mathematical Society and the Cyprus Mathematics Teacher Union-OELMEK.

Sponsor: Intercollege-Cyprus.

Topics: The conference will consist of several sessions covering multiple themes under the general topic of Mathematics Education. Parallel to the conference there will be a Mathematics Festival with activities for students, including a mini Mathematics Olympiad. Official languages of the conference: Greek and English.

Information: Information can be found at the Web page: <http://www.kutzler.com/medconf2000-mathedu/>; fax: -357-2-

480505; e-mail: cms@cyearn.pi.ac.cy.

*** 15–19 (DATE CHANGE) IMA Workshop: Confinement and Remediation of Environmental Hazards**, Institute for Mathematics and its Applications, University of Minnesota, Minneapolis, Minnesota.

Organizers: J. Chadam (Univ. of Pittsburgh), A. C. Cunningham (Montana State Univ.), R. Ewing (Texas A&M Univ.).

Information: Institute for Mathematics and its Applications, Univ. of Minnesota, 207 Church St. SE, 400 Lind Hall, Minneapolis, MN 55455; tel: 612-624-6066; e-mail: staff@ima.umn.edu; Web page: <http://www.ima.umn.edu/reactive/winter/rf5.html>.

March 2000

*** 6–10 4th International Conference on Operations Research Optimization, Probability and Statistics, Mathematical Economics and Algorithms**, Havana, Cuba.

Organizers: Universidad de La Habana and Humboldt-Universitt zu Berlin.

Topics: Optimization: Linear, nonlinear, discrete, parametric, stochastic and global optimization; operations research tools. Probability and Statistics: Biometric models, statistical inference, decision modeling and theory, multivariate analysis, sampling, probability and stochastic processes, reliability, neural techniques for data mining. Mathematical Economics: Game theory, microeconomic theory, financial modeling and portfolio management. Algorithms: Geometric computation, graph theory, metaheuristics, neural networks, numerical solution of differential and differential-algebraic equations, numerical linear algebra. Multicriteria Decision Making: Decision support systems, goal programming, ordinal criteria, preference modeling and software of qualitative methods. Systems and Control: Dynamical systems, optimal control, stabilization.

Confirmed Speakers: D. Carreras, L. Davidson, K. Krikeberg, B. Kummer, C. Ribeiro, J. L. Rodriguez, R. Steuer.

Special Sessions: Optimization and Statistics Working Days: symposia on parametric and discrete optimization, mathematical statistics, dynamic systems and related topics will be developed within the frame of the working days. Workshop on connections between universities and enterprises. Roundtable: German and Cuban experiences and perspectives. Invited papers. Workshop on biometrie and applications of biomathematics. Those interested in organizing a session must propose it to one of the Program Committee chairs.

Registration: Registration information: J. Guddat, Institut für Mathematik, Humboldt Universität-Berlin, Unter den Linden 6, D-10099 Berlin, Germany; fax: 49-30-2834463; e-mail: guddat@mathematik.hu-berlin.de; S. Allende, Facultad de Matematica y Computacion, Universidad de La Habana, San Lazaro y L. Habana 4, Ciudad Habana, Cuba; fax: 537-783231 or 537-335774; e-

mail: sira@matcom.uh.cu.

Participation: Those participants who want to present a paper must send a short abstract of the paper (about 100 words) together with the registration form. The Program Committee will decide on the acceptance of the submitted papers. A number of the presented papers will be published in the journal *Investigacion Operacional*.

Key Dates: Deadline for abstracts: November 30, 1999; Information about acceptance of papers: December 30, 1999; Full version of paper due: March 7, 2000.

Fees: Participants: (Foreign Guests) US\$100, (Cubans) 100 CP; (Students) US\$40, (Cubans) 40 CP.

* 27-31 **Quantum Groups**, Morelia, Mexico.

Organizing Committee: S. Montgomery (USC), J. A. de la Pena (UNAM), C. Procesi (Univ. of Roma), and N. Reshetikhin (UCB).

Workshop Topics: Quantum groups emerged from mathematical physics in the mid '80s as an algebraic structure hidden behind quantum integrable systems. Algebraically, quantum groups are Hopf algebras which are noncommutative deformations of functions on Lie groups or dualizing, noncommutative deformations of universal enveloping algebras of Lie algebras. Immediately after these structures were discovered they were used to construct new invariants of knots and 3-manifolds. One of the most important discoveries in representation theory in the '90s was the universal (crystal) basis discovered by Kashiwara and Lusztig using quantum groups, and more recently Nakajima and others constructed representations of affine Lie algebras and corresponding quantum groups using geometry of certain moduli spaces.

Another area where quantum groups clarified a lot of the existing results and made possible fast progress is the theory of special functions (q-special functions). Conceptually, this direction can be regarded as harmonic analysis on quantum groups. Yet another direction emerged from the study of Hopf algebras with real structure by means of functional analysis. This direction is well represented in the community of people working in C^* -algebras.

