

MEETINGS & CONFERENCES OF THE AMS

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The Meetings and Conferences section of the Notices gives information on all AMS meetings and conferences approved by press time for this issue. Please refer to the page numbers cited on this page for more detailed information on each event. Invited Speakers and Special Sessions are listed as soon as they are approved by the cognizant program committee; the codes listed are needed for electronic abstract submission. For some meetings the list may be incomplete. Information in this issue may be dated.

The most up-to-date meeting and conference information can be found online at: www.ams.org/meetings.

Important Information About AMS Meetings: Potential organizers, speakers, and hosts should refer to page 88 in the January 2018 issue of the *Notices* for general information regarding participation in AMS meetings and conferences.

Abstracts: Speakers should submit abstracts on the easy-to-use interactive Web form. No knowledge of \LaTeX is

necessary to submit an electronic form, although those who use \LaTeX may submit abstracts with such codings, and all math displays and similarly coded material (such as accent marks in text) must be typeset in \LaTeX . Visit www.ams.org/cgi-bin/abstracts/abstract.pl. Questions about abstracts may be sent to abs-info@ams.org. Close attention should be paid to specified deadlines in this issue. Unfortunately, late abstracts cannot be accommodated.

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See www.ams.org/meetings for the most up-to-date information on the meetings and conferences that we offer.

ASSOCIATE SECRETARIES OF THE AMS

Central Section: Georgia Benkart, University of Wisconsin-Madison, Department of Mathematics, 480 Lincoln Drive, Madison, WI 53706-1388; email: benkart@math.wisc.edu; telephone: 608-263-4283.

Eastern Section: Steven H. Weintraub, Department of Mathematics, Lehigh University, Bethlehem, PA 18015-3174; email: steve.weintraub@lehigh.edu; telephone: 610-758-3717.

Southeastern Section: Brian D. Boe, Department of Mathematics, University of Georgia, 220 D W Brooks Drive, Athens, GA 30602-7403, email: brian@math.uga.edu; telephone: 706-542-2547.

Western Section: Michel L. Lapidus, Department of Mathematics, University of California, Surge Bldg., Riverside, CA 92521-0135; email: lapidus@math.ucr.edu; telephone: 951-827-5910.

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 the AMS website. See www.ams.org/meetings/.

Final programs for Sectional Meetings will be archived on the AMS website accessible from the stated URL .

Newark, Delaware

University of Delaware

September 29–30, 2018

Saturday – Sunday

Meeting #1141

Eastern Section

Associate secretary: Steven H. Weintraub

Announcement issue of *Notices*: June 2018

Program first available on AMS website: August 9, 2018

Program issue of electronic *Notices*: To be announced

Issue of *Abstracts*: Volume 39, Issue 3

Deadlines

For organizers: Expired

For abstracts: July 31, 2018

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/sectional.html.

Invited Addresses

Leslie Greengard, New York University, *Linear and nonlinear inverse problems in imaging*.

Elisenda Grigsby, Boston College, *Braids, surfaces, and homological invariants*.

Davesh Maulik, Massachusetts Institute of Technology, *Title to be announced*.

Special Sessions

If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the abstract submission form found at www.ams.org/cgi-bin/abstracts/abstract.pl.

Advances in Numerical Approximation of Partial Differential Equations (Code: SS 8A), **Constantin Bacuta** and **Jingmei Qiu**, University of Delaware.

Applied Algebraic Topology (Code: SS 2A), **Chad Giusti**, University of Delaware, and **Gregory Henselman**, Princeton University.

Billiard Dynamics: Standard and Alternative Collision Models (Code: SS 15A), **Tim Chumley**, Mount Holyoke College, **Chris Cox**, University of Delaware, and **Renato Feres**, Washington University in St. Louis.

Commutative Algebra (Code: SS 19A), **Ela Celikbas**, West Virginia University, **Sema Gunturkun**, University of Michigan, and **Oana Veliche**, Northeastern University.

Convex Geometry and Functional Inequalities (Code: SS 3A), **Mokshay Madiman**, University of Delaware, **Elisabeth Werner**, Case Western Reserve University, and **Artem Zvavitch**, Kent State University.

Fixed Point Theory with Application and Computation (Code: SS 7A), **Clement Boateng Ampadu**, Boston, MA, **Penumarthy Parvateesam Murthy**, Guru Ghasidas Vishwavidyalaya, Bilaspur, India, **Naeem Saleem**, University of Management and Technology, Lahore, Pakistan, **Yaé Ulrich Gaba**, Institut de Mathématiques et de Sciences Physiques (IMSP), Porto-Novo, Bénin, and **Xavier Udo-utun**, University of Uyo, Uyo, Nigeria.

Graph Theory (Code: SS 12A), **Sebastian M. Cioabă**, University of Delaware, **Brian Kronenthal**, Kutztown University of Pennsylvania, **Felix Lazebnik**, University of Delaware, and **Wing Hong Tony Wong**, Kutztown University of Pennsylvania.

Interplay between Analysis and Combinatorics (Code: SS 5A), **Mahya Ghandehari** and **Dominique Guillot**, University of Delaware.

Modern Quasiconformal Analysis and Geometric Function Theory (Code: SS 6A), **David Herron**, University of Cincinnati, and **Yuk-J Leung**, University of Delaware.

Nonlinear Water Waves and Related Problems (Code: SS 9A), **Philippe Guyenne**, University of Delaware.

Operator and Function Theory (Code: SS 4A), **Kelly Bickel**, Bucknell University, **Michael Hartz**, Washington University, St. Louis, **Constanze Liaw**, University of Delaware, and **Alan Sola**, Stockholm University.

MEETINGS & CONFERENCES

Probability, Combinatorics, and Statistical Mechanics (Code: SS 18A), **Nayantara Bhatnagar** and **Douglas Rizzolo**, University of Delaware.

Quantum Correlation Sets in Quantum Information Theory (Code: SS 13A), **Elie Alhajar** and **Travis B. Russell**, US Military Academy.

Recent Advances in Nonlinear Schrödinger Equations (Code: SS 1A), **Alexander Pankov**, Morgan State University, **Junping Shi**, College of William and Mary, and **Jun Wang**, Jiangsu University.

Recent Analytic and Numeric Results on Nonlinear Evolution Equations (Code: SS 10A), **Xiang Xu**, Old Dominion University, and **Wujun Zhang**, Rutgers University.

Representations of Infinite Dimensional Lie Algebras and Applications (Code: SS 16A), **Marco Aldi**, Virginia Commonwealth University, **Michael Penn**, Randolph College, and **Juan Villarreal**, Virginia Commonwealth University.

Stochastic Processes in Mathematical Biology (Code: SS 14A), **Yao Li**, University of Massachusetts Amherst, and **Abhyudai Singh**, University of Delaware.

The Mathematics of Swimmers and Active Particles (Code: SS 11A), **Louis Rossi**, University of Delaware, and **Enkeleida Lushi**, Flatiron Institute.

Ann Arbor, Michigan

University of Michigan, Ann Arbor

October 20–21, 2018

Saturday – Sunday

Meeting #1143

Central Section

Associate secretary: Georgia Benkart

Announcement issue of *Notices*: July 2018

Program first available on AMS website: August 30, 2018

Issue of *Abstracts*: Volume 39, Issue 4

Deadlines

For organizers: Expired

For abstracts: August 21, 2018

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtg/sectional.html.

Invited Addresses

Elena Fuchs, University of Illinois Urbana-Champaign, *Title to be announced.*

Andrew Putman, University of Notre Dame, *Title to be announced.*

Charles Smart, University of Chicago, *Title to be announced.*

Special Sessions

If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the ab-

stract submission form found at www.ams.org/cgi-bin/abstracts/abstract.pl.

Advances in Commutative Algebra (Code: SS 15A), **Jack Jeffries**, University of Michigan, **Linquan Ma**, Purdue University, and **Karl Schwede**, University of Utah.

Advances on Analytical and Geometric Aspects of Differential Equations (Code: SS 24A), **Alessandro Arsie**, **Chunhua Shan**, and **Ekaterina Shemyakova**, University of Toledo.

Analytical and Numerical Aspects of Turbulent Transport (Code: SS 23A), **Michele Coti Zelati**, Imperial College London, and **Ian Tobasco** and **Karen Zaya**, University of Michigan.

Aspects of Geometric Mechanics and Dynamics (Code: SS 13A), **Anthony M Bloch** and **Marta Farre Puiggali**, University of Michigan.

Bio-inspired Mechanics and Propulsion (Code: SS 16A), **Silas Alben**, University of Michigan, and **Longhua Zhao**, Case Western Reserve University.

Canonical Operators in Several Complex Variables and Related Topics (Code: SS 21A), **David Barrett** and **Luke Edholm**, University of Michigan, and **Yunus Zeytuncu**, University of Michigan, Dearborn.

Cell Motility: Models and Applications (Code: SS 20A), **Magdalena Stolarska**, University of St. Thomas, and **Nicoleta Tarfulea**, Purdue University Northwest.

Cluster Algebra, Poisson Geometry, and Related Topics (Code: SS 9A), **Eric Bucher**, Michigan State University, and **Maitreyee Kulkarni** and **Bach Nguyen**, Louisiana State University.

Combinatorics in Algebra and Algebraic Geometry (Code: SS 14A), **Zachary Hamaker**, **Steven Karp**, and **Oli-ver Pechenik**, University of Michigan.

Commutative Algebra and Complexity (Code: SS 32A), **Harm Derksen**, **Francesca Gandini**, and **Visu Makam**, University of Michigan.

Commutative Ring Theory (Code: SS 22A), **Joe Stickles**, Millikin University, and **Darrin Weber**, University of Evansville.

Ergodic and Topological Quantum Systems (Code: SS 28A), **Matthew Cha**, **Ilya Kachkovskiy**, and **Shiwen Zhang**, Michigan State University.

Extensions-Interpolation-Shape Matching in R^d , Symmetry-Invariance, Algorithms and Related Topics (Code: SS 11A), **Steven Damelin**, American Mathematical Society, and **Nir Sharon**, Princeton University.

