

Meetings & Conferences of the AMS

IMPORTANT INFORMATION REGARDING MEETINGS PROGRAMS: AMS Sectional Meeting programs do not appear in the print version of the *Notices*. However, comprehensive and continually updated meeting and program information with links to the abstract for each talk can be found on e-MATH. See <http://www.ams.org/meetings/>. Programs and abstracts will continue to be displayed on e-MATH in the Meetings and Conferences section until about three weeks after the meeting is over. Final programs for Sectional Meetings will be archived on e-MATH in an electronic issue of the *Notices* as noted below for each meeting.

Odense, Denmark

Odense University



Note: This is a World Math Year 2000 (WMY2000) event.

June 13–16, 2000

Meeting #955

First AMS-Scandinavian International Mathematics Meeting. Sponsored by the AMS, Dansk Matematisk Forening, Suomen matemaattinen yhdistys, Icelandic Mathematical Society, Norsk Matematisk Forening, and Svenska matematiker-samfundet.

Associate secretary: Robert M. Fossum

Announcement issue of *Notices*: March 2000

Program first available on e-MATH: Not applicable

Program issue of electronic *Notices*: None

Issue of *Abstracts*: None

Deadlines

For organizers: Expired

For consideration of contributed papers in Special Sessions: Expired

For abstracts: March 15, 2000

Invited Addresses

Tobias Colding, Courant Institute, New York University, *Embedded minimal surfaces and applications to 3-manifold topology*.

Johan Håstad, Royal Institute of Technology, Stockholm, *On efficient approximability of NP-hard optimization problems*.

Nigel J. Hitchin, University of Oxford, *The geometry of three-forms*.

Elliott Lieb, Princeton University, *Title to be announced*.

Pertti Mattila, University of Jyväskylä, *What has Menger curvature given to complex and harmonic analysis?*

Curtis T. McMullen, Harvard University, *The shape of the moduli space of Riemann surfaces*.

Alexei N. Rudakov, Norwegian University of Science & Technology, *Representations of $E(3,6)$ and the related structures*.

Karen Uhlenbeck, University of Texas, Austin, *Integrable systems in geometry*.

Dan Voiculescu, University of California, Berkeley, *Title to be announced*.

Special Sessions

Algebraic Groups and Representation Theory, **Henning Haahr Andersen** and **Niels Lauritzen**, Aarhus University.

Complex Analysis in Higher Dimensions, **Finnur Larusson**, University of Western Ontario, and **Ragnar Sigurdsson**, University of Iceland.

Differential Geometry, **Claude R. LeBrun**, State University of New York at Stony Brook, and **Peter Petersen**, University of California, Los Angeles.

Discrete Mathematics, **Iiro S. Honkala**, University of Turku, and **Carsten Thomassen**, Technical University of Denmark.

Dynamical Systems, **Michael Benedicks**, Royal Institute of Science, Stockholm, and **Carsten Lunde Petersen**, Roskilde.

Geometric Analysis/PDE, **Gerd Grubb**, University of Copenhagen, and **Bent Ørsted**, Odense University.

Joint EWM and AWM Session, **Lisbeth Fajstrup**, Aalborg University, **Tinne Hoff Kjeldsen**, Roskilde, and **Christina Wiis Tonnesen-Friedman**, Aarhus University.

K-Theory and Operator Algebras, **Soren Eilers**, University of Copenhagen, and **Nigel D. Higson**, Pennsylvania State University.

Linear Spaces of Holomorphic Functions, **Peter L. Duren**, University of Michigan, Ann Arbor, **Michael Stessin**, State University of New York, Albany, and **Harold S. Shapiro**, Royal Institute of Technology, Stockholm.

Mathematical Physics, **Bergfinnur Durhuus**, University of Copenhagen, and **Kurt Johansson**, Royal Institute of Technology, Stockholm.

Mathematics Education, **Claus Michelsen**, Odense, and **Martti E. Pesonen**, University of Joensuu.

Stochastic DE and Financial Mathematics, **Tomas Björk**, University of Stockholm, and **Bernt Øksendal**, University of Oslo.

Los Angeles, California

University of California, Los Angeles



Note: This is a World Math Year 2000 (WMY2000) event.

August 6–12, 2000

Meeting #956

Associate secretary: Robert J. Daverman
Announcement issue of *Notices*: May 2000
Program first available on e-MATH: May 24, 2000
Program issue of electronic *Notices*: October 2000
Issue of *Abstracts*: Volume 21, Issue 3

Deadlines

For organizers: Not applicable
For abstracts: May 10, 2000

Invited Addresses

All of the following invited addresses will be plenary talks. Speakers will discuss broad perspectives on recent developments in their fields, on the impact upon science, and on applications and opportunities for the future. See the Timetable (page 620) for tentative days and times.

James G. Arthur, University of Toronto, *The principle of functoriality*.

Alexander A. Beilinson, University of Chicago, *Some results on the Geometric Langlands Conjecture*.

Michael V. Berry, University of Bristol, *Wave asymptotics and borderland physics*.

Haim Brezis, University of Paris XI and Rutgers University, *The interplay between analysis and topology in some non-linear PDEs*.

Alain Connes, Collège de France, *Noncommutative geometry*.

David L. Donoho, Stanford University, *will speak on interactions among harmonic analysis, statistical analysis, and information theory*.

Charles L. Fefferman, Princeton University, *Unsolved problems of fluid mechanics*.

Michael H. Freedman, Microsoft Research, *The physics of computation*.

Ronald L. Graham, University of California, San Diego, *Mathematics in the 21st century: Problems and prospects*. (AMS-MAA Presidents' Lecture).

Helmut H. W. Hofer, Courant Institute, New York University, *Dynamical systems at the interface of symplectic geometry and three-dimensional topology*.

Richard M. Karp, University of Washington, *will speak on Mathematical challenges from genomics and molecular biology*.

Sergiu Klainerman, Princeton University, *On the analysis of geometric evolution equations*.

Maxim Kontsevich, Institut des Hautes Études Scientifiques, *will speak on deformations, supermanifolds, and homotopical algebra*.

Peter D. Lax, Courant Institute, New York University, *Mathematics and computing*.

Simon A. Levin, Princeton University, *Ecosystems as complex adaptive systems*.

László Lovász, Yale University, *Algorithms and their analysis: Classical mathematics and new challenges*.

David Mumford, Brown University, *Modeling perception and inference in intelligent systems*.

Peter Sarnak, Princeton University, *Some problems in number theory and related analysis*.

Saharon Shelah, The Hebrew University and Rutgers University, *Logical dreams*.

Peter W. Shor, AT&T Labs, *will speak on quantum computing/quantum information theory*.