Topics to be covered in the conference are: Finite-dimensional Hopf algebras, geometric realizations of quantized universal enveloping algebras, applications of quantum groups, representation theory of quantum groups.

Financial Support: To apply for funding, send a letter explaining your interest in the workshop together with a vita or bibliography and a budget for travel/living expenses. If you are a student, also solicit a letter from a faculty advisor. Those coming from North America should apply through MSRI; those coming from Latin America should apply through the Instituto de Matemáticas, UNAM (contact Jose Antonio de la Pena, jap@penelope.matem.unam.mx). All infor-

mation should be received by December 1, 1999.

Information: For more information, visit <http://www.msri.org/>.

May 2000

* 8-12 **Geometric and Topological Aspects of Group Theory**, MSRI, Berkeley, California.

Organizing Committee: R. Alperin, M. Culler, B. Farb, and P. Shalen.

Topics: This conference will focus on the interactions between the theory of finitely generated groups and other areas of mathematics, such as 3-manifold theory, hyperbolic geometry, and rigidity of lattices in Lie groups. Topics will include: splittings of groups, group actions on real trees, asymptotic geometry of groups, and automorphism groups of free groups. The conference is planned to coincide with the 65th birthday of J. Stallings, whose contributions to geometric group theory have been of fundamental importance.

Financial Support: A limited amount of funding is available for partial support of people wishing to attend. Students, recent Ph.D.s, women, and minorities are particularly encouraged to apply. To apply for funding, send a letter explaining your interest in the workshop together with a vita or bibliography and a budget for travel/living expenses. If you are a student, also solicit a letter from a faculty advisor. All information should be received by February 1, 2000.

Information: For more information, visit <http://www.msri.org/>.

June 2000

* 4-9 **Ninth Quadrennial International Conference on Graph Theory, Combinatorics, Algorithms, and Applications**, Western Michigan University, Kalamazoo, Michigan.

Program: The conference will include five days of principal, invited, and contributed lectures. Presentations will be given at the Western Michigan Univ. Conference Facility, the Fetzer Center. The conference will include several special events: Sunday and Monday receptions, a special conference luncheon and the traditional picnic on Wednesday, and the conference banquet on Thursday.

Directors: Y. Alavi (Western Michigan Univ.), G. Chartrand (Western Michigan Univ.), R. L. Graham (AT&T Laboratories), D. R. Lick (Eastern Michigan Univ.), J. W. Petro (Western Michigan Univ.), and A. J. Schwenk (Western Michigan Univ.).

Information: The Directors, The Ninth International Conference, Department of Mathematics, Western Michigan Univ., Kalamazoo, MI 49008-5152; tel: 616-387-4591 or 616-387-4532 or 616-387-4551; fax: 616-387-4530; WWW: <http://www.wmich.edu/graftheo/gtc2000.html>.

* 12-17 **Third International Conference on Differential Equations and Applications**

(DIFFEQ'2000), St. Petersburg State Technical University, St. Petersburg, Russia.

Organizers: Department of Mathematics and Laboratory of Nonlinear Analysis, St. Petersburg Technical Univ., Editorial Board of the Electronic Journal *Differential Equations and Control Processes*.

Organizing Committee: E. Ershov (St. Petersburg Univ. of Arch. and Civil Eng., associate chair, ershov@eug.usr.abu.spb.ru); A. Moiseev (St. Petersburg Technical Univ., secretary, diff2000@osipenko.stu.neva.ru).

Conference Chair: G. Osipenko (St. Petersburg Technical Univ.), math@math.hop.stu.neva.ru.

Focus: Discussion of latest advances in the development of the theory of ordinary differential equations and the role of the theory for explanation of some nonlinear effects arising in real systems as well as demonstration of up-to-date efficient methods for solution of applied technical problems.

Topics: The list of possible topics includes (but is not limited) to the following: qualitative theory of ordinary differential equations; dynamical systems; constructive methods and computer-oriented algorithms; computer modeling in dynamical systems; mathematical models in biology, medicine, ecology, etc.; applications to physics, electrotechnics, and electronics; dynamic economic models; numerical methods.

Scientific Program: The program will consist of 30-minute lectures to be given by the plenary speakers and parallel sessions for short 15-minute communications by the participants on their recent research. The detailed schedule of all plenary talks and parallel session presentations will be printed in the conference program.

Languages: English and Russian.

Extended Abstracts and Papers: The participants should submit their abstracts to the Organizing Committee. Two copies of an extended abstract are requested for selection purposes. An extended abstract of one complete typewritten page should include the title of the paper, names of all authors, addresses and complete affiliations, and appropriate references. A collection of extended abstracts will be printed before the conference. Refereed proceedings including full versions of selected papers will be published after the conference.