From Hyperelliptic to Superelliptic Curves (Code: SS 6A), **Tony Shaska**, Oakland University, **Nicola Tarasca**, Rutgers University, and **Yuri Zarhin**, Pennsylvania State University.

Geometry of Submanifolds, in Honor of Bang-Yen Chens 75th Birthday (Code: SS 1A), **Alfonso Carriazo**, University of Sevilla, **Ivko Dimitric**, Penn State Fayette, **Yun Myung Oh**, Andrews University, **Bogdan D. Suceava**, California State University, Fullerton, **Joeri Van der Veken**, University of Leuven, and **Luc Vrancken**, Universite de Valenciennes.

Interactions between Algebra, Machine Learning and Data Privacy (Code: SS 3A), **Jonathan Gryak**, University of

Michigan, **Kelsey Horan**, CUNY Graduate Center, **Delaram Kahrobaei**, CUNY Graduate Center and New York University, **Kayvan Najarian** and **Reza Soroushmehr**, University of Michigan, and **Alexander Wood**, CUNY Graduate Center.

Large Cardinals and Combinatorial Set Theory (Code: SS 10A), **Andres E. Caicedo**, Mathematical Reviews, and **Paul B. Larson**, Miami University.

Mathematics of the Genome (Code: SS 30A), **Anthony Bloch**, **Daniel Burns**, and **Indika Rajapakse**, University of Michigan.

Modern Trends in Integrable Systems (Code: SS 12A), **Deniz Bilman**, **Peter Miller**, **Michael Music**, and **Guilherme Silva**, University of Michigan.

Multiplicities and Volumes: An Interplay Among Algebra, Combinatorics, and Geometry (Code: SS 19A), **Federico Castillo**, University of Kansas, and **Jonathan Montaño**, New Mexico State University.

New Trends in Numerical Methods for Partial Differential Equations: Theory and Applications (Code: SS 17A), **Fatih Celiker**, Wayne State University.

Nonlocality in Models for Kinetic, Chemical, and Population Dynamics (Code: SS 25A), **Christopher Henderson**, University of Chicago, **Stanley Snelson**, Florida Institute of Technology, and **Andrei Tarfulea**, University of Chicago.

Probabilistic Methods in Combinatorics (Code: SS 7A), **Patrick Bennett** and **Andrzej Dudek**, Western Michigan University, and **David Galvin**, University of Notre Dame.

Random Matrix Theory Beyond Wigner and Wishart (Code: SS 2A), **Elizabeth Meckes** and **Mark Meckes**, Case Western Reserve University, and **Mark Rudelson**, University of Michigan.

Recent Advances in Nonlinear PDE (Code: SS 31A), **Jessica Lin**, McGill University, and **Russell Schwab**, Michigan State University.

Recent Developments in Discontinuous Galerkin Methods for Differential Equations (Code: SS 34A), **Mahboub Bacouch**, University of Nebraska at Omaha.

Recent Developments in Mathematical Analysis of Some Nonlinear Partial Differential Equations (Code: SS 18A), **Mimi Dai**, University of Illinois at Chicago.

Recent Developments in the Mathematics of Tomography and Scattering (Code: SS 26A), **Shixu Meng**, University of Michigan, and **Yang Yang**, Michigan State University.

Recent Trends on Local, Nonlocal and Fractional Partial Differential Equations (Code: SS 27A), **Pablo Raúl Stinga**, Iowa State University, **Peiyong Wang**, Wayne State University, and **Jiuyi Zhu**, Louisiana State University.

Representations of Reductive Groups over Local Fields and Related Topics (Code: SS 8A), **Anne-Marie Aubert**, Institut Mathématiques de Jussieu, Paris Rive Gauche, **Jessica Fintzen**, IAS, University of Michigan, University of Cambridge, and **Camelia Karimianpour**, University of Michigan.

Self-similarity and Long-range Dependence in Stochastic Processes (Code: SS 4A), **Takashi Owada**, Purdue University, **Yi Shen**, University of Waterloo, and **Yizao Wang**, University of Cincinnati.

Structured Homotopy Theory (Code: SS 5A), **Thomas Fiore**, University of Michigan, Dearborn, **Po Hu** and **Dan**

Isaksen, Wayne State University, and **Igor Kriz**, University of Michigan.

The Mathematics of Decisions, Elections, and Games (Code: SS 29A), **Michael A. Jones**, Mathematical Reviews, and **David McCune**, William Jewell College.

Topics in Graph Theory, Hypergraphs and Set Systems (Code: SS 33A), **John Engbers**, Marquette University, and **Cliff Smyth**, University of North Carolina, Greensboro.

Accommodations

Participants should make their own arrangements directly with the hotel of their choice. Special discounted rates were negotiated with the hotels listed below. Rates quoted do not include the Michigan state hotel tax (11%), local taxes and hotel fees may apply. Participants must state that they are with the **American Mathematical Society's (AMS) Fall Central Sectional Meeting** to receive the discounted rate. The AMS is not responsible for rate changes or for the quality of the accommodations. **Hotels have varying cancellation and early checkout penalties; be sure to ask for details.**

Wyndham Garden Hotel Ann Arbor, 2900 Jackson Ave., Ann Arbor, MI 48103; (734) 665-4444; <https://www.wyndhamhotels.com/wyndham-garden/ann-arbor-michigan/wyndham-garden-ann-arbor/overview?CID=LC:GN::GGL:RIO:National:36846&iata=00065402>. To book online visit the link provided, use the "special rate" drop down menu, select "block code" and enter "AMS". Rates are **US\$84** per night for a room. The group rate includes deluxe continental breakfast, fitness center, indoor pool, free Wi-Fi access and free parking. This property is located about 2 miles from campus. Cancellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. The deadline for reservations at this rate is **September 18, 2018**.

Comfort Inn & Suites University South, 3501 South State St., Ann Arbor, MI, 48108; (734) 761-8838 ; <https://www.choicehotels.com/michigan/ann-arbor/comfort-inn-hotels/mi229>. Rates are **US\$98** per night for a single king or double queen guest room. Amenities include free Wi-Fi, free parking, free hot breakfast, computer and printer in lobby, indoor pool, hot tub and fitness center. This property is located about 5 miles from campus. Cancellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. Individual reservations can be cancelled without penalty up to October 1, 2018. Cancellations after this date will be charged one night room and tax. A cancellation number should be obtained from the reservations agent for reference. The deadline for reservations at a reduced rate is by **October 1, 2018**.

Courtyard by Marriott Ann Arbor, 3205 Boardwalk, Ann Arbor, MI 48108; (734) 995-5900; https://www.marriott.com/meeting-event-hotels/group-corporate-travel/groupCorp.mi?resLinkIdData=American%20Mathematical%20Society%5Earbch%60AMSAMS%60134.00%60USD%60false%602%6010/19/18%6010/22/18%609/19/18&app=resvlink&stop_mobi=yes. Rates are

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US\$134 per night for a king bed guest room with pullout sofa. Amenities include free high-speed internet, fitness center, complimentary self-parking and pool. This property is located about 3 miles from the campus. Cancellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. All individual room reservations must be cancelled by October 16, 2018 at 12:01am. In the event individual room reservations are cancelled less than 3 days prior to arrival, the individual must pay the hotel a cancellation fee equal to the first night's room and tax. Cancellation includes length of stay reduction within the designated 3 days prior to arrival and are also subject to the above stated cancellation fee. The deadline for reservations at a reduced rate is **September 19, 2018**.

Hilton Garden Inn Ann Arbor, 1401 Briarwood Cir., Ann Arbor, MI, 48108; (734) 327-6400; https://secure3.hilton.com/en_US/gi/reservation/book.htm?inputModule=HOTEL&ctyhocn=ARBGIGI&spec_plan=FCSM&arrival=20181019&departure=20181022&cid=OM,W,W,HILTONLINK,EN,DirectLink&fromId=HILTONLINKDIRECT. Rates are **US\$159** per night for a single king bed or two queen bed guest room. Amenities include complimentary Wi-Fi, a 24-hour business center, complimentary fitness center, an on-site full-service restaurant, on-site convenience store, coin laundry and lounge. This property is located approximately 3.5 miles from campus. Complimentary self-parking is available. Cancellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. Individual reservations may be cancelled up to 48 hours prior to arrival without penalty. Cancellation within 48 hours prior to arrival may be subject to one night's rate plus tax to be charged to the credit card on file. A no-show reservation will be subject to one night's rate plus tax to be charged to the credit card on file. The deadline for reservations at this rate is **September 19, 2018**.

Hampton Inn Ann Arbor South, 925 Victors Way, Ann Arbor, MI, 48108; (734) 665-5000; group.hamptoninn.com/Fall-Cntrl-Sectional-Mting-2018. Rates are **US\$119** per night for a standard guest room. Rate includes hot breakfast buffet, free Wi-Fi, heated indoor pool, fitness center and free self-parking. This property is located about 2 miles from campus. Cancellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. Individual cancellations must be made 48 hours prior to arrival to avoid a cancellation fee. The deadline for reservations at this rate is **September 19, 2018**.

Ann Arbor Regent Hotel and Suites, 2455 Carpenter Rd., Ann Arbor, MI 48108; (734) 973-6100; <https://annarborregent.com/>. Rate is **US\$129** per night for a two queen bed guest room. To book online go to the website above then enter your dates, click 'make a reservation' and enter group code "FCSM2018". Amenities include free self-parking, complimentary hot breakfast buffet, same business-day dry cleaning, indoor pool and hot tub, fitness center and complimentary Wi-Fi throughout the property. This property is located about 4 miles from campus. Can-

cellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. The deadline for reservations at this rate is **September 21, 2018**.