Yakov G. Sinai, Princeton University, *From renormalization in dynamics to renormalization in statistical physics*.

Richard P. Stanley, Massachusetts Institute of Technology, *Recent progress in algebraic combinatorics*.

Dennis P. Sullivan, The CUNY Graduate School, *String topology*.

Clifford Taubes, Harvard University, *Bliss and ignorance in 4-dimensions*.

Jean E. Taylor, Rutgers University, *Applications of geometric analysis*.

William P. Thurston, University of California, Davis, will speak on *three-dimensional topology and geometry*.

Karen Uhlenbeck, University of Texas, Austin, *Geometric partial differential equations: From Hilbert's Twenty-third Problem to nonlinear waves*.

S. R. S. Varadhan, Courant Institute, New York University, *Stochastic analysis and applications*.

Edward Witten, Institute for Advanced Study, will speak on *the mathematical impact of quantum fields and strings*.

Shing-Tung Yau, Harvard University, will speak on *geometry and its relation to physics*.

Don B. Zagier, Max-Planck-Institut für Mathematik, will speak on *number theory: modular forms*.

Contributed Papers

Sessions for ten-minute contributed papers will be held over the long lunch hour and perhaps on some evenings. Papers will be grouped by related subject classifications into sessions. Abstracts will be published in the program. To submit an abstract, see www.ams.org/abstracts/instructions.html, or send an empty e-mail message to abs-submit@ams.org and type help as the subject line to receive instructions through e-mail.

Opening Ceremonies and Reception

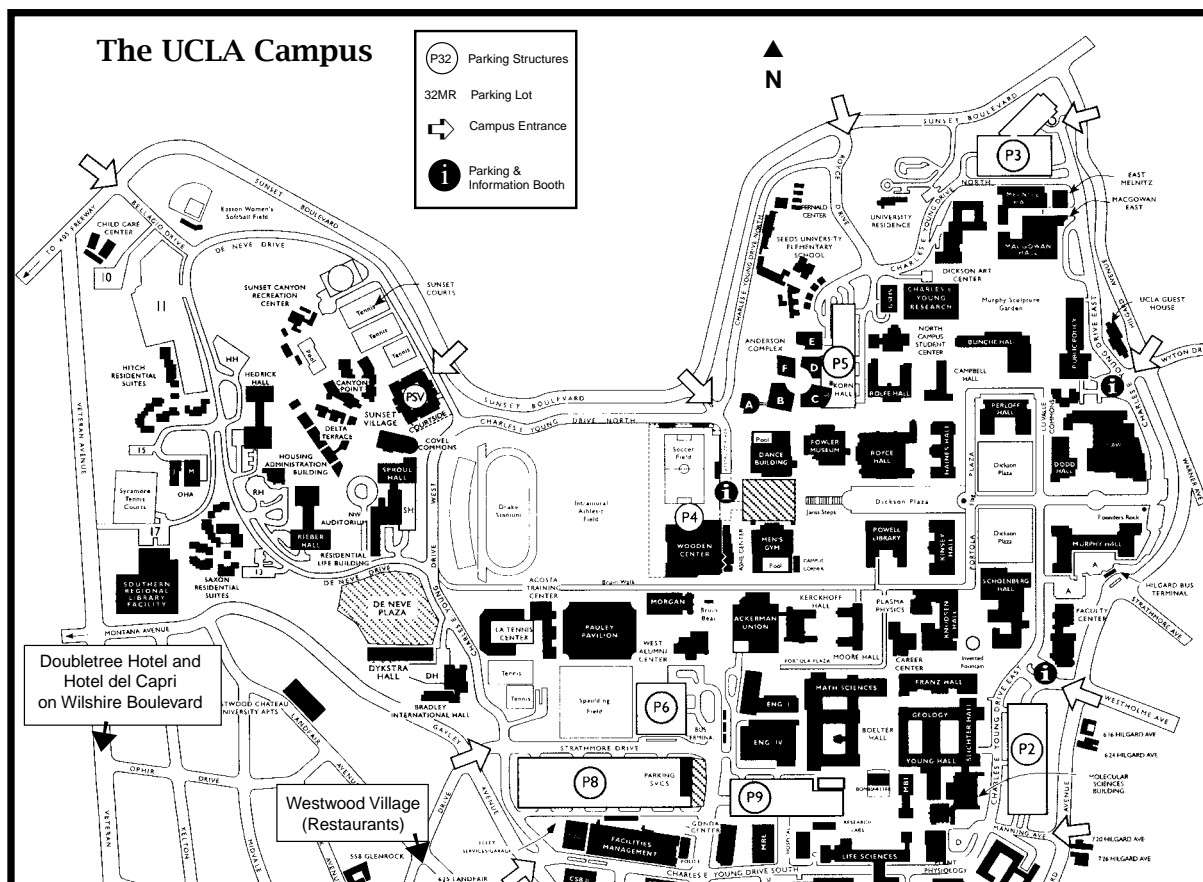
At the conclusion of the AMS-MAA Presidents' Lecture by Ronald L. Graham, all participants are invited to the Mathematical Challenges Opening Ceremonies on Sunday at

5:00 p.m. in UCLA's spectacular Royce Hall. As we hear from organizers and distinguished guests, we will begin to explore and celebrate the glorious future of mathematics. A reception will be held immediately following remarks by the speakers.

Other Events of Interest

AMS Information Booth: All Math Challenges participants are invited to visit the AMS Information Booth during the meeting. Complimentary coffee and tea will be served. A special gift will be available for participants, compliments of the AMS. The membership manager of the Society will be at the booth to answer questions about membership.

Book Sales and Exhibits: All participants are encouraged to visit the book, education media, and software exhibits from 8:00 a.m. to 4:30 p.m. Monday through Friday, and from 8:00 a.m. to noon on Saturday. Books published by the AMS will be sold at discounted prices somewhat below the cost for the same books purchased by mail. These discounts will be available only to registered participants wearing the official Math Challenges badge. Most major credit cards will be accepted for book sale purchases at the meetings. Also, AMS electronic products and e-MATH will be demonstrated.



Social Events

It is strongly recommended that for any event requiring a ticket, tickets should be purchased through advance registration. Only a very limited number of tickets, if any, will be available for sale on site. If you must cancel your participation in a ticketed event, you may request a 50% refund by returning your ticket(s) to the Mathematics Meetings Service Bureau (MMSB) by **July 10, 2000**. After that date no refunds can be made. Special meals are available at the banquet upon advance request, but this must be indicated on the Advance Registration/Housing Form.

The **Math Challenges Pub**, a private cash bar, will be open for meeting participants only on Monday through Friday evenings on the terrace outside the Grand Horizons Ballroom in Covell Commons. The Commons is adjacent to the hotel-style residence halls where meeting participants will stay and serves as the dining facility. The terrace overlooks the beautiful UCLA campus. Join your colleagues for a glass of wine, beer, or soft drinks at the end of the day to discuss mathematical issues (blackboards will be provided) or simply to watch the sunset.

Saturday, August 5

All participants are invited to a **reception** at the new NSF-funded **Institute for Pure and Applied Mathematics (IPAM)**. See www.ipam.org/ for more information on this new institute, whose main purpose is to encourage the cross-fertilization between mathematics and other scientific disciplines and to broaden the range of mathematical techniques used in science. Time to be announced.

Sunday, August 6

Getty Museum Tour: The Getty offers a vast collection of European paintings, decorative arts, Old Master drawings, medieval and Renaissance manuscripts, and American and European photographs. The beautifully landscaped grounds feature tranquil gardens and panoramic views of the city, mountains, and sea. Buses will leave the UCLA campus at approximately 10:00 a.m. and return at 3:00 p.m. For those on the UCLA meal plan, box lunches will be provided. There are restaurants at the museum. Cost for this trip is \$5/person; there is no charge for a child sitting on an adult's lap. Space is limited, so reserve early during advance registration! See www.getty.edu/ for more information on special exhibitions, programs, and children's activities.

Tuesday, August 8

Southern California Barbecue: Bring your appetite for a country shindig! Feast on mesquite-grilled chicken, pork spareribs with hickory barbecue sauce, tossed green salad, red potato salad, corn on the cob, and country biscuits. Top it all off with some mouthwatering strawberry shortcake! So kick off your shoes, relax with your colleagues outdoors in Sunset Village, and enjoy this bountiful buffet. Cash bar available. Cost is \$27 per person; children 5 to 11 are \$12; no charge for children 4 and under.

Thursday, August 10

A Night at the Hollywood Bowl: Here is your chance to experience this historic outdoor amphitheater, the Los Angeles Philharmonic's summer home. This evening's theme will be "Thunder and Lightning", featuring the music of Beethoven and Tchaikovsky. Buses will take us from the UCLA campus at about 7:30 p.m., returning at approximately 10:30 p.m. Cost is \$45 per person, including round-trip bus transportation. Reserve early during advance registration! Tickets are limited for this fabulous evening of music under the stars.

Saturday, August 12

Millennium Banquet: At the conclusion of the week's plenary talks, come join your colleagues to summarize what the mathematical challenges of the 21st century will be. Enjoy a beverage at the cash bar, then dine on grilled fillet of salmon glazed with a caramelized orange sauce, accompanied by herbed orzo and a salad of fresh tomatoes, grilled vegetables, and goat cheese, dressed with a champagne vinaigrette; dessert is blackberry sorbet garnished with fresh berries. Complimentary wine will be served with dinner. This evening's event will feature a special presentation by **Persi Diaconis**, probabilist, magician, and expert on the mathematics of card shuffling, in addition to being a very stimulating lecturer. Don't miss this marvelous event celebrating the achievements of mathematics! Cost is \$35 per person.

Registering in Advance and Hotel/Residence Hall Accommodations

How to Register in Advance: The importance of advance registration cannot be overemphasized. Advance registration fees are considerably lower than the fees that will be charged for registration at the meeting. Participants registering by **June 8, 2000**, will receive their badges, programs, and tickets purchased in advance by mail approximately three weeks before the meeting, unless they check the appropriate box to the contrary on the Advance Registration/Housing Form. Because of delays that occur in U.S. mail to Canada, it is strongly suggested that advance registrants from Canada choose to pick up their materials at the meeting. Because of delays that occur in U.S. mail to overseas, we do not mail materials overseas. There will be a special Registration Assistance Desk at the meetings to assist individuals who either do not receive this mailing or who have a problem with their registration. Please note that a \$5 replacement fee will be charged for programs and badges that are mailed but not taken to UCLA. Acknowledgments of registrations will be sent by e-mail to the e-mail addresses given on the Advance Registration/Housing Form. If you do not wish your registration acknowledged by e-mail, please mark the appropriate box on the form.

E-mail Advance Registration: This service is available for advance registration and housing arrangements. Please request the e-mail registration form either by sending e-mail to meetreg-request@ams.org or by going to <http://www.ams.org/amsmtgs/mathchall.html> and

looking under "Registration". VISA, MasterCard, Discover, and American Express are the only methods of payment which can be accepted for e-mail advance registration, and charges to credit cards will be made in U.S. funds. Completed e-mail forms should be sent to meetreg-submit@ams.org. All advance registrants will receive acknowledgment of payment prior to the meetings.

Internet Advance Registration: This service is available for advance registration and housing arrangements at <http://www.ams.org/amsmtgs/mathchall1.regmsg.html> or by going directly to <https://www.ams.org/cgi-bin/meetreg/meetings?meetnum=2062/>. VISA, MasterCard, Discover, and American Express are the only methods of payment that can be accepted for Internet advance registration, and charges to credit cards will be made in U.S. funds. All Internet advance registrants will see an on-screen acknowledgment upon the submission of this form.

Cancellation Policy: Those who cancel their advance registration for the Mathematical Challenges meeting by **July 27, 2000**, will receive a 50% refund of fees paid. No refunds will be issued after this date.

Wow! Maximize Your Mathematics!

Want to get the most out of MAA's Mathfest and AMS's Math Challenges meeting but can't stay for the full length of both? Register for the last day of MAA's Mathfest for only \$50 when you register for Math Challenges. Check out the special 3-day registration fee below!

Mathematical Challenges Registration Fees

	by July 10	At meeting
Member of AMS, CMS, MAA, SIAM	\$155	\$202
Temporarily Employed	115	127
Emeritus Member of AMS, MAA:		
Graduate Student, Unemployed, Librarian, High School Teacher, Developing Countries Special Rate	35	45
Undergraduate Student	20	26
Nonmember	240	312
High School Student	2	5
One-Day Member		
of AMS, CMS, MAA, SIAM	n/a	111
One-Day Nonmember	n/a	172
Special: 3-day Member Registration	85	132
3-day Nonmember Registration	132	204
Nonmathematician Guest	5	5

Full-Time Students: Those currently working toward a degree or diploma. Students are asked to determine whether their status can be described as graduate (working toward a degree beyond the bachelor's), undergraduate (working toward a bachelor's degree), or high school (working toward a high school diploma) and to mark the Advance Registration/Housing Form accordingly.

Emeritus: Persons who qualify for emeritus membership in either Society. The emeritus status refers to any person who has been a member of the AMS for twenty years or

more and who retired because of age or long-term disability from his or her latest position.

Librarian: Any librarian who is not a professional mathematician.

Unemployed: Any person currently unemployed, actively seeking employment, and not a student. It is not intended to include any person who has voluntarily resigned or retired from his or her latest position.

Developing Country Participant: Any person employed in developing countries where salary levels are radically non-commensurate with those in the U.S.

Temporarily Employed: Any person currently employed but who will become unemployed by June 1, 2000, and who is actively seeking employment.

Nonmathematician Guest: A registered participant may request a nonmathematician guest badge for a spouse, guest, or child. We request that all mathematicians register in a scientific category.

Advance registration and on-site registration fees only partially cover the expenses of holding meetings. All mathematicians who wish to attend sessions are expected to register and should be prepared to show their badges if so requested. Badges are required to obtain discounts at the AMS Book Sale and to cash a check with the meeting cashier.

Advance registration forms accompanied by insufficient payment either will be returned, thereby delaying the processing of any housing request, or a \$5 charge will be assessed if an invoice must be prepared to collect the delinquent amount. Overpayments of less than \$5 will not be refunded.

For each invalid check or credit card transaction that results in an insufficient payment for registration or housing, a \$5 charge will be assessed. Participants should check with their tax preparers for applicable deductions for education expenses as they pertain to this meeting.

If you wish to be included in a **list of individuals sorted by mathematical interest**, please provide the one mathematical subject classification number of your major area of interest on the Advance Registration/Housing Form. (A list of these numbers is available by sending an empty e-mail message to abs-submit@ams.org; include the number 956 as the subject of the message.)

If you do not wish to be included in any mailing list used for promotional purposes, please indicate this in the appropriate box on the Advance Registration/Housing Form.

Advance Registration Deadlines

There are two separate advance registration deadlines, each with its own advantages and benefits.

Early Advance Registration

(materials mailed and airfare lottery) **June 8**

Final Advance Registration

(advance registration, banquets, and events) **July 10**

Free Airfare!

Early Advance Registration: Those who register by the **early** deadline of **June 8** will be eligible for a **free airfare** lottery, provided by the Los Angeles Convention & Visitor's Bureau (LACVB). Early registrants may also choose to

receive their registration packets before the meeting. Registration packets will be mailed on **July 13, 2000**.

Final Advance Registration: Those who register after **June 8** and by the **final** deadline of **July 10** may register for the meeting and obtain tickets for social events. Those who register after **June 8** must pick up their badges, programs, and any tickets for social events at the Registration Desk in Royce Hall at UCLA. Please note that the **July 10 deadline is firm**; any forms received after that date will be returned and full refunds issued. Please come to the Registration Desk in Royce Hall at UCLA to register on site.

The deadline to reserve residence hall housing at UCLA is **July 3** (see below).

Hotel Reservations

Participants should be aware that the AMS contracts only with facilities who are working toward being in compliance with the public accommodations requirements of the ADA.

Participants requiring hotel reservations should call the following hotels directly.

Doubletree Hotel Brentwood

(1 mile from UCLA)

Deadline for reservations: July 10, 2000

10740 Wilshire Boulevard

Los Angeles, CA 90024

Telephone: 310-475-8711; 310-475-5220 (fax)

Toll-Free Reservations: 1-800-472-8556

Rooms: \$129 single/double

Please note: Credit card guarantee necessary, full service, 24-hour cancellation policy, full amenities, restaurant/lounge, covered parking \$16 overnight with in/out privileges (subject to change). Limited complimentary shuttle to and from UCLA.

Hotel del Capri

(9 blocks from UCLA, car needed)

Deadline for reservations: July 10, 2000

10586 Wilshire Boulevard

Los Angeles, CA 90024

Telephone: 310-474-3511; 310-470-9999 (fax)

Toll-Free: 1-800-44HOTEL

Rooms: \$90 single /\$100 double

Guest Suites: \$110 single/\$120 double

Please note: European hotel; multilingual staff, credit card guarantee necessary, **number of rooms is limited**. Rates include parking. There is no restaurant, but complimentary continental breakfast is served each morning; a charge of \$1.00 per breakfast per day is added to the bill at check-out. Four-week cancellation policy with no penalty; two-week cancellation policy with 50% penalty.

Participants should be aware that most hotels are starting to charge a penalty fee to guests for departure changes made after guests have checked into their rooms. Participants should inquire about this at check-in and make their final plans accordingly.

Participants should also be aware that it is general hotel practice in most cities to hold a nonguaranteed reservation

until 6:00 p.m. only. When one guarantees a reservation by paying a deposit or submitting a credit card number as a guarantee in advance, however, the hotel usually will honor this reservation up until checkout time the following day. If the individual holding the reservation has not checked in by that time, the room is then released for sale, and the hotel retains the deposit or applies one night's room charge to the credit card number submitted.

If you hold a guaranteed reservation at a hotel but are informed upon arrival that there is no room for you, there are certain things you can request the hotel do. First, they should provide for a room at another hotel in town for that evening at no charge. (You already paid for the first night when you made your deposit.) They should pay for taxi fares to the other hotel that evening and back to the meeting the following morning. They should also pay for one telephone toll call so that you can let people know you are not at the hotel you expected. They should make every effort to find a room for you in their hotel the following day and, if successful, pay your taxi fares to and from the second hotel so that you can pick up your baggage and bring it to the first hotel. Not all hotels in all cities follow this practice, so your request for these services may bring mixed results or none at all.

Residence Hall Reservations

Rooms will be available from August 5 to August 12 at the following halls.

Deadlines:

Housing Reservations

July 3

Housing Changes/Cancellations

(90% refund on cancellations—
no refunds after this date)

July 12

Sunset Village: Hotel-style air-conditioned rooms with private bathrooms or shared bathrooms, all nonsmoking. Rooms include daily maid service and hotel-type amenities, including cable TV. Cost of a room with a private bathroom is \$106.50 per person for a single, and \$60.00 per person for a double. **Rates include breakfast and lunch.** Cost of a room with a shared bathroom is \$95.50 per person for a single and \$54.50 per person for a double. (Please note: Doors in shared bathrooms do not lock from the bedroom side; however, rubber door stops will be provided free of charge upon request at the Mathematical Challenges Registration Desk.) Check-in will be in Sunset Village lobby.

Dykstra Hall: Residence hall with community bathrooms on each floor. Rooms are not air-conditioned, all nonsmoking. The rooms are \$74.50 per person for a single and \$44.00 per person for a double. **Rates include breakfast and lunch.** Daily towel exchange at the front desk is included. Check-in will be in Dykstra lobby.

Residence Suites: Suites are located in Saxon Hall or Hitch Hall; the walk to these halls is slightly uphill. All suites have two bedrooms (two twin beds in each), a living room, and a private bathroom. All suites are nonsmoking, but are not air-conditioned. Kitchen facilities are not available

in these suites. They are \$168.50 per person for a single, \$91.00 per person for a double, \$65.17 per person for a triple, and \$52.25 per person for a quad. **Rates include breakfast and lunch.** Daily towel exchange at front desk is included. Check-in will be in Rieber Hall lobby or Hedrick Hall lobby.

All residence hall rates listed include complimentary guest privileges at recreational facilities on campus and a **daily meal package of breakfast and lunch**, starting with breakfast on the day after arrival and ending with lunch on the day of departure. Sorry, refunds cannot be issued for meals missed at the meeting. Children under 5 are free of charge. Children between 5 and 12 are free of charge in the rooms and receive meal tickets at a discounted rate. Children over 12 pay full adult rates. There is a \$20 charge per day per rollaway for anyone at any age. Maximum number of people in a room in Sunset Village or Dykstra Hall is three. Maximum number of people in a residence suite in Saxon Hall or Hitch Hall is four.

Meals will be served for all residents at Covell Commons in Sunset Village. Operation hours and meal prices (for cash basis only) are (Sunday-Saturday):

Breakfast: 7:00 a.m. to 10:00 a.m. (door price: \$6.50)
Lunch: 11:00 a.m. to 2:00 p.m. (door price \$8.50)
Dinner: 5:00 p.m. to 9:00 p.m. (door price \$12.00)

To reserve university housing, you must complete an Advance Registration/Housing Form. All completed Advance Registration/Housing Forms must be received by the MMSB by **July 3, 2000**, for housing. Changes to reservations will be accepted by the MMSB until **July 12, 2000**. After this date, changes will be taken by the MMSB based on availability. A 10% cancellation fee will be charged for all university housing cancellations made by **July 12, 2000**. There will be no refunds issued for changes and cancellations after **July 12, 2000**.

Miscellaneous Information

Audio-visual Equipment: Standard equipment is one overhead projector and screen in the session room (plenary speakers are provided with two overhead projectors and screens). No additional equipment is available.

E-mail/Internet Access: An Internet access port is available in every residence hall sleeping room. Ethernet cards are available from the Student Technology Center located in the Sunset Village plaza. The UCLA Department of Mathematics also plans to have terminals available for checking e-mail, as does the new Institute for Pure and Applied Mathematics.

Getting around Campus/Parking: Participants residing in the Sunset Village complex may purchase parking permits during advance registration through the MMSB. Cost for parking permits is \$6 per day per vehicle. See the Advance Registration/Housing Form for details. Parking spaces will be available to residents in the PSV parking

garage, located on DeNeve Drive. You may also park in this garage while you unload your belongings and check in.

Commuters may purchase individual parking permits at the parking kiosk in parking structure #4. The parking structure entrance is located at Sunset Boulevard and Westwood Plaza. Current rate for parking permits is \$6 per day per vehicle, subject to change.

Complimentary shuttle service available exclusively for Math Challenges participants will operate Monday through Saturday between Sunset Village and Royce Hall during these times: 7:45 a.m. to 8:45 a.m., 11 a.m. to 2 p.m., and 5:30 p.m. to 6:30 p.m. It is about a 15- to 20-minute walk to Royce from Sunset Village.

Information Distribution: A table is set up in the exhibits area for dissemination of information of possible interest to participants but not promoting a product or program for sale. Those who wish to display information promoting a product or program for sale may do so in the exhibit area at the Joint Books, Journals, and Promotional Materials display for a fee of \$50 per item. Contact the exhibits coordinator at 401-455-4143 or send e-mail to meet@ams.org for more information.

Local Information: Please see pages maintained by the UCLA Department of Mathematics at <http://www.math.ucla.edu/newsevents/news/ams2000.html> and by the Los Angeles Convention & Visitors Bureau at <http://www.lacvb.com/>.

Messages: Telephone messages of a routine nature should be left at the participant's place of accommodation, either the hotel or the Sunset Village reception desk (310-206-9633).

Emergency messages will be taken at the meeting registration desk in Royce Hall during the hours that the desk is open. The telephone number will be published in the program.

Registration Desk: The meeting registration desk in the Founders Room in Royce Hall will be open Monday through Friday, August 7-11, from 8:00 a.m. to 4:30 p.m., and on Saturday from 8:00 a.m. to noon. Participants who register in advance and do not elect to receive their badges and programs in the mail may pick up pertinent materials at the outside ticket booth at Royce Hall on Sunday afternoon between 2:00 p.m. and 5:00 p.m.; otherwise, all badge and program pickup and new registrations will take place in the Founders Room during the hours cited above.

Travel: The nearest airport to campus is the Los Angeles International Airport (LAX).

The following specially negotiated rates on **USAirways** are available exclusively to mathematicians and their families for the period July 29-August 15, 2000, for travel to Los Angeles. Discounts apply only to travel within the continental U.S. Other restrictions may apply, and seats are limited. Receive a 5% discount off first or Envoy class and any published USAirways promotional round-trip fare. By purchasing your ticket 60 days or more prior to departure, you can receive an additional 5% bonus discount. Or you may receive a 10% discount off unrestricted coach fares with 7-day advance purchase. For reservations call (or have your travel agent call) USAirways Group and Meeting Reservation Office toll-free at 877-874-

7687 between 8:00 a.m. and 9:30 p.m. Eastern Time. Refer to **Gold File number 18611161**.

AVIS is offering special convention car rental rates for the meeting, effective July 26–August 19, 2000. Rentals include unlimited free miles and are available from Los Angeles/Orange County Avis locations. There are no additional drop-off charges at the Los Angeles International Airport or John Wayne Airport. If at the time of your reservation a lower qualifying rate becomes available, Avis will extend a 5% discount on that rate. The following rates are available to renters 25 years and older:

Car Group	Daily	Weekly	Weekend per day*
4-door subcompact	\$38.99	\$171.99	\$27.99
4-door compact	41.99	181.99	28.99
2/4-door intermed.	44.99	190.99	29.99
2-door full size	51.99	204.99	32.99
4-door full size	53.99	208.99	35.99
Premium	57.99	245.99	41.99
Luxury	67.99	312.99	46.99
Minivan	72.99	331.99	80.99
Sport Utility (SUV)	70.99	322.99	77.99

*Weekend rates are available from noon on Thursday to 11:59 p.m. on Monday.

Sales tax, optional LDW, PAI, ALI, PEP, and gas refueling charges are extra. Advance reservations are strongly encouraged and can be made 24 hours a day, seven days a week at 1-800-331-1600; cite rate code 00 for daily and weekly rentals, and rate code E2 for weekend rentals. Also cite Avis Worldwide Discount #AWD K167407.

Participants who may find it convenient are invited to use UCLA's discounted airline and car rental services. Airfare on United Airlines will be discounted by 15%. Alamo Rent A Car offers the following rates:

Size	Daily	Weekly
Compact	\$31	\$155
Intermediate	33	165
Full size	35	175
Premium	40	200
Luxury	44	220

Some restrictions may apply to discounted airfares and car rentals. Please contact the UCLA Travel Center by telephone at 1-800-235-UCLA, 1-310-794-2875, or by fax at 1-310-794-2703. When telephoning, please select "summer conferences" during their business hours of 7:30 a.m.–6:00 p.m. (PT), Monday through Friday. Please state that you are part of the AMS conference.

Directions/Transportation from LAX: From the airport take the 405 Freeway north to the Sunset Blvd. exit. Proceed east on Sunset Blvd. to Bellagio Drive. Turn right onto Bellagio and proceed to the stop sign at the top of the hill. Turn left at the stop sign onto DeNeve Drive. Proceed .3 mile down the hill through one stop sign to the Sunset Vil-

lage parking garage. The campus is well marked with directional signs to other facilities.

Taxi fare is approximately \$24. Door-to-door van service is provided by three carriers with various fare schedules. Each operates 24 hours per day; fares quoted are current as of this printing; pickup at LAX is at the blue van spot on the center traffic island. Prime Time Shuttle (800-733-8267) and SuperShuttle (800-BLUEVAN): \$14/one person, \$28/two persons, \$42/three persons; Xpress Shuttle (800-427-7483): \$12/one person, \$19/two persons, \$26/three persons.

Weather: In August Los Angeles is generally sunny with comfortable humidity. For more current information use your favorite Net search engine or try the sites: <http://www.usatoday.com/weather/basemaps/nw722950.htm> or http://www.weather.com/weather/cities/us_ca_los_angeles.html.

Program Committee

Richard Askey, University of Wisconsin
 Spencer Bloch, University of Chicago
 Felix Browder (chair), Rutgers University
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 Peter Lax, Courant Institute
 Robert MacPherson, Institute for Advanced Study
 David Mumford, Brown University
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 Eitan Tadmor, UCLA

Toronto, Ontario Canada

University of Toronto

September 22–24, 2000

Meeting #957

Central Section
 Associate secretary: Susan J. Friedlander
 Announcement issue of *Notices*: August 2000
 Program first available on e-MATH: August 10, 2000
 Program issue of electronic *Notices*: November 2000
 Issue of *Abstracts*: Volume 21, Issue 3

Deadlines

For organizers: Expired

For consideration of contributed papers in Special Sessions: June 6, 2000

For abstracts: July 14, 2000

Invited Addresses

John H. Conway, Princeton University, *Title to be announced* (Erdős Memorial Lecture).

George Elliott, University of Toronto, *Title to be announced*.

Benson Farb, University of Chicago, *Title to be announced*.

Yongbin Ruan, University of Wisconsin, *Title to be announced*.

Boris Tsyagan, Pennsylvania State University, *Title to be announced*.

Special Sessions

Analytic Number Theory (Code: AMS SS N1), **John Friedlander**, University of Toronto, and **Steve Gonek**, University of Rochester.

Applied Categorical Structures (Code: AMS SS J1), **Joan Wick Pelletier** and **Walter Tholen**, York University.

Commutative Algebra and Algebraic Geometry (Code: AMS SS A1), **Anthony Geramita**, Queens University, and **William Traves**, United States Naval Academy.

Computational Wavelet Analysis (Code: AMS SS H1), **Sebastian Ferrando** and **Larry Kolasa**, Ryerson Polytechnic University.

Discrete and Applied Geometry (Code: AMS SS L1), **Asia Ivic Weiss** and **Walter Whiteley**, York University.

Ergodic Theory and Dynamical Systems (Code: AMS SS B1), **Andres del Junco**, University of Toronto, and **Blair Madore**, SUNY, Potsdam.

Functional Differential Equations and Applications (Code: AMS SS D1), **Anatoli F. Ivanov**, Pennsylvania State University, and **Jianhong Wu**, York University.

Hamiltonian Systems (Code: AMS SS M1), **Lisa Jeffrey**, **Velimir Jurdjevic**, and **Boris Khesin**, University of Toronto.

Innovative Programs and Projects That Work in Undergraduate Mathematics (Code: AMS SS R1), **Bathi Kasturiarachi**, Kent State University.

Modern Schubert Calculus (Code: AMS SS K1), **Nantel Bergeron**, York University, and **Frank Sottile**, University of Wisconsin.

Nonabsolute Integration (Code: AMS SS C1), **Patrick Muldowney**, University of Ulster, and **Erik Talvila**, University of Illinois, Urbana.

Noncommutative Geometry (Code: AMS SS Q1), **Ryszard Nest**, University of Copenhagen, and **Victor Nistor** and **Boris Tsygan**, Pennsylvania State University.

Nonlinear Functional Analysis (Code: AMS SS P1), **Sankatha Singh** and **Bruce Watson**, Memorial University of Newfoundland.

Operator Algebras and Operator Theory (Code: AMS SS T1), **Man-Duen Choi** and **George Elliott**, University of Toronto.

Probability (Code: AMS SS S1), **Neal Madras**, **Thomas Salisbury**, and **Donna Salopek**, York University.

Pseudo-differential Operators, Wavelet Transforms and Related Topics (Code: AMS SS F1), **M. W. Wong**, York University.

Representation Theory of Infinite Dimensional Lie Algebras (Code: AMS SS E1), **Yun Gao**, York University.

Set Theory and Set-Theoretic Topology (Code: AMS SS G1), **Franklin D. Tall**, University of Toronto.

San Francisco, California

San Francisco State University

October 21–22, 2000

Meeting #958

Western Section

Associate secretary: Bernard Russo

Announcement issue of *Notices*: August 2000

Program first available on e-MATH: September 11, 2000

Program issue of electronic *Notices*: December 2000

Issue of *Abstracts*: Volume 21, Issue 4

Deadlines

For organizers: Expired

For consideration of contributed papers in Special Sessions: June 21, 2000

For abstracts: August 29, 2000

Invited Addresses

Steven N. Evans, University of California, Berkeley, *Title to be announced*.

Lisa J. Fauci, Tulane University, *Title to be announced*.

Kristin Lauter, Microsoft Corporation, *Title to be announced*.

Special Sessions

Algebraic and Geometric Combinatorics (Code: AMS SS A1), **Jesus De Loera**, University of California, Davis, and **Frank Sottile**, University of Wisconsin.

History of Mathematics (Code: AMS SS B1), **Shawnee McMurrin**, University of Redlands, and **James J. Tattersall**, Providence College.