Deadlines: Abstracts due: April 30, 2000; registration form due: April 30, 2000.

Information: For more information contact the Meeting Secretariat: DIFFEQ'2000, Department of Mathematics, St. Petersburg State Technical University, Politechnicheskaya st., 29, 195251 St. Petersburg, Russia; fax: +7+812+5343314, +7+812+5341404; e-mail: diff2000@osipenko.stu.neva.ru; or consult the Web page http://www.neva.ru/journal/eng/e_main.htm.

July 2000

* 3-7 **ALHAMBRA 2000**, Granada, Spain.

Sponsor: This is a World Math Year 2000 (WMY 2000) event, promoted by the European Mathematical Society, with the collaboration of the Spanish Royal Mathematical Society and the CIMPA.

Information: C. Ruiz, conference e-mail: alhambra2000@ugr.es; conference secretariat: eurocongres@mx3.redestb.es; Web site: <http://www.ugr.es/~alhambra2000/>

* 4-6 **Catop2000**, Department of Mathematics, University of Fribourg, Fribourg, Switzerland.

Topic: Organized on the occasion of Heinrich Kleisli's 70th birthday, it is the aim of this conference to discuss categorical topological methods that are likely to be mathematically important in the next century.

Organizers: H.-P. Kunzi (Berne, Switzerland) and E. Ruh (Fribourg, Switzerland).

Invited Speakers: A. Arhangel'skii (Moscow, Russia), M. Barr (Montreal, Canada), M. M. Clementino (Coimbra, Portugal), K. P. Hess (Lausanne, Switzerland), R. Lowen (Antwerp, Belgium), H. A. Priestley (Oxford, England), D. Pumpluen (Hagen, Germany), S. Watson (York, Canada).

Information: Catop2000, Dept. of Mathematics, Univ. of Fribourg, CH-1700 Fribourg, Switzerland; e-mail: catop2000@unifr.ch. More information concerning the conference, in particular its program, its proceedings, and its various deadlines, can be found on its home page, <http://www.unifr.ch/math/catop2000/>.

* 9-28 **Workshop On Mathematical Models of Individual and Public Choice**, University of California, Irvine, California.

Topics and Leaders: Voting (N. Miller); Social choice (J. Weymark); Political economy (J. Banks); Fair division (S. Brams); Cost and surplus sharing (H. Moulin); Macro models of distributive justice (J. Roemer); Utility and risk (M. Machina); Learning/evolution of preference (C. Camerer); Inter-temporal choice.

Information: Expenses will be covered for those accepted. Application deadline: November 22, 1999. For application details see Web site: <http://hyapatia.ss.uci.edu/imbs/workshop/workshop.html>. For general inquiries contact A. A. J. Marley at tony@hebb.psych.mcgill.ca or H. Moulin at moulin@rice.edu.

August 2000

* 21-25 **16th IMACS World Congress (IMACS Congress 2000)**, Lausanne, Switzerland.

Host: Swiss Federal Institute of Technology (École Polytechnique Fédérale de Lausanne).

Information: For more information about the congress, contact either R. Owens (robert.owens@epfl.ch) or the IMACS secretariat at the following addresses: IMACS Secretariat, Dept. of Computer Science, Rutgers Univ., New Brunswick, NJ 08903; fax: 732-445-0537; e-mail: imacs@cs.rutgers.edu.

edu; Web page: <http://IMACS2000.epfl.ch/> or <http://www.cs.rutgers.edu/>.

September 2000

* 12-15 **International Workshop on Operator Theory and Applications (IWOTA)**, Faro, Portugal.

Topics: The main topics will be factorization theory, factorization and integrable systems, operator theoretical methods in diffraction theory, algebraic techniques in operator theory, related topics and applications to mathematical physics. A related summer school on integrable systems and factorization problems is planned to precede the workshop (September 7-9). In 2000 another IWOTA conference will take place in Bordeaux (June 14-17).

Organizing Committee: M. A. Kaashoek (Amsterdam), V. G. Kravchenko (Faro), A. B. Lebre (Lisboa), N. Manojlovic (Faro), R. Picken (Lisboa), A. F. dos Santos (Lisboa), F.-O. Speck (Lisboa).

Registration: Those interested may pre-register on the IWOTA Web page or by e-mail in order to receive the second announcement containing further details and the registration form. This will be sent out in September 1999. All information, including a tentative list of participants, will be available on our Web page.

Information: Please contact the organizer: N. Manojlovic, U.C.E.H., Universidade do Algarve, Campus de Gambelas, 8000 Faro, Portugal; tel: +351-89-800914, ext. 7637; fax: +351-89-818560; e-mail: nmanoj@ualg.pt; <http://www.ualg.pt/cma/iwota/>.