avis.com/. Please quote Avis Discount Number B159266 when making reservations.

## Driving to Indiana University

From the South: The best route is from Louisville, Kentucky. Take I-65, the four-lane interstate, north from Louisville to Columbus, Indiana (approximately one-hour drive).

From Columbus, take Indiana Highway 46 west to Bloomington. (State highway is two lanes and winds through the hills.) Travel east approximately one hour to Bloomington. Upon entering the commercial and residential district, Highway 46 becomes East Third Street. Continue heading west on Third Street through the stoplights at K-Mart/ Marsh Supermarket, College Mall Road (Shell Station/Red Lobster), Eastland Plaza, High Street, Jordan Avenue. (Third Street becomes one-way street heading west between the High Street and Jordan Avenue stoplights.) Turn right (north) at Indiana Avenue, the next stoplight. Indiana is a one-way street going north. Go three blocks to the second stop sign (3-way stop), which is intersection of Seventh and Indiana. Turn right (east) on Seventh. Turn right at the second stop sign into the Indiana Memorial Union circle drive/parking lot.

From the West: From St. Louis and points west, take Interstate 70 east to Terre Haute.

From Terre Haute, take Indiana Highway 46 east to Bloomington. (State highway is two lanes and winds through the hills.) Travel east approximately one hour to Bloomington. Westbury Village will be on the left (north) of the road as it crosses over Highway 37 and leads into Bloomington. Highway 46 becomes 17th Street at this point. Once you have entered Bloomington, continue to the second stoplight (College Avenue). College is one-way going south. Turn right on College and continue to 7 th Street. Turn left (east) on 7th Street. Continue through the 4 -way and 3 -way stops (approximately eight blocks) to the Indiana Memorial Union.

From Evansville, IN, take Highway 41 north to Terre Haute. See directions above.

From the North: From Chicago, take Interstate 65 to Indianapolis. Take 465 bypass southwest to Highway 37.

From Detroit/Lansing areas, take Highway 69 to Indianapolis. Take 465 bypass southeast to Highway 37.

From Indianapolis, take Indiana Highway 37 (four-lane state highway with many series of stoplights) south. Travel south for approximately one hour to the first Bloomington exit (College Avenue/Business 37 exit). Continue south on College as it becomes one-way. Turn left (east) on 7th Street. Follow directions listed above in Terre Haute entry.

From the East: From Columbus, OH, take Interstate 70 to Indianapolis. Take 465 bypass south to Highway 37.

From Cincinnati, OH , take Interstate 74 to Indianapolis. Take 465 bypass south to Highway 37.

Follow directions listed above from Indianapolis.

## Weather

Early April temperatures normally range from a daily high of $63^{\circ} \mathrm{F}$ to a low of $42^{\circ} \mathrm{F}$. Spring also tends to be a rainy time of year, so be sure to bring an umbrella or raincoat.

## New York, New York

## Courant Institute

April 12-13, 2003

## Meeting \#986

Eastern Section
Associate secretary: Lesley M. Sibner
Announcement issue of Notices: February 2003
Program first available on AMS website: February 27, 2003
Program issue of electronic Notices: April 2003
Issue of Abstracts: Volume 24, Issue 3

## Deadlines

For organizers: Expired
For consideration of contributed papers in Special Sessions: Expired
For abstracts: February 18, 2003

## Invited Addresses

Matthias Aschenbrenner, University of California Berkeley, Title to be announced.

John Etnyre, University of Pennsylvania, Legendrian knots. Hans Foellmer, Humboldt University Berlin, Title to be announced.
Wilfrid Gangbo, Georgia Institute of Technology, Title to be announced.

## Special Sessions

Algebraic and Topological Combinatorics (Code: AMS SS E1), Eva-Maria Feichtner, ETH, Zurich, Switzerland, and Dmitry N. Kozlov, University of Bern, Switzerland, and KTH, Stockholm, Sweden.
Algebraic Geometry, Integrable Systems, and Gauge Theory (Code: AMS SS C1), Marcos Jardim and Eyal Markman, University of Massachusetts, Amherst.
Analytical and Computational Methods in Electromagnetics (Code: AMS SS G1), Alexander P. Stone, University of New Mexico, and Peter A. McCoy, U. S. Naval Academy.
Combinatorial and Statistical Group Theory (Code: AMS SS B1), Alexei Myasnikov and Vladimir Shpilrain, City College, New York.
Contact and Symplectic Geometry(Code: AMS SS K1), John B. Etnyre and Joshua M. Sabloff, University of Pennsylvania.
Galois Module Theory and Hopf Algebras (Code: AMS SS F1), Daniel R. Replogle, College of Saint Elizabeth, and Robert G. Underwood, Auburn University.
The History of Mathematics (Code: AMS SS D1), Patricia R. Allaire, Queensborough Community College, CUNY, and Robert E. Bradley, Adelphi University.
Hopf Algebras and Quantum Groups (Code: AMS SS A1), M. Susan Montgomery, University of Southern California, Earl J. Taft, Rutgers University, and Sarah J. Witherspoon, Amherst College.

Low-Dimensional Topology (Code: AMS SS M1), James Conant, Cornell University, Slava Krushkal, University of Virginia, and Rob Schneiderman, NYU-Courant Institute.
Nonlinear Partial Differential Equations in Differential Geometry (Code: AMS SS L1), John C. Loftin and Mu-Tao Wang, Columbia University.
Rigidity in Dynamics, Geometry, and Group Theory (Code: AMS SS J1), David Fisher, CUNY, Herbert H. Lehman College, and Steven E. Hurder and Kevin M. Whyte, University of Illinois at Chicago.
Topological Aspects of Complex Singularities (Code: AMS SS H1), Sylvain E. Cappell, NYU-Courant Institute, and Walter D. Neumann and Agnes Szilard, Barnard College, Columbia University.

## Accommodations

Participants should make their own arrangements directly with a hotel of their choice. Special rates for the meeting are available at the property shown below for the nights of Friday, and Saturday, April 11 and 12. Room rates do not include the tax of $14 \%$. Please cite the group name or booking number as indicated when making a reservation. Hotels have varying cancellation or early checkout penalties; be sure to ask for details when making your reservation. The AMS is not responsible for rate changes or for the quality of the accommodations.

Washington Square Hotel, 13 Waverly Place at Washington Square West, New York, NY 10011-9194, 212-7779515; 212-979-8373 (fax); \$165 for one full/queen bedded room for one or two persons; includes complimentary continental breakfast, exercise room, restaurant and lounge; about three blocks from the meeting site. The number of rooms is very limited; deadline for reservations is February 24, 2003. Please cite group number 0412 when making a reservation.

Please watch. http://www.ams.org/amsmtgs/ sectiona1.htm1 for additional information on hotel availability for the meeting.

## Food Service

There are a variety of restaurants within walking distance of the sessions.

## Local Information

The Courant Institute homepage is located at http://www. cims.nyu. edu/; New York University's home page is http://www.nyu. edu. There is an excellent downloadable campus map at http://www.nyu.edu/v40extras/nyumap.pdf.; visitor's information is at http://www.nyu.edu/visitors.nyu.

## Other Activities

Book Sales: Examine the newest titles from the AMS! Many of the AMS books will be available at a special 50 at the meeting. Complimentary coffee will be served courtesy of AMS Membership Services.

AMS Editorial Activity: An acquisitions editor from the AMS Book program will be present to speak with prospective authors. If you have a book project that you
would like to discuss with the AMS, please stop by the book exhibit.

## Parking

The closest available off-street parking (about three or four blocks) is at the Hillary Gardens Garage, 300 Mercer St. between 8th St. and Waverly Pl. (212-473-8752), rates are $\$ 19 /$ day or $\$ 24 /$ overnight; and the Thompson Street Garage, 221 Thompson between 3rd St. and Bleecker St. (212-677-8741), rates are \$14/day or \$28/overnight.

## Registration and Meeting Information

The meeting is at the Courant Institute of Mathematical Sciences, Warren Weaver Hall, 251 Mercer St. between 3rd and 4th Streets. Sessions will take place in here and in other buildings; Invited Addresses will be in Warren Weaver Hall.

The registration desk will be in Warren Weaver Hall and will be open 7:30 a.m.-4:00 p.m. on Saturday, April 12, and 8:00 a.m.-noon on Sunday, April 13. Fees are $\$ 40$ for AMS or CMS members, $\$ 60$ for nonmembers; and $\$ 5$ for students/unemployed/emeritus, payable on site by cash, check or credit card.

## Travel

From La Guardia International Airport, Kennedy International Airport, or Newark International Airport, take the airport shuttle bus to Port Authority Bus Terminal or Grand Central Station.

From Port Authority, take the A or E subway downtown to West Fourth Street-Washington Square Station, or from Grand Central, take the Lexington Avenue subway (No. 6 train) downtown to Astor Place Station. Cabs and car services are available at the airport and, even though they cost more, they are more convenient if you have a lot of luggage. Plan on spending at least $\$ 25$ to $\$ 40$ depending on the airport and time of day.

Once in the city you can take one of these subway routes: Take the Lexington Avenue subway (No. 6 train) to Astor Place Station. Go west on Astor Place to Broadway. Walk south on Broadway to Waverly Place. Walk westward on Waverly Place until you reach Washington Square.

Take the Broadway subway (N or R train) to Eighth Street Station. At Broadway walk south to Waverly Place. Walk westward on Waverly Place until you reach Washington Square.

Take the Sixth Avenue subway to West Fourth StreetWashington Square Station (A, C, E, F, V, or S train). Walk east on West Fourth Street until you reach Washington Square.

Take the Seventh Avenue subway to Christopher StreetSheridan Square Station (1 or 2). Walk east on Christopher Street to West Fourth Street. Continue east to Washington Square.

## Weather

Weather conditions in mid April in New York City are usually pleasant. Temperatures are between 45 and 60 degrees, and the average rainfall is four inches for the month. For up to the minute forecasts see http://asp.usatoday.
com/weather/cityforecast.aspx?LocationID=USNY09 96.

## San Francisco, California

## San Francisco State University

May 3-4, 2003

## Meeting \#987

Western Section
Associate secretary: Michel L. Lapidus
Announcement issue of Notices: March 2003
Program first available on AMS website: March 20, 2003
Program issue of electronic Notices: May 2003
Issue of Abstracts: Volume 24, Issue 3

## Deadlines

For organizers: Expired
For consideration of contributed papers in Special Sessions: January 14, 2003
For abstracts: March 11, 2003

## Invited Addresses

Joe P. Buhler, Reed College, A problem in symmetric functions arising from phase determination in crystallography.
Raymond C. Heitmann, University of Texas at Austin, Title to be announced.
Alexei Y. Kitaev, California Institute of Technology, Title to be announced.
Arkady Vaintrob, University of Oregon, Title to be announced.

## Special Sessions

Beyond Classical Boundaries of Computability (Code: AMS SS E1), Mark Burgin, University of California Los Angeles, and Peter Wegner, Brown University.
Combinatorial Commutative Algebra and Algebraic Geometry (Code: AMS SS C1), Serkan Hosten, San Francisco State University, and Ezra Miller, Mathematical Sciences Research Institute.
Commutative Algebra (Code: AMS SS L1), Raymond C. Heitmann, University of Texas at Austin, and Irena Swanson, New Mexico State University.
Efficient Arrangements of Convex Bodies (Code: AMS SS H1), Dan P. Ismailescu, Hofstra University, and Wlodzimierz Kuperberg, Auburn University.
Geometry and Arithmetic over Finite Fields (Code: AMS SS G1), Bjorn Poonen, University of California Berkeley, and Joe P. Buhler, Reed College.
Gromov-Witten Theory of Spin Curves and Orbifolds (Code: AMS SS M1), Tyler Jarvis, Brigham Young University, and Arkady Vaintrob, University of Oregon.

The History of Nineteenth and Twentieth Century Mathematics (Code: AMS SS A1), Shawnee McMurran, California State University, San Bernardino, and James A. Tattersall, Providence College.

Numerical Methods, Calculations and Simulations in Knot Theory and Its Applications (Code: AMS SS J1), Jorge Alberto Calvo, North Dakota State University, Kenneth C. Millett, University of California Santa Barbara, and Eric J. Rawdon, Duquesne University.
PDEs and Applications in Geometry (Code: AMS SS K1), Qi S. Zhang, University of California, Riverside.
Q-Series and Partitions (Code: AMS SS B1), Neville Robbins, San Francisco State University.
Qualitative Properties and Applications of Functional Equations (Code: AMS SS F1), Theodore A. Burton, Southern Illinois University at Carbondale.
Topological Quantum Computation (Code: AMS SS D1), Alexei Kitaev, California Institute of Technology, and Samuel J. Lomonaco, University of Maryland, Baltimore County.

## Seville, Spain

## June 18-21,2003

## Meeting \#988

First Joint International Meeting between the AMS and the Real Sociedad Matematica Española (RSME).
Associate secretary: Susan J. Friedlander
Announcement issue of Notices: To be announced Program first available on AMS website: Not applicable Program issue of electronic Notices: Not applicable Issue of Abstracts: Not applicable

## Deadlines

For organizers: Expired
For consideration of contributed papers in Special Sessions:
February 10, 2003
For abstracts: February 10, 2003

## Invited Addresses

Xavier Cabre, Universidad Politècnica de Cataluña, Barcelona, Title to be announced.
Charles Fefferman, Princeton University, Title to be announced.
Michael Hopkins, Massachusetts Institute of Technology, Title to be announced.
Ignacio Sols, Universidad Complutense, Madrid, Title to be announced.
Luis Vega, Universidad del Pais Vasco, Bilbao, Title to be announced.
Efim Zelmanov, Yale University, Title to be announced.