New York, New York

Columbia University

November 4–5, 2000

Meeting #959

Eastern Section

Associate secretary: Lesley M. Sibner

Announcement issue of *Notices*: September 2000

Program first available on e-MATH: September 28, 2000

Program issue of electronic *Notices*: December 2000

Issue of *Abstracts*: Volume 21, Issue 4

Deadlines

For organizers: Expired

For consideration of contributed papers in Special Sessions: July 18, 2000

For abstracts: September 12, 2000

Invited Addresses

Paula Cohen, Université des Sciences et Technologies de Lille, France, *Title to be announced.*

Brian Greene, Columbia University, *Title to be announced.*

Sergey Novikov, University of Maryland, College Park, and Landau Institute for Theoretical Physics, *Title to be announced.*

Alexander I. Suci, Northeastern University, *Title to be announced.*

Special Sessions

Algebraic Geometry (Code: AMS SS H1), **Sorin Popescu** and **Lev A. Borisov**, Columbia University.

Arithmetic Geometry and Modular Forms (Code: AMS SS D1), **Dorian Goldfeld**, Columbia University, and **Paula Cohen**, University of Lille.

Arrangements of Hyperplanes (Code: AMS SS C1), **Michael J. Falk**, Northern Arizona University, and **Alexander I. Suci**, Northeastern University.

Combinatorial Group Theory (Code: AMS SS A1), **Gilbert Baumslag**, **Alexei Myasnikov**, and **Vladimir Shpilrain**, City College (CUNY).

Commutative Algebra (Code: AMS SS F1), **Irena Peeva**, Cornell University, and **Luchezar Avramov**, Purdue University.

Differential Algebra and Related Topics (Code: AMS SS E1), **Li Guo** and **William Keigher**, Rutgers University at Newark, and **William Sit**, City College (CUNY).

Symbolic Computation and Kleinian Groups (Code: AMS SS G1), **Jane P. Gilman**, Rutgers University, and **Mika K. Sepala**, Florida State University.

The Topology of 3-Manifolds (Code: AMS SS B1), **Joan S. Birman** and **Brian S. Magnus**, Columbia University, and **Walter D. Neumann**, University of Melbourne.

Birmingham, Alabama

University of Alabama-Birmingham

November 10–12, 2000

Meeting #960

Southeastern Section

Associate secretary: John L. Bryant

Announcement issue of *Notices*: September 2000

Program first available on e-MATH: October 5, 2000

Program issue of electronic *Notices*: January 2001

Issue of *Abstracts*: Volume 21, Issue 4

Deadlines

For organizers: April 10, 2000

For consideration of contributed papers in Special Sessions: July 25, 2000

For abstracts: September 19, 2000

Special Sessions

Analytical Problems in Mathematical Physics (Code: AMS SS E1), **Roger T. Lewis**, University of Alabama at Birmingham, **Michael P. Loss**, Georgia Institute of Technology, and **Marcel Griesemer**, University of Alabama at Birmingham.

Billiards and Related Topics (Code: AMS SS C1), **Nikolai I. Chernov** and **Nandor Simanyi**, University of Alabama at Birmingham.

Dynamics and Low-Dimensional Topology (Code: AMS SS G1), **Alexander M. Blokh**, **Lex G. Oversteegen**, and **John C. Mayer**, University of Alabama at Birmingham.

Inverse Problems (Code: AMS SS A1), **Ian Walker Knowles** and **Rudi Weikard**, University of Alabama at Birmingham.

Operator Algebras and Their Representations (Code: AMS SS F1), **Alan Hopenwasser**, University of Alabama, and **Justin R. Peters**, Iowa State University.

Relations between Spectral Theory and Analytic Number Theory (Code: AMS SS B1), **Robert M. Kauffman**, University of Alabama at Birmingham, and **Martin N. Huxley**, Cardiff University, Wales.

Spectral and Transport Problems in Solid State Physics (Code: AMS SS D1), **Peter D. Hislop**, University of Kentucky, and **Yulia Karpeshina** and **Gunter H. Stolz**, University of Alabama at Birmingham.

Hong Kong, People's Republic of China

December 13–17, 2000

Meeting #961

First Joint International Meeting between the AMS and the Hong Kong Mathematical Society.

Associate secretary: Bernard Russo

Announcement issue of *Notices*: June/July

Program first available on e-MATH: Not applicable

Program issue of electronic *Notices*: None

Issue of *Abstracts*: None

Deadlines

For organizers: Expired

For consideration of contributed papers in Special Sessions: July 15, 2000

For abstracts: September 15, 2000

Invited Addresses

Thomas Liggett, UCLA, *Title to be announced.*

Michael Shub, IBM, *Title to be announced.*

Gang Tian, MIT, *Title to be announced.*

Special Sessions

Combinatorial and Computational Methods in Commutative Algebra and Algebraic Geometry, **Vladimir Shpilrain**, CUNY, City College, and **Jie-Tai Yu**, University of Hong Kong.

Combinatorics and Graph Theory, **Beifang Chen**, Hong Kong University of Science and Technology, **Jeong Han Kim**, Microsoft, USA, and **Che Bor Lam**, Hong Kong Baptist University.

Geometric Analysis, **Peter Li**, University of California, Irvine, and **Luen Fai Tam** and **Tom Wan**, Chinese University of Hong Kong.

Integrable Systems, **Jishan Hu**, Hong Kong University of Science and Technology, **Wen Xiu Ma**, City University of Hong Kong, **Peter Olver**, University of Minnesota, and **Min Yan**, Hong Kong University of Science and Technology.

Iterative Methods in Scientific Computation, **Michael Ng**, University of Hong Kong, and **Robert Plemmons**, Wake Forest University.

Low Dimensional Topology, **Iain Aitchison** and **Hyam Rubinstein**, University of Melbourne.

Mathematics of Learning Theory, **Felipe Cucker** and **Stephen Smale**, City University of Hong Kong.

Mathematics of Optimization, **Kung Fu Ng**, Chinese University of Hong Kong, and **Jong-shi Pang**, Johns Hopkins University.

Nonlinear Elliptic and Parabolic Partial Differential Equations, **Kai Seng Chou**, Chinese University of Hong Kong, **Yanyan Li**, Rutgers University, and **Juncheng Wei**, Chinese University of Hong Kong.

Nonlinear Waves, **Zhouping Xin**, Courant Institute of Mathematical Sciences and Chinese University of Hong Kong, and **Xiaoping Wang**, Hong Kong University of Science and Technology.

Numerical Methods for Partial Differential Equations, **Susanne Brenner**, University of South Carolina, and **Jun Zou**, Chinese University of Hong Kong.

Optimization and Applications, **Kok Lay Teo** and **X. Q. Yang**, Hong Kong Polytechnic University.

Representation Theory, **Jian Shu Li** and **Jinsong Huang**, Hong Kong University of Science and Technology.

Theoretical and Numerical Aspects of Nonlinear Conservation Laws, **Tao Tang**, Hong Kong Baptist University, and **Zhouping Xin**, Courant Institute of Mathematical Sciences and Chinese University of Hong Kong.

Value Distribution Theory and Complex Dynamics, **Chung Chun Yang**, Hong Kong University of Science and Technology, and **William Cherry**, University of North Texas.

New Orleans, Louisiana

New Orleans Marriott and Sheraton New Orleans Hotel

January 10–13, 2001

Meeting #962

Joint Mathematics Meetings, including the 107th Annual Meeting of the AMS, 84th Meeting of the Mathematical Association of America (MAA), annual meetings of the Association for Women in Mathematics (AWM) and the National Association of Mathematicians (NAM), and the winter meeting of the Association for Symbolic Logic (ASL).

Associate secretary: Lesley M. Sibner

Announcement issue of *Notices*: October 2000

Program first available on e-MATH: To be announced

Program issue of electronic *Notices*: To be announced

Issue of *Abstracts*: Volume 22, Issue 1

Deadlines

For organizers: Expired

For consideration of contributed papers in Special Sessions: August 8, 2000

For abstracts: October 3, 2000

For summaries of papers to MAA organizers: To be announced

Columbia, South Carolina

University of South Carolina

March 16–18, 2001

Meeting #963

Southeastern Section

Associate secretary: John L. Bryant

Announcement issue of *Notices*: To be announced

Program first available on e-MATH: To be announced

Program issue of electronic *Notices*: To be announced

Issue of *Abstracts*: To be announced

Deadlines

For organizers: August 15, 2000

For consideration of contributed papers in Special Sessions: To be announced

For abstracts: To be announced

Lawrence, Kansas

University of Kansas

March 30–31, 2001

Meeting #964

Central Section

Associate secretary: Susan J. Friedlander

Announcement issue of *Notices*: To be announced

Program first available on e-MATH: To be announced

Program issue of electronic *Notices*: To be announced

Issue of *Abstracts*: To be announced

Deadlines

For organizers: June 28, 2000

For consideration of contributed papers in Special Sessions: To be announced

For abstracts: To be announced

Special Sessions

Commutative Algebra (Code: AMS SS A1), **Craig Huneke** and **Daniel Katz**, University of Kansas.

Las Vegas, Nevada

University of Nevada

April 21–22, 2001

Meeting #965

Western Section

Associate secretary: Bernard Russo

Announcement issue of *Notices*: To be announced

Program first available on e-MATH: To be announced

Program issue of electronic *Notices*: To be announced

Issue of *Abstracts*: To be announced

Deadlines

For organizers: To be announced

For consideration of contributed papers in Special Sessions: To be announced

For abstracts: To be announced

Hoboken, New Jersey

Stevens Institute of Technology

April 28–29, 2001

Meeting #966

Eastern Section

Associate secretary: Lesley M. Sibner

Announcement issue of *Notices*: To be announced

Program first available on e-MATH: To be announced

Program issue of electronic *Notices*: To be announced

Issue of *Abstracts*: To be announced

Deadlines

For organizers: September 28, 2000

For consideration of contributed papers in Special Sessions: To be announced

For abstracts: To be announced

Invited Addresses

Alexander Barvinok, University of Michigan, Ann Arbor, *Title to be announced.*

Frank Sottile, University of Wisconsin, Madison, *Title to be announced.*

Lyon, France

July 17–20, 2001

First Joint International Meeting between the AMS and the Société Mathématique de France.

Associate secretary: Lesley M. Sibner

Announcement issue of *Notices*: To be announced

Program first available on e-MATH: Not applicable

Program issue of electronic *Notices*: None

Issue of *Abstracts*: None

Deadlines

For organizers: To be announced

For consideration of contributed papers in Special Sessions: To be announced

For abstracts: To be announced

Chattanooga, Tennessee

University of Tennessee, Chattanooga

October 5–6, 2001

Southeastern Section

Associate secretary: John L. Bryant

Announcement issue of *Notices*: To be announced

Program first available on e-MATH: To be announced

Program issue of electronic *Notices*: To be announced

Issue of *Abstracts*: To be announced

Deadlines

For organizers: March 5, 2001

For consideration of contributed papers in Special Sessions: To be announced

For abstracts: To be announced

Williamstown, Massachusetts

Williams College

October 13–14, 2001

Eastern Section

Associate secretary: Lesley M. Sibner

Announcement issue of *Notices*: To be announced

Program first available on e-MATH: To be announced

Program issue of electronic *Notices*: To be announced

Issue of *Abstracts*: To be announced

Deadlines

For organizers: March 11, 2001

For consideration of contributed papers in Special Sessions: To be announced

For abstracts: To be announced

Special Sessions

History of Mathematics (Code: AMS SS A1), **Glen R. Van Brummelen**, Bennington College, **Della D. Fenster**, Richmond University, and **James J. Tattersall**, Providence College.

San Diego, California

San Diego Convention Center

January 6–9, 2002

Joint Mathematics Meetings, including the 108th Annual Meeting of the AMS, 85th Meeting of the Mathematical Association of America (MAA), annual meetings of the Association for Women in Mathematics (AWM) and the National Association of Mathematicians (NAM), and the winter meeting of the Association for Symbolic Logic (ASL).

Associate secretary: John L. Bryant

Announcement issue of *Notices*: To be announced

Program first available on e-MATH: To be announced

Program issue of electronic *Notices*: To be announced

Issue of *Abstracts*: To be announced

Deadlines

For organizers: April 4, 2001

For consideration of contributed papers in Special Sessions: To be announced

For abstracts: To be announced

For summaries of papers to MAA organizers: To be announced

Pisa, Italy

June 16–20, 2002

First Joint International Meeting between the AMS and the Unione Matematica Italiana.

Associate secretary: Lesley M. Sibner

Announcement issue of *Notices*: To be announced

Program first available on e-MATH: Not applicable

Program issue of electronic *Notices*: None

Issue of *Abstracts*: None

Deadlines

For organizers: To be announced

For consideration of contributed papers in Special Sessions: To be announced

For abstracts: To be announced

Boston, Massachusetts

Northeastern University

October 5–6, 2002

Eastern Section

Associate secretary: Lesley M. Sibner

Announcement issue of *Notices*: To be announced

Program first available on e-MATH: To be announced

Program issue of electronic *Notices*: To be announced

Issue of *Abstracts*: To be announced

Deadlines

For organizers: March 5, 2002

For consideration of contributed papers in Special Sessions: To be announced

For abstracts: To be announced