The Fairfield Inn Ann Arbor, 3285 Boardwalk Dr., Ann Arbor, MI 48108; (734) 995-5200; https://www.marriott.com/meeting-event-hotels/group-corporate-travel/groupCorp.mi?resLinkIdData=American%20Mathematical%20Society%20-%20Fall%20Central%20Sectional%20Meeting%202018%5Earbfi%60AMSAMS%7CAMSAMSB%60119.00%60USD%60false%604%6010/19/18%6010/22/18%6009/27/2018&app=resvlink&stop_mobi=yes. Rates are **US\$119** per night for a room with either single king bed or two double beds. Amenities include complimentary hot breakfast, indoor pool, 24 hour fitness center, complimentary high-speed internet and 24 hour Corner Market. This property is located about 3 miles from campus. Cancellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. Individual room reservations must be cancelled by Tuesday, October 16, 2018 at 12:01am. In the event individual room reservations are cancelled less than 3 days prior to arrival, the individual must pay the hotel a cancellation fee equal to the first night's room and tax. Cancellation includes length of stay reduction within the designated 3 days prior to arrival and are also subject to the above stated cancellation fee. The deadline for reservations at this rate is **September 19, 2018**.

Holiday Inn, 3600 Plymouth Rd., Ann Arbor, MI 48105; (734) 769-9800; https://www.ihg.com/holidayinn/hotels/us/en/ann-arbor/arbnc/hoteldetail?qAdlt=1&qBrs=6c.hi.ex.rs.ic.cp.in.sb.cw.cv.ul.vn.ki.va.sp.nd.ct&qChld=0&qFRA=1&qGRM=0&qGrpCd=AMS&qIta=99801505&qPst=0&qRRSrt=rt&qRef=df&qRms=1&qRpn=1&qRpp=20&qSHp=1&qSmP=3&qSrt=sBR&qWch=0&srb_u=1&icdv=99801505&setPMCookies=true. Rates are **US\$114** for a room. To book online use the booking link above and scroll down to select your check-in and check-out dates. The group code will automatically populate once you click on 'check availability'. Amenities include free self-parking, complimentary Wi-Fi, indoor/outdoor heated swimming pool, fitness center, tennis and basketball court and complimentary shuttle service to and from Ann Arbor destinations. This property is located about 4 miles from campus. Cancellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. Cancellations must be received by October 18, 2018 to avoid a charge of one night room and tax. The deadline for reservations at this rate is **October 5, 2018**.

The Kensington Hotel, 3500 S. State St., Ann Arbor, MI 48108; (734) 761-7800; <https://www.kcourtaa.com/>. Rates are **US\$129** for a standard guest room. Amenities include free self-parking, complimentary Viennese Coffee Bar, complimentary Wi-Fi access, heated indoor pool, fitness center and hot tub. This property is located about 7 miles from campus. Cancellation and early check-out policies vary and penalties exist at this property; be sure

to check when you make your reservation. The deadline for reservations at this rate is **September 19, 2018**.

The Inn at the Michigan League, 911 N. University Ave., Ann Arbor, MI 48104; (734) 764-3177; <https://unions.umich.edu/league/inn/>. Rates are **US\$145** for single occupancy or **US\$155** for double occupancy. Included in the rate is one parking pass per guest room, free Wi-Fi access and a **US\$4.50** food coupon for each night to be used in one of the hotel's food establishments. This property is located on the university campus. Cancellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. The deadline for reservations at this rate is **September 20, 2018**.

Housing Warning: Please beware of aggressive housing bureaus that target potential attendees of a meeting. They are sometimes called “room poachers” or “room-block pirates” and these companies generally position themselves as a meeting's housing bureau, convincing attendees to unknowingly book outside the official room block. They call people who they think will more likely than not attend a meeting and lure them with room rates that are significantly less than the published group rate—for a limited time only. And people who find this offer tempting may hand over their credit card data, believing they have scored a great rate and their housing is a done deal. Unfortunately, this often turns out to be the start of a long, costly nightmare.

These housing bureaus are not affiliated with the American Mathematical Society or any of its meetings, in any way. The AMS would never call anyone to solicit reservations for a meeting. The only way to book a room at a rate negotiated for an AMS Sectional Meeting is through AMS Sectional Meetings pages. The AMS cannot be responsible for any damages incurred as a result of hotel bookings made with unofficial housing bureaus.

Food Services

On Campus: South University (AKA South U) is filled with a wide range of food including burritos, sushi, bi bim bop, subs, pizza, and more. Not to mention that many places on South U are open till as late as 4:00 am! For a quicker bite to eat or a late night craving, South U has you covered. The other area on campus is State Street. Here you will find many quick and easy foods under **US\$10**. This street has food that ranges from Mediterranean, to Mexican, to Italian, and much more. State Street is a popular lunch destination among many students, faculty, and visitors.

Good Time Charley's, 1140 S. University Ave.; (734) 668-8411; a University of Michigan campus tradition since 1979! Full menu and full bar with nightly specials.

Tios Mexican Cafe and Tequila Bar, 401 E. Liberty St.; (734) 761-6650; open 11:00 am to 2:00 pm on Saturday and Sunday; serves late-night eats, a massive hot sauce collection & homemade salsa.

Frita Batidos, 117 W. Washington St.; (734) 761-2882; open 11:00 am to midnight on Saturday and Sunday; serves colorful Cuban street food & tropical cocktails.

Zingerman's Roadhouse, 2501 Jackson Ave.; open 9:00 am to 11:00 pm on Saturday and 9:00 am to 9:00 pm on Sunday; offers hearty American comfort fare, local draft beers & a gourmet food shop.

Ama Bistro Family Restaurant, 215 S. State St.; (734) 780-7202; open 8:00 am to 10:00 pm on Saturday and 8:00 am to 4:00 pm on Sunday; elevated diner fare including french toast, burgers & Albanian stews.

Brown Jug, 1204 S. University Ave.; (734) 761-3355; open 11:00 am to 2:00 am on Saturday and noon to 2:00 am on Sunday; serves breakfast all day, full bar, pizza, spinach pie, lasagna, plus daily specials.

Cottage Inn, 2900 S. State St.; (734) 663-4500; open 10:00 am to 1:00 am on Saturday and 10:00 am to midnight on Sunday; decadent, delicious, delivery-ready gourmet pizza.

Romano's Macaroni Grill, 3010 S. State St.; (734) 663-4433; open 11:00 am to 10:00 pm on Saturday and Sunday; lively Italian chain with an open kitchen, known for small plates, pizzas, pastas & wine.

Beanster's Cafe, 911 N. University (Michigan League Ground level); (734) 764-3586; quick service cafe with sandwiches and coffee.

U-go's Express, 911 N. University (Michigan League Ground level); (734) 764-3586; bottled beverages, assorted snacks and ready-to-eat food.

Off Campus: Downtown Ann Arbor is a great place for a more quiet and sit-down type restaurant. There are a few areas in Downtown which are famous for delicious dinners, such as Main Street, Liberty Street, and Kerrytown. Main Street is packed with restaurants of all different kinds, like seafood, sushi, artisan, bar food and more. In the heart of Ann Arbor, this is the place to get the best of the best restaurants the city has to offer. Additionally, Liberty Street, which intersects Main Street, is home to a wide array of restaurants which can be seen filled with people past 6:00 pm every night of the week. Be sure to call ahead, because these places fill up quickly. Finally, Kerrytown is a unique experience due to its wide range of options, which include home grown, vegan, locally sourced, and more. Please go to the Visit Ann Arbor site for a complete restaurant guide at <https://www.visitannarbor.org/eat>.

Some options for coffee include:

Roasting Plant Coffee, 312 S. State St.; (734) 263-1881; <https://roastingplant.com/>; open 8:00 am to 6:00 pm Saturday and Sunday; serving coffee brewed to order from your choice of single origin beans or custom blend.

lab, 505 E. Liberty St.; (734) 827-2233; labcafe.tumblr.com/; open 9:00 am to 8:00 pm on Saturday and Sunday; light-filled cafe known for pour-over cups & colorful bakery fare showcases local art & musicians.

Starbucks, 222 S. State St.; (734) 623-8067; Seattle-based coffeehouse chain known for its signature roasts, light bites and Wi-Fi availability.

Some options for downtown dining include:

The Chop House Ann Arbor, 322 S. Main St.; (734) 669-9977; open for dinner on Saturdays and Sundays; offers premium steak, wine & interactive tablet menus.

Afternoon Delight Cafe, 251 E. Liberty St.; (734) 665-7513; www.afternoonlightcafe.com/; specializing in fresh, homemade meals for breakfast and lunch with brunch on weekends.

BD's Mongolian Barbeque, 200 S. Main St.; (734) 913-0999; <https://www.gomongo.com/>; all-you-can-eat, create-your-own stir-fry.

Isalita, 341 E. Liberty St.; (734) 213-7400; www.isalita.com/; flavor-packed menu of snacks, small plates, tacos and other delicious bites inspired mainly by popular Mexican street foods.

Bar Louie, 401 E. Liberty St.; (734) 794-3000; cool neighborhood restaurant & bar serving sandwiches, appetizers, pastas, entrees and a wide assortment of interesting beers, micro brews and wines by the glass or bottle.

Registration and Meeting Information

Advance Registration: Advance registration for this meeting opens on **August 1, 2018**. Advance registration fees will be **US\$63** for AMS members, **US\$95** for nonmembers, and **US\$10** for students, unemployed mathematicians, and emeritus members. Participants may cancel registrations made in advance by emailing mmsb@ams.org. The deadline to cancel is the first day of the meeting.

On-site Information and Registration: The registration desk, AMS book exhibit, and coffee service will be located in Haven Hall lobby. The Invited Address lectures will be located in Angell Hall in Auditorium B. Special Sessions and Contributed Paper Sessions will take place in the nearby classrooms. Please look for additional information about specific session room locations on the web and in the printed program. For further information on building locations, a campus map is available at <https://maps.studentlife.umich.edu/>.

The registration desk will be open on Saturday, October 20, 7:30 am to 4:00 pm and Sunday, October 21, 8:00 am to 12:00 pm. The same fees listed above apply for on-site registration and are payable with cash, check or credit card.

Other Activities

Book Sales: Stop by the on-site AMS bookstore to review the newest publications and take advantage of exhibit discounts and free shipping on all on site orders! AMS and MAA members receive 40% off list price. Nonmembers receive a 25% discount. Not a member? Ask a representative about the benefits of AMS membership.

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 wish to discuss with the AMS, please stop by the book exhibit.

Membership Activities: On Saturday, October 20, stop by the AMS Membership Exhibit to learn about the benefits

of AMS Membership. Members receive free shipping on purchases all year long and additional discounts on books purchased at meetings, subscriptions to *Notices* and *Bulletin*, discounted registration for world-class meetings and conferences, and more!

Complimentary Refreshments will be served courtesy in part by the AMS Membership Department.

Math Reviews Open House: All attendees at the AMS Fall Central Sectional Meeting are invited to an Open House hosted by the AMS at the Mathematical Reviews Building. You will have the opportunity to meet some of the people who put together this impressive database of the mathematics literature. The building has an interesting history, having been originally built in 1902 as a brewery, then served later as an ice cream plant, then as a camera factory. Snacks and refreshments will be served. The event will take place Saturday, October 20 from 12:30 to 2:00 pm at 416 Fourth Street in Ann Arbor, Michigan.

Special Needs

It is the goal of the AMS to ensure that its conferences are accessible to all, regardless of disability. The AMS will strive, unless it is not practicable, to choose venues that are fully accessible to the physically handicapped.

If special needs accommodations are necessary in order for you to participate in an AMS Sectional Meeting, please communicate your needs in advance to the AMS Meetings Department by:

- Registering early for the meeting
- Checking the appropriate box on the registration form, and
- Sending an email request to the AMS Meetings Department at mmsb@ams.org or meet@ams.org.

AMS Policy on a Welcoming Environment

The AMS strives to ensure that participants in its activities enjoy a welcoming environment. In all its activities, the AMS seeks to foster an atmosphere that encourages the free expression and exchange of ideas. The AMS supports equality of opportunity and treatment for all participants, regardless of gender, gender identity or expression, race, color, national or ethnic origin, religion or religious belief, age, marital status, sexual orientation, disabilities, or veteran status.

Harassment is a form of misconduct that undermines the integrity of AMS activities and mission.

The AMS will make every effort to maintain an environment that is free of harassment, even though it does not control the behavior of third parties. A commitment to a welcoming environment is expected of all attendees at AMS activities, including mathematicians, students, guests, staff, contractors and exhibitors, and participants in scientific sessions and social events. To this end, the AMS will include a statement concerning its expectations towards maintaining a welcoming environment in registration materials for all its meetings, and has put in place a mechanism for reporting violations. Violations may be reported confidentially and anonymously to 855-282-5703 or at www.mathsociety.ethicspoint.com. The reporting

mechanism ensures the respect of privacy while alerting the AMS to the situation. Violations may also be brought to the attention of the coordinator for the meeting (who is usually at the meeting registration desk), and that person can provide advice about how to proceed.

For AMS policy statements concerning discrimination and harassment, see the AMS Anti-Harassment Policy at see the www.ams.org/about-us/governance/policy-statements/anti-harassment-policy.

Questions about this welcoming environment policy should be directed to the AMS Secretary at www.ams.org/about-us/governance/sec-contact.

Local Information and Maps

This meeting will take place on the *University of Michigan* campus. A campus map can be found at <https://maps.studentlife.umich.edu/>. Information about the *University of Michigan Mathematics Department* can be found at <https://lsa.umich.edu/math>. Please visit the university website at <https://www.umich.edu> for additional information on the campus.

Please watch the AMS website at www.ams.org/meetings/sectional/sectional.html for additional information on this meeting.

Parking

If you are unfamiliar with Ann Arbor, please be aware that parking may be challenging. We recommend arriving early so that you may find parking and make your way to the meeting spaces.

The *City of Ann Arbor Parking Structure* on Maynard St. between William St. and Liberty St. is a convenient parking structure near the *Huetwell Visitors Center* which allows for all-day parking. The cost is approximately US\$1.40/hour. The structure is located at 324 Maynard Street in Ann Arbor, MI 48104.

Public parking meters are enforced Monday through Saturday, 8:00 am to 6:00 pm. The cost is US\$1.70 per hour. These meters are free on evenings, Sundays and all federal holidays observed by city employees. To download the Ann Arbor Field Guide to Parking please visit www.a2dda.org/wp-content/uploads/Field-Guide-Updated-3-26-2018.pdf.

For parking information please contact *Republic Parking* at (734) 761-7235 or visit www.a2dda.org/transportation/.

Travel

This meeting will take place on the main campus of the *University of Michigan* located in Ann Arbor, Michigan.

By Air:

Detroit Metropolitan International Airport (DTW) is only 20 miles from Ann Arbor, about a 45 minute drive, and is the most convenient air travel choice. Please note, the drive could take longer during rush hour traffic. DTW has two terminals, *North* and *McNamara*. For a list of which airlines serve each terminal visit <https://www.metroairport.com/flights/airline-directory>. Please visit the

airport web site for a list of airlines and lists of cities with daily direct flights; <https://www.metroairport.com/>

There are several options available for transportation to and from the airport.

To get to the airport, you can use *AirRide*, which is available for transportation to the airport from Ann Arbor. This shuttle runs 13 times during the day and picks up at *Blake Transit Center* and the *Kensington Court Hotel*. At DTW pick up and drop off is at the south end of the *Ground Transportation Center* for the *McNamara Terminal* and at the north end of the *Ground Transportation Center* at Stall #1 for the *North Terminal*. A one way ticket on *AirRide* is US\$15, however, if a reservation is made in advance the fare is reduced to US\$12. Please visit www.theride.org/Services/Airport-Service for more information and to make reservations.

From the *McNamara Terminal* taxi services dispatch in the middle of the *Ground Transportation Center*, located on Level 4. Upon arrival in Detroit, and once all baggage has been claimed, follow signs to ground transportation. From the *North Terminal* taxi services dispatch from the upper level of the *Ground Transportation Center*. Upon arrival in Detroit, and once all baggage has been claimed, follow signs to ground transportation on Level 4.

Rideshare passengers can only meet their driver at the terminal's *Ground Transportation Center* within the designated rideshare area. Once across the skybridge, "rideshare" signs will guide passengers to the designated rideshare areas of *McNamara* or *North Terminal's Ground Transportation Center*. From the *McNamara Terminal* the rideshare area is located on Level 4 of the parking garage. From the *North Terminal* the rideshare is located on Level 1 of the parking garage.

To find the rental cars follow signs to ground transportation and take a courtesy shuttle to the rental car campus, located at the Northeast corner of the airport along Lucas Drive. Rental car shuttle bus stops can be found in the *Ground Transportation Centers* of both the *McNamara Terminal Parking Garage* and the *Big Blue Deck* of the *North Terminal*.

Phones for contacting each agency can be found in baggage claim and the *Ground Transportation Center* located at each terminal. Rental car desks are not located inside the terminals. For a rental car directory please visit <https://www.metroairport.com/parking/rental-cars>.

By Bus:

A *Greyhound* station is located at 325 Depot Street in Ann Arbor, about 1 mile from campus. For tickets and travel information visit their website at www.greyhound.com/default.aspx.

By Car:

From Windsor, Detroit and Airports:

- I-94 West to State St. (exit 177)
- North (right) on State St. to E. William St.
- West (left) on E. William St., one block to Maynard St.

MEETINGS & CONFERENCES

- North (right) on Maynard St. to public parking structure.

From Toledo and South:

- US 23 North to I-94 West (Exit 35)
- I-94 West to State St. (Exit 177)
- North (right) on State St. to E. William St.
- West (left) on E. William St., one block to Maynard St.
- North (right) on Maynard St. to public parking structure.

From Jackson and West:

- I-94 East to State St. (Exit 177)
- North (left) on State St. to E. William St.
- West (left) on E. William St., one block to Maynard St.
- North (right) on Maynard St. to public parking structure.

From Flint and North:

- US 23 South to M-14 West (exit 45)
- M-14 West to Downtown Ann Arbor (exit 3); exit turns into Main St.
- Take Main St. to William St.
- East (left) on William St., 6 blocks to Maynard St.
- North (left) on Maynard St. to public parking structure.

Car Rental: *Hertz* is the official car rental company for the meeting. To make a reservation accessing our special meeting rates online at www.hertz.com, click on the box "I have a discount", and type in our convention number (CV): CV#04N30008. You can also call *Hertz* directly at 800-654-2240 (US and Canada) or 1-405-749-4434 (other countries). At the time of reservation, the meeting rates will be automatically compared to other *Hertz* rates and you will be quoted the best comparable rate available.

For directions to campus, inquire at your rental car counter.

Local Transportation

Walking, biking and personal cars are recommended to get around campus and Ann Arbor.

By Bus: Downtown Ann Arbor is accessible by public transit operated by *TheRide*. *TheRide* operates public transportation services in the greater Ann Arbor-Ypsilanti area. For information on bus routes, schedules and security information please visit www.theride.org/How-to-Ride. For a bus trip planner please visit www.theride.org/Plan-My-Trip.

Seasonal On-Street Bike Parking: On-street bike racks accommodate up to fourteen bikes bringing an additional ninety-eight spots to the downtown neighborhoods. Locations include:

Zingerman's Deli - 419 Detroit Street
People's Food Co-op - 216 N. Fourth Ave.
Spencer - 113 E. Liberty Street
Bivouac - 336 S. State Street
Ann Arbor District Library - 343 S. Fifth Ave.
Bill's Beer Garden - 218 S. Ashley Street
Mighty Good Coffee - 217 N. Main

Other options: Other local transportation options include *Uber*; www.uber.com and *Lyft*; www.lyft.com.

Weather

The average weather in October in Ann Arbor, Michigan is characterized by decreasing daily high temperatures, with daily high temperatures decreasing by 12°F, from 67°F to 55°F, rarely falling below 42°F or exceeding 79°F. Attendees are advised to wear coats and layered clothing. The weather can be unpredictable so umbrellas are also recommended.

Social Networking

Attendees and speakers are encouraged to tweet about the meeting using the hashtag #AMSmtg.

Information for International Participants

Visa regulations are continually changing for travel to the United States. Visa applications may take from three to four months to process and require a personal interview, as well as specific personal information. International participants should view the important information about traveling to the US found at <https://travel.state.gov/content/travel/en.html>. If you need a preliminary conference invitation in order to secure a visa, please send your request to cro@ams.org.

If you discover you do need a visa, the National Academies website (see above) provides these tips for successful visa applications:

- * Visa applicants are expected to provide evidence that they are intending to return to their country of residence. Therefore, applicants should provide proof of "binding" or sufficient ties to their home country or permanent residence abroad. This may include documentation of the following:

- family ties in home country or country of legal permanent residence
- property ownership
- bank accounts
- employment contract or statement from employer stating that the position will continue when the employee returns;

- * Visa applications are more likely to be successful if done in a visitor's home country than in a third country;

- * Applicants should present their entire trip itinerary, including travel to any countries other than the United States, at the time of their visa application;

- * Include a letter of invitation from the meeting organizer or the US host, specifying the subject, location and dates of the activity, and how travel and local expenses will be covered;

- * If travel plans will depend on early approval of the visa application, specify this at the time of the application;

- * Provide proof of professional scientific and/or educational status (students should provide a university transcript).

This list is not to be considered complete. Please visit the websites above for the most up-to-date information.

San Francisco, California

San Francisco State University

October 27–28, 2018

Saturday – Sunday

Meeting #1144

Western Section

Associate secretary: Michel L. Lapidus

Announcement issue of *Notices*: July 2018

Program first available on AMS website: September 6, 2018

Issue of *Abstracts*: Volume 39, Issue 4

Deadlines

For organizers: Expired

For abstracts: August 28, 2018

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/sectional.html.

Invited Addresses

Srikanth B. Iyengar, University of Utah, *Title to be announced*.

Sarah Witherspoon, Texas A&M University, *Derivatives, derivations, and Hochschild cohomology*.

Abdul-Aziz Yakubu, Howard University, *Population cycles in discrete-time infectious disease models*.

Special Sessions

If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the abstract submission form found at www.ams.org/cgi-bin/abstracts/abstract.pl.

Advances in Operator Theory, Operator Algebras, and Operator Semigroups (Code: SS 14A), **Asuman G. Aksoy**, Claremont McKenna College, **Michael Hartglass**, Santa Clara University, **Zair Ibragimov**, California State University, Fullerton, and **Marat Markin**, California State University, Fresno.

Algebraic Geometry (Code: SS 21A), **Emily Clader** and **Dustin Ross**, San Francisco State University, and **Mark Shoemaker**, Colorado State University.

Analysis and Geometry of Fractals (Code: SS 7A), **Kyle Hambrook**, University of Rochester, **Chun-Kit Lai**, San Francisco State University, and **Sze-Man Ngai**, Georgia Southern University.

Applied Harmonic Analysis: Frame Theory and Applications (Code: SS 9A), **Chun-Kit Lai** and **Shidong Li**, San Francisco State University.

Big Data and Statistical Analytics (Code: SS 17A), **Tao He**, **Mohammad Kafai**, and **Alexandra Piryatinska**, San Francisco State University.

Combinatorial and Categorical Aspects of Representation Theory (Code: SS 10A), **Nicholas Davidson** and **Jonathan Kujawa**, University of Oklahoma, and **Robert Muth**, Tarleton State University.

Coupling in Probability and Related Fields (Code: SS 3A), **Sayan Banerjee**, University of North Carolina, Chapel Hill, and **Terry Soo**, University of Kansas.

Geometric Analysis (Code: SS 8A), **Ovidiu Munteanu**, University of Connecticut, and **David Bao**, San Francisco State University.

Geometric Methods in Hypercomplex Analysis (Code: SS 13A), **Paula Cerejeiras**, Universidade de Aveiro, **Matvei Libine**, Indiana University, Bloomington, and **Mihaela B. Vajiac**, Chapman University.

Geometric and Analytic Inequalities and their Applications (Code: SS 4A), **Nicholas Brubaker**, **Isabel M. Serrano**, and **Bogdan D. Suceavă**, California State University, Fullerton.

Homological Aspects in Commutative Algebra and Representation Theory (Code: SS 5A), **Srikanth B. Iyengar**, University of Utah, and **Julia Pevtsova**, University of Washington.

Homological Aspects of Noncommutative Algebra and Geometry (Code: SS 2A), **Dan Rogalski**, University of California San Diego, **Sarah Witherspoon**, Texas A&M University, and **James Zhang**, University of Washington, Seattle.

Markov Processes, Gaussian Processes and Applications (Code: SS 18A), **Alan Krinik** and **Randall J. Swift**, California State Polytechnic University.

Mathematical Biology with a focus on Modeling, Analysis, and Simulation (Code: SS 1A), **Jim Cushing**, The University of Arizona, **Saber Elaydi**, Trinity University, **Suzanne Sindi**, University of California, Merced, and **Abdul-Aziz Yakubu**, Howard University.

Mathematical Methods for the study of the Three Dimensional Structure of Biopolymers (Code: SS 22A), **Javier Arsuaga** and **Mariel Vazquez**, University of California Davis, Davis, and **Robin Wilson**, Cal Poly Pomona.

Noncommutative Geometry and Fundamental Applications (Code: SS 12A), **Konrad Aguilar**, Arizona State University, and **Federic Latremoliere**, University of Denver.

Nonlocal PDEs via Harmonic Analysis (Code: SS 20A), **Tadele Mengesha**, University of Tennessee, Knoxville, and **Armin Schikorra**, University of Pittsburgh.

Probabilistic and Statistical Problems in Stochastic Dynamics (Code: SS 16A), **Tao He**, **Mohammad Kafai**, and **Alexandra Piryatinska**, San Francisco State University.

Research in Mathematics by Early Career Graduate Students (Code: SS 11A), **Michael Bishop**, **Marat Markin**, **Jenna Tague**, and **Khang Tran**, California State University, Fresno.

Social Change In and Through Mathematics and Education (Code: SS 19A), **Federico Ardila** and **Matthias Beck**, San Francisco State University, **Jamylle Carter**, Diablo Valley Community College, and **Kimberly Seashore**, San Francisco State University.

Statistical and Geometrical Properties of Dynamical Systems (Code: SS 6A), **Joanna Furno** and **Matthew Nicol**,

University of Houston, and **Mariusz Urbanski**, University of North Texas.

Topics in Operator Theory: CANCELLED (Code: SS 15A), **Anna Skripka** and **Maxim Zinchenko**, University of New Mexico.

Accommodations

Participants should make their own arrangements directly with the hotel of their choice. Special discounted rates were negotiated with the hotels listed below. Rates quoted do not include the California state hotel tax (12.7%), local taxes and hotel fees may apply. Participants must state that they are with the **American Mathematical Society's (AMS) Fall Western Sectional Meeting** to receive the discounted rate. The AMS is not responsible for rate changes or for the quality of the accommodations. **Hotels have varying cancellation and early checkout penalties; be sure to ask for details.**

AC Hotel San Francisco Airport/Oyster Point Waterfront, 1333 Veterans Blvd., South San Francisco, CA 94080; (650) 742-9211; achotels.marriott.com/hotels/ac-hotel-san-francisco-airport. Rates are **US\$229** per night for a standard guest room. Amenities include AC Lounge, Wi-Fi everywhere, complimentary parking, 24-hour fitness center access and AC Kitchen with European-inspired breakfast. This property is located about 12 miles from campus. Cancellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. The deadline for reservations at this rate is **September 26, 2018**.

DoubleTree by Hilton San Francisco Airport, 835 Airport Blvd., Burlingame, CA 94010; (650) 344-5500; doubletree3.hilton.com/en/hotels/california/doubletree-by-hilton-hotel-san-francisco-airport-SFOAODT/index.html. Rates are **US\$199** per night for single or double occupancy in a non-smoking king or non-smoking guest room with two double beds. Discounted parking of **US\$10** per day is available for room block overnight guests. The parking rate is subject to change and the parking fee in effect during the dates of your stay will be charged. Amenities include complimentary internet in the guest rooms, complimentary shuttle to and from SFO airport, complimentary trolley to downtown Burlingame (based on schedule), refrigerator in each room and warm chocolate chip cookie at check-in. This property is located about 14 miles from campus. Cancellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. The deadline for reservations at a reduced rate is by **October 5, 2018**.

Hampton by Hilton San Francisco Downtown, 942 Mission St., San Francisco, CA 94103; (415) 546-3110; hamptoninn3.hilton.com/en/hotels/california/hampton-inn-san-francisco-downtown-convention-center-SFOCCHX/index.html. Rates are **US\$269** per night for a standard guest room. Amenities include complimentary hot breakfast offered daily, fitness center, 24-hour Suite Shop and complimentary Wi-Fi in all guest rooms. This property is located about 10 miles from the

campus. Cancellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. Valet parking is available for an overnight fee of **US\$53** plus tax per vehicle per night. The parking rate is subject to change and the parking fee in effect during the dates of your stay will be charged. Cancellations on or after September 26, 2018 will incur a cancellation fee of one night room and tax. No modification can be made to the reservation after the cancellation date. A reduction in length of stay will incur a penalty of one night room and tax. The deadline for reservations at a reduced rate is **August 26, 2018**.

Harbor Court Hotel, 165 Steuart St., San Francisco, CA 94105; (415) 882-1300; <https://www.harborcourthotel.com>. Rates are **US\$209** per night for single or double occupancy guest room. Amenities include complimentary Wi-Fi, hosted evening wine hour, morning coffee and tea. This property is located approximately 10 miles from campus. The following hotel charges are separate and distinct from, and in addition to, the room rate and taxes. Hotel charges include portage charges in the amount of **US\$6.50** per bag, round trip; special room delivery service in the amount of **US\$6.40** per delivery; overnight parking for guests is **US\$60** per day, plus taxes, with in and out privileges; **US\$10** amenity fee per person per day. The parking rate is subject to change and the parking fee in effect during the dates of your stay will be charged. Cancellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. A night of room and tax will be assessed for departure before the confirmed departure date. The deadline for reservations at this rate is **September 11, 2018**.

Hotel Focus SFO, 111 Mitchell Ave., South San Francisco, CA 94080; (650) 877-0770; <https://hotelfocussfo.com>. Rates are **US\$189** per night for a standard guest room. Amenities include complimentary continental breakfast, free Wi-Fi, free airport shuttle and IMediaCast panels and charging stations in each guest room. This property is located about 10 miles from campus. Guest parking is **US\$12** per night plus tax per vehicle per night. The parking rate is subject to change and the parking fee in effect during the dates of your stay will be charged. Cancellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. Individual reservations require a first night's room and tax deposit via valid major credit card. All reservations are subject to a 72 hour cancellation policy. If an individual reservation is cancelled within 72 hours of arrival it will be subject to a loss of deposit. Individual guaranteed reservations that "no show" will forfeit their first night's room and tax deposit and the reserved room will be released back for general sale. The deadline for reservations at this rate is **September 20, 2018**.

Hyatt House Emeryville/San Francisco Bay Area, 5800 Shellmound St., Emeryville, CA 94608; (510) 601-5880; <https://emeryville.house.hyatt.com/en/hotel/home.html>. Rate is **US\$229** per night for a standard guest room. Additional charges of **US\$10** per person

will apply for triple or quadruple occupancy. Amenities include suites with a fully fitted kitchen, living room area and separate bedroom with either one king bed or two queen beds. On-site parking is US\$15 per day per vehicle. The parking rate is subject to change and the parking fee in effect during the dates of your stay will be charged. Amenities include free breakfast, free Wi-Fi, fitness center, pool, and hot tub. This property is located about 18 miles from campus. Cancellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. Individual cancellations must be made 24 hours prior to arrival. Any cancellations within 24 hours of arrival or no-shows will be subject to a charge of one night room and tax to the individual guest. The deadline for reservations at this rate is **September 26, 2018**.

Hyatt Regency San Francisco Airport, 1333 Old Bayshore Hwy., Burlingame, CA 94010; (650) 347-1234; <https://sanfranciscoairport.regency.hyatt.com/en/hotel/home.html>. Rates are US\$159 per night for a guest room with single or double occupancy. Amenities include 24-hour complimentary shuttle service to the airport, Hertz rental car service desk on-site, free trolley to downtown Burlingame, fitness center, outdoor pool and whirlpool. This property is located about 13 miles from campus. Cancellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. The deadline for reservations at this rate is **September 28, 2018**.

Marriott San Mateo San Francisco Airport, 1770 S Amphlett Blvd., San Mateo, CA 94402; (650) 653-6000; <https://www.marriott.com/hotels/travel/sfosa-san-mateo-marriott-san-francisco-airport>. Rates are US\$199 for a standard guest room. Amenities include on-site breakfast and room service, fitness center, complimentary airport transportation and complimentary guest room Wi-Fi for those in the AMS room block. This property is located about 23 miles from campus. Self-parking is available at discounted rate for those in the room block at US\$12 per day. The parking rate is subject to change and the parking fee in effect during the dates of your stay will be charged. Cancellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. A cancellation less than 48 hours prior to arrival will result in a charge equal to one night room and tax. Early departures and no-shows will result in the same consequence. The deadline for reservations at this rate is **September 26, 2018**.

Marriott Oakland City Center, 1001 Broadway, Oakland, CA 94607; (510) 451-4000; <https://www.marriott.com/hotels/travel/oakdt-oakland-marriott-city-center>. Rates are US\$146 for a deluxe guest room. Amenities include on-site Iron & Oak bar and restaurant, fitness center and outdoor pool. This property is located about 20 miles from campus. Self-parking is available for overnight guests at US\$35 per day with no in and out privileges. The parking rate is subject to change and the parking fee in effect during the dates of your stay will be charged. Cancellation and early check-out policies vary

and penalties exist at this property; be sure to check when you make your reservation. The deadline for reservations at this rate is **September 19, 2018**.

Marriott San Francisco Airport Waterfront, 11800 Bayshore Hwy., Burlingame, CA 94010; (650) 692-9100; <https://www.marriott.com/hotels/travel/sfobg-san-francisco-airport-marriott-waterfront>. Rates are US\$199 for a standard guest room. Amenities include complimentary shuttle service to and from a BART subway station and San Francisco International Airport. This property is located about 14 miles from campus. Self-parking is available for overnight guests at US\$26 per day. The parking rate is subject to change and the parking fee in effect during the dates of your stay will be charged. Cancellation and early check-out policies vary and penalties exist at this property; be sure to check when you make your reservation. The deadline for reservations at this rate is **September 28, 2018**.

The AMS is not holding room blocks at the following properties. These properties are located near the university and are listed for your convenience. The AMS is not responsible for rate charges or for the quality of the accommodations.

Alpine Inn & Suites, 560 Carter St., Daly City, CA 94014; (415) 334-6969; <https://www.alpineinnsuites.com>. This property is located about 5 miles from campus. Please contact the property or visit their website for room rates and availability.

Mirage Inn and Suites, 2600 Sloat Blvd., San Francisco, CA 94116; (415) 665-9000; mirageinnandsuites.com/. This property is located about 2 miles from campus. Please contact the property or visit their website for room rates and availability.

Ocean Park Hotel, 2690 46th Ave., San Francisco, CA 94116; (415) 566-7020; www.oceanparkmotel.com. This property is located about 2 miles from campus. Please contact the property or visit their website for room rates and availability.

Seal Rock Inn, 545 Point Lobos Ave., San Francisco, CA 94121; (415) 752-8000; sealrockinn.com. This property is located about 5 miles from campus. Please contact the property or visit their website for room rates and availability.

Great Highway Inn, 1234 Great Hwy., San Francisco, CA 94112; (415) 731-6644; www.greathwy.com/. The hotel is located approximately 4 miles from campus. Please contact the property or visit their website for room rates and availability.

Mission Inn, 5630 Mission St., San Francisco, CA 94112; (415) 584-5020; <https://www.sfmissioninn.com>. This hotel is located about 2 miles from campus. Please contact the property or visit their website for room rates and availability.

Serrano Hotel, 405 Taylor St., San Francisco, CA 94102; (415) 885-2500; www.serranohotel.com. This property is steps from Union Square and is located about 10 miles from campus. Please contact the property or visit their website for room rates and availability.

Housing Warning:

Please beware of aggressive housing bureaus that target potential attendees of a meeting. They are sometimes called “room poachers” or “room-block pirates” and these companies generally position themselves as a meeting’s housing bureau, convincing attendees to unknowingly book outside the official room block. They call people who they think will more likely than not attend a meeting and lure them with room rates that are significantly less than the published group rate—for a limited time only. And people who find this offer tempting may hand over their credit card data, believing they have scored a great rate and their housing is a done deal. Unfortunately, this often turns out to be the start of a long, costly nightmare. These housing bureaus are not affiliated with the American Mathematical Society or any of its meetings, in any way. The AMS would never call anyone to solicit reservations for a meeting. The only way to book a room at a rate negotiated for an AMS Sectional Meeting is through AMS Sectional Meetings pages. The AMS cannot be responsible for any damages incurred as a result of hotel bookings made with unofficial housing bureaus.

Food Services

On Campus: The San Francisco State campus has many dining options to suit your mood and budget. You can order a variety of sandwiches, enjoy a wide selection of ethnic cuisines—Mexican, Italian, Chinese, and more—or sip a cappuccino from one of the food vendors at the Cesar Chavez Student Center. For a full list of food vendors please visit <https://ucorp.sfsu.edu/food-vendors>.

Cafe Rosso, 1600 Holloway Ave. (plaza behind Burk Hall); (415) 405-0923; open Saturday 8:00 am to 3:00 pm; serves fun and creative dishes with a Mediterranean flair.

Clean Bites, Mashouf Wellness Center; (415) 404-9756; open 11:00 am to 10:00 pm on Saturday and Sunday; serves nutritious and energy-boosting juices, smoothies, beverages, bowls and wraps.

iNoodles, Cesar Chavez Student Center, Recreation & Dining Level; (415) 338-6338; open 10:00 am to 5:00 pm on Saturday and Sunday; specializes in traditional Asian-style noodles and rice plates.

Peet’s Coffee & Tea, first floor of the J. Paul Leonard Library; open 9:00 am to 9:00 pm on Saturday and Sunday; serving hand-crafted beverages, premium salads, bagels and sandwiches.

Quickly, Cesar Chavez Student Center, West Plaza; (415) 338-6484; open Saturday and Sunday from 11:00 am to 4:00 pm; serving Boba teas and snacks.

Station Cafe, 19th Ave. (in front of HSS Bldg); (415) 405-0463; open 8:00 am to 3:00 pm on Saturday; serving on-the-go sandwiches, salads, snacks, coffee and espresso.

Subway, Village at Centennial Square; (415) 405-3499; open 8:00 am to 3:00 am on Saturday and 9:00 am to midnight on Sunday; providing fast, healthy food, including made-to-order sandwiches.

Village Market & Pizza, Village at Centennial Square; (415) 405-2292; open 10:00 am to 3:00 am on Saturday;

specialty pizzas, signature sandwiches and pasta; offering groceries, sundries, and a full espresso bar.

Off Campus: The San Francisco dining scene is one of the best in the country. From hearty comfort food to Michelin-starred fine dining, there are restaurants for every palate. Please go to the San Francisco Travel site for a complete restaurant guide at www.sfsttravel.com/explore/dining.

Some options for coffee include:

Spessa Coffee Bar, 51 Cambon Dr.; (415) 239-1520; open 7:00 am to 7:00 pm Saturday and Sunday; serving coffee and pastries.

Starbucks, 3251 20th Ave. (Stonestown Galleria); (415) 665-4956; Seattle-based coffeehouse chain known for its signature roasts, light bites and Wi-Fi availability.

Some options for dining include:

Hall of Flame Burger, 73 Cambon Dr.; (415) 584-4444; open Saturday and Sunday for lunch and dinner; offers premium burgers, sandwiches and salads.

Taqueria Dos Charros, 55 Cambon Dr.; (415) 334-6075; open Saturday and Sunday until 10:00 pm; specializing in a combination of international foods.

Papa John’s, 69 Cambon Dr.; (415) 586-7272; open until 11:30 pm on Saturday and Sunday; take-out and delivery chain offering specialty pizzas, wings, bread sticks and desserts.

Olive Garden, 3251 20th Ave. (Stonestown Galleria); (415) 661-6770; www.olivegarden.com; open until 10:00 pm on Saturday and Sunday; lively, family-friendly chain featuring Italian standards such as pastas and salads, with a full bar.

Sorabol Korean BBQ, 3251 20th Ave. (Stonestown Galleria); (415) 753-5959; www.sorabolrestaurants.com; counter-serve chain dishing up Korean BBQ, plus Asian noodle dishes and soups.

Original Joe’s Westlake, 11 Glenwood Ave., Daly City; (650) 755-7400; www.originaljoessf.com; open until 10:00 pm on Saturday and Sunday; neighborhood fixture serving traditional, old-school Italian entrees in spacious environs.

Registration and Meeting Information

Advance Registration: Advance registration for this meeting opens on **August 1, 2018**. Advance registration fees will be **US\$63** for AMS members, **US\$95** for nonmembers, and **US\$10** for students, unemployed mathematicians, and emeritus members. Participants may cancel registrations made in advance by emailing mmsb@ams.org. The deadline to cancel is the first day of the meeting.

On-site Information and Registration: The registration desk, AMS book exhibit, and coffee service will be located in Thornton Hall, Room 404. The Invited Address lectures, Special Sessions and Contributed Paper Sessions will take place in the nearby classrooms. Please look for additional information about specific session room locations on the web and in the printed program. For further information on building locations, a campus map is available at https://www.sfsu.edu/~sfsu-map/graphics/sfsu_map_color.pdf.

The registration desk will be open on Saturday, October 27, 7:30 am to 4:00 pm and Sunday, October 28, 8:00 am to 12:00 pm. The same fees listed above apply for on-site registration and are payable with cash, check or credit card.

Other Activities

Book Sales: Stop by the on-site AMS bookstore to review the newest publications and take advantage of exhibit discounts and free shipping on all on site orders! AMS and MAA members receive 40% off list price. Nonmembers receive a 25% discount. Not a member? Ask a representative about the benefits of AMS membership.

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 wish to discuss with the AMS, please stop by the book exhibit.

Membership Activities: Stop by the AMS Membership Exhibit to learn about the benefits of AMS Membership. Members receive free shipping on purchases all year long and additional discounts on books purchased at meetings, subscriptions to *Notices* and *Bulletin*, discounted registration for world-class meetings and conferences, and more!

Complimentary Refreshments will be served courtesy in part by the AMS Membership Department.

Special Needs

It is the goal of the AMS to ensure that its conferences are accessible to all, regardless of disability. The AMS will strive, unless it is not practicable, to choose venues that are fully accessible to the physically handicapped.

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- Registering early for the meeting
- Checking the appropriate box on the registration form, and
- Sending an email request to the AMS Meetings Department at mmsb@ams.org or meet@ams.org.

AMS Policy on a Welcoming Environment

The AMS strives to ensure that participants in its activities enjoy a welcoming environment. In all its activities, the AMS seeks to foster an atmosphere that encourages the free expression and exchange of ideas. The AMS supports equality of opportunity and treatment for all participants, regardless of gender, gender identity or expression, race, color, national or ethnic origin, religion or religious belief, age, marital status, sexual orientation, disabilities, or veteran status.

Harassment is a form of misconduct that undermines the integrity of AMS activities and mission.

The AMS will make every effort to maintain an environment that is free of harassment, even though it does not control the behavior of third parties. A commitment to a welcoming environment is expected of all attendees at AMS activities, including mathematicians, students, guests, staff, contractors and exhibitors, and participants in scientific sessions and social events. To this end, the

AMS will include a statement concerning its expectations towards maintaining a welcoming environment in registration materials for all its meetings, and has put in place a mechanism for reporting violations. Violations may be reported confidentially and anonymously to 855-282-5703 or at www.mathsociety.ethicspoint.com. The reporting mechanism ensures the respect of privacy while alerting the AMS to the situation. Violations may also be brought to the attention of the coordinator for the meeting (who is usually at the meeting registration desk), and that person can provide advice about how to proceed.

For AMS policy statements concerning discrimination and harassment, see the AMS Anti-Harassment Policy at see the www.ams.org/about-us/governance/policy-statements/anti-harassment-policy.

Questions about this welcoming environment policy should be directed to the AMS Secretary at www.ams.org/about-us/governance/sec-contact.

Local Information and Maps

This meeting will take place on the *San Francisco State University* campus. A campus map can be found at https://www.sfsu.edu/~sfsumap/graphics/sfsu_map_color.pdf. Information about the *San Francisco State University Mathematics Department* can be found at math.sfsu.edu. Please visit the university website at <https://www.sfsu.edu> for additional information on the campus.

Please watch the AMS website at www.ams.org/meetings/sectional/sectional.html for additional information on this meeting.

Parking

SF State provides parking for students, faculty, staff and visitors. The cost to park at different facilities and parking locations for each type of user is located at <https://parking.sfsu.edu/sfsu-parking/campus-parking>. See the parking map for the locations of each of these lots available at https://parking.sfsu.edu/sites/default/files/maps/614_color_map_PARKING_0.pdf. A valid daily or semester permit is required at ALL times in every lot. After 5:00 pm and on weekends, all lots are open to the public.

The gymnasium parking structure, *Lot 6*, is the closest to the meeting registration area. On weekends the structure is open to the public. Parking fees are **US\$5** for two hours or **US\$8** for a day of parking. Daily parking permits expire at midnight. Please note that exact change is required; machines do not give change. Pay stations will accept \$1, \$5 and \$10 bills as well as credit/debit cards and the SF State OneCard. If credit/debit card is used there is a 2.75% credit card fee.

For parking information please contact the parking office at (415) 338-1441 or email parking@sfsu.edu.

Travel

This meeting will take place on the main campus of *San Francisco State University* located in San Francisco, California.

MEETINGS & CONFERENCES

By Air:

San Francisco International Airport (SFO) is an international airport 13 miles south of downtown San Francisco. SFO airport is only 12 miles from the campus. Road closures currently affect traffic to SFO airport. Attendees are advised to allow extra travel time. The San Bruno Canal Bridge at South Airport Boulevard is currently closed and the new bridge is expected to open by the end of 2018. Please visit the airport web site for a list of airlines and lists of cities with daily direct flights; <https://www.flysfo.com>.

There are several options available for transportation to and from the airport.

App-Based Ride Services provide prearranged transportation between SFO and passenger-specified locations. Passengers arrange service online, typically using a smartphone app. Drivers use their personal, non-commercial vehicles to transport passengers. App-Based Ride Services pick up and drop off passengers at the terminal curbs on the Departures/Ticketing Level of all terminals. Fare and travel times ranges vary. Customers should contact the company for details.

Bay Area Rapid Transit (BART) operates rapid rail service to northern San Mateo County, San Francisco and the East Bay directly from SFO. The *SFO BART Station* is located on the Departures/Ticketing Level of the International Terminal (Boarding Area G side). *BART* is easily accessed from any terminal by riding SFO's *AirTrain* to the Garage G/BART Station stop. There is no charge to board *AirTrain*. Tickets can be purchased at the SFO BART Station upon arrival. *BART* provides a connection to Caltrain at the Millbrae station, but before 9:05pm on weekdays, passengers must change *BART* trains at *BART*'s San Bruno station.

Travelers are advised to purchase *BART* train vouchers in advance. Vouchers can only be redeemed at the *SFO* Information Booth located in the International Terminal G-side, near the *AirTrain* escalator, during the hours of 8:00 am to midnight daily. The *BART* fare range is **US\$8.40 to US\$8.95**. For more information visit www.bart.gov.

SamTrans Public Bus Service provides 24-hour bus service connecting SFO with San Mateo County and parts of San Francisco. Routes KX, 292, 397, 398 and 399 stop directly at the Airport terminals. Routes 140, 292, 397 and 399 stop at the Rental Car Center and the United Airlines Maintenance Center. Routes 292, 397 and 399 stop on North McDonnell Road at the Airport Business Center and West Field Road. *SamTrans* buses stop at Terminal 2 Arrivals/Baggage Claim Level, Terminal 3 Arrivals/Baggage Claim Level and International Terminal Level 1. The *SamTrans* fares range is **US\$2 to US\$5**. For more information on schedules and maps please visit www.samtrans.com.

San Francisco International Airport's Rental Car Center allows travelers to pick up and drop off rental cars at one convenient, central location. To access the Rental Car Center from the airport terminals, take the *AirTrain* Blue Line. *AirTrain*, SFO's fully automated people mover system, operates 24 hours every day and provides frequent service throughout SFO. *AirTrain* stations are located in

all terminals, terminal parking garages, the *Rental Car Center* and SFO's *BART* station.

By Bus:

A *Greyhound* station is located at 200 Folsom St. in San Francisco, about 11 mile from campus. For tickets and travel information visit their website at www.greyhound.com/default.aspx.

By Car:

From the North:

Take Highway 101 South, cross the Golden Gate Bridge. Take 19th Avenue/Highway 1 exit. Follow 19th Avenue to the main campus at Holloway Avenue.

From the South:

Take I-280 North, exit at 19th Avenue. Take Junipero Serra Boulevard to Holloway Avenue, turn left on Holloway Avenue to campus at 19th Avenue.

From the East:

Take I-80 West across the Bay Bridge to Highway 101 South. Take 101 South to I-280 toward Daly City. Take the San Jose Avenue/Mission St. exit (immediately after the Ocean Avenue exit), bearing right onto Sagamore Street to Brotherhood Way to Junipero Serra Boulevard North. Take Junipero Serra Boulevard to Holloway Avenue, turn left on Holloway Avenue to campus at 19th Avenue.

Car Rental: *Hertz* is the official car rental company for the meeting. To make a reservation accessing our special meeting rates online at www.hertz.com, click on the box "I have a discount", and type in our convention number (CV): CV#04N30008. You can also call *Hertz* directly at 800-654-2240 (US and Canada) or 1-405-749-4434 (other countries). At the time of reservation, the meeting rates will be automatically compared to other *Hertz* rates and you will be quoted the best comparable rate available.

For directions to campus, inquire at your rental car counter.

Local Transportation

Walking, biking and personal cars are recommended to get around campus and San Francisco.

By Bus: The campus is served by the *Muni* 28 bus line. The cost per trip is **US\$2.25** if paid in cash. For more information and a map of bus routes go to <https://parking.sfsu.edu/transit/muni>.

Biking: SF State encourages biking as a commute option. SF State was named a Bronze-level Bicycle Friendly University by the *League of American Bicyclists* in 2016. For the safety of all members of the community, the core of campus is designated as a pedestrian only zone. Please see the Bike Parking Map at parking.sfsu.edu/sites/default/files/614%20color%20map%20BIKE%20PARKING%20revised.pdf for designated on-campus bike routes. Riding your bike in prohibited areas may result in a citation.

Other options: Other local transportation options include *Uber*; www.uber.com and *Lyft*; www.lyft.com. *Zipcars* are available on campus, located in the Lot 20 garage on the street level accessed by State Drive and at University

Park North, on Winston Drive. For more information go to zipcar.com/sfsu.

Weather

The weather in San Francisco, California during the month of October is great for touring and other activities. In the afternoons throughout the month, the temperature typically stays mild around 60 degrees Fahrenheit. Although the mornings and evenings will normally be foggy and chilly, the afternoons have plenty of sunshine. As always in San Francisco, it can be windy near the coastline. Attendees are advised to wear layered clothing. The weather can be unpredictable so umbrellas are also recommended.

Social Networking

Attendees and speakers are encouraged to tweet about the meeting using the hashtag #AMSmtg.

Information for International Participants

Visa regulations are continually changing for travel to the United States. Visa applications may take from three to four months to process and require a personal interview, as well as specific personal information. International participants should view the important information about traveling to the US found at <https://travel.state.gov/content/travel/en.html>. If you need a preliminary conference invitation in order to secure a visa, please send your request to cro@ams.org.

If you discover you do need a visa, the National Academies website (see above) provides these tips for successful visa applications:

* Visa applicants are expected to provide evidence that they are intending to return to their country of residence. Therefore, applicants should provide proof of “binding” or sufficient ties to their home country or permanent residence abroad. This may include documentation of the following:

- family ties in home country or country of legal permanent residence
- property ownership
- bank accounts
- employment contract or statement from employer stating that the position will continue when the employee returns;

* Visa applications are more likely to be successful if done in a visitor’s home country than in a third country;

* Applicants should present their entire trip itinerary, including travel to any countries other than the United States, at the time of their visa application;

* Include a letter of invitation from the meeting organizer or the US host, specifying the subject, location and dates of the activity, and how travel and local expenses will be covered;

* If travel plans will depend on early approval of the visa application, specify this at the time of the application;

* Provide proof of professional scientific and/or educational status (students should provide a university transcript).

This list is not to be considered complete. Please visit the websites above for the most up-to-date information.

Fayetteville, Arkansas

University of Arkansas

November 3–4, 2018

Saturday – Sunday

Meeting #1142

Southeastern Section

Associate secretary: Brian D. Boe

Announcement issue of *Notices*: July 2018

Program first available on AMS website: August 16, 2018

Issue of *Abstracts*: Volume 39, Issue 3

Deadlines

For organizers: Expired

For abstracts: September 4, 2018

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/sectional.html.

Invited Addresses

Mihalis Dafermos, Princeton University, *On Falling Into Black Holes*

Jonathan Hauenstein, University of Notre Dame, *Numerical Algebraic Geometry and Optimization*.

Kathryn Mann, Brown University, *Group actions, geometry and rigidity*.

Special Sessions

If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the abstract submission form found at www.ams.org/cgi-bin/abstracts/abstract.pl.

Advances in Birational Geometry (Code: SS 11A), **Roi Docampo**, University of Oklahoma, and **Lance Edward Miller** and **Wenbo Niu**, University of Arkansas.

Commutative Algebra (Code: SS 3A), **Alessandro De Stefani**, University of Nebraska–Lincoln, **Paolo Mantero**, University of Arkansas, and **Thomas Polstra**, University of Utah.

Groups in Low-dimensional Topology and Dynamics (Code: SS 7A), **Matt Clay**, University of Arkansas, and **Kathryn Mann**, Brown University.

Harmonic Analysis and Partial Differential Equations (Code: SS 8A), **Ariel Barton**, University of Arkansas, and **Simon Bortz**, University of Minnesota.

Interactions Between Combinatorics and Commutative Algebra (Code: SS 10A), **Ashwini Bhat**, **Chris Francisco**, and **Jeffrey Mermin**, Oklahoma State University.

MEETINGS & CONFERENCES

Interactions Between Contact and Symplectic Geometry and Low-dimensional Topology (Code: SS 5A), **Jeremy Van Horn-Morris**, University of Arkansas, and **David Shea Vela-Vick**, Louisiana State University.

Non-associative Algebraic Structures and their (Co)homology Theories (Code: SS 12A), **Michael Kinyon**, University of Denver, **Jozef H Przytycki**, The George Washington University, and **Petr Vojtechovsky** and **Seung Yeop Yang**, University of Denver.

Numerical Methods for Nonlinear Systems (Code: SS 9A), **Jonathan Hauenstein** and **Tingting Tang**, University of Notre Dame.

Operator Theory and Function Spaces of Analytic Functions (Code: SS 13A), **Daniel Luecking** and **Maria Tjani**, University of Arkansas.

Partial Differential Equations in Several Complex Variables (Code: SS 2A), **Phillip Harrington** and **Andrew Raich**, University of Arkansas.

Recent Advances in Mathematical Fluid Mechanics (Code: SS 1A), **Zachary Bradshaw**, University of Arkansas.

Recent Developments on Fluid Turbulence (Code: SS 6A), **Eleftherios Gkioulekas**, University of Texas Rio Grande Valley.

The Geometry of Curves and Applications (Code: SS 14A), **Jason Cantarella** and **Philipp Reiter**, University of Georgia.

Validation and Verification Strategies in Multiphysics Problems (Code: SS 4A), **Tulin Kaman**, University of Arkansas.

Accommodations

Participants should make their own arrangements directly with the hotel of their choice. Special discounted rates were negotiated with the hotels listed below. Rates quoted do not include a 13.75% occupancy tax. Participants must state that they are with the **American Mathematical Society (AMS) Meeting at the University of Arkansas/ AMS Fall Southeastern Sectional Meeting** to receive the discounted rate. The AMS is not responsible for rate changes or for the quality of the accommodations. **Hotels have varying cancellation and early checkout penalties; be sure to ask for details.**

Inn at Carnall Hall (.5 miles from Champions Hall on campus), 465 Arkansas Avenue, Fayetteville, AR 72701; (479)582-0400; <https://www.innatcarnallhall.com>. Rates are US\$119 per night for a room with a king bed, and US\$149 per night for a room with two queen beds. The Inn at Carnall Hall offers complimentary high speed Wi-Fi and parking for guests of the hotel. Guests also receive access to the University of Arkansas fitness center. Ella's Table, the on-site restaurant, is open for breakfast, lunch (Monday-Friday, only) and dinner. The hotel's Lambeth Lounge is open every evening.

The deadline for reservations at this rate is **October 5, 2018**.

The Chancellor Hotel (.9 miles from Champions Hall on campus), 70 N. East Avenue, Fayetteville, AR 72703; (479) 442-5555, www.hotelchancellor.com/?gclid=CjwKCAjw06LZBRBNEiwA2vgMVTBNBmAnk-prh0vk2RXFa6Q

-2DtW0J5rwtARdx7xahN4s-MTQAqv8RoCckAQAvD_BwE. Rates are US\$139.00 for all room types. To make a reservation online, please use this link: bookings.ihotelier.com/bookings.jsp?groupID=2106178&hotelID=96837a. The Chancellor Hotel offers complimentary Wi-Fi in all guest rooms and public spaces as well as a complimentary shuttle within the Fayetteville area. Valet parking is US\$10 per day and garage parking is US\$4 per day. The Chancellor Hotel also has an indoor/outdoor pool and fitness facilities for their guests. 6494 Bistro and Lounge, the hotel's on-site casual dining, is open for breakfast, lunch and dinner.

The deadline for reservations at this rate is **October 3, 2018**.

Candlewood Suites (1.7 miles from Champions Hall on campus), 2270 W Martin Luther King, Jr. Boulevard, Fayetteville, AR 72701; (479) 856-6262, https://www.ihg.com/candlewood/hotels/us/en/fayetteville/fyvfs/hoteldetail?cm_mmc=GoogleMaps--CW--US--FYVFS. Rates are US\$81 for a room with one queen bed; US\$86 for a room with two double beds; US\$86 for a room with one king bed; US\$100 for a suite with one queen bed; and US\$105 for a suite with one king bed. Please note: there is a 7-day cancellation policy at Candlewood Suites. The hotel's amenities include complimentary wireless internet service, a fitness center and a 24-hour business center.

The deadline for reservations at this rate is **October 2, 2018**.

Staybridge Suites (1.8 miles from Champions Hall on campus), 1577 West 15th Street, Fayetteville, AR 72701; (479) 695-2400, <https://www.ihg.com/staybridge/hotels/us/en/fayetteville/fyvar/hoteldetail>. Rates are US\$112 for a room with a queen bed and US\$125 for a room with two double beds. To make a reservation online, please use this link: <https://www.staybridge.com/redirect?path=hd&brandCode=SB&localeCode=en®ionCode=1&hotelCode=FYVAR&PMID=99801505&GPC=AMS&viewfullsite=true>. Amenities offered at Staybridge Suites include complimentary Wi-Fi, complimentary hot breakfast buffet, fitness room and complimentary laundry facilities.

The deadline for reservations at this rate is **October 18, 2018**.

Econo Lodge (1.9 miles from Champions Hall on campus), 1000 S. Futrall Drive, Fayetteville, AR 72701; (479) 442-3041; <https://www.choicehotels.com/arkansas/fayetteville/econo-lodge-hotels/ar229?source=gyxt>. Rates are US\$69 per night for a room with two queen beds and US\$65 for a room with one king or one queen bed. Please note: there is a 7-day cancellation policy at the Econo Lodge. The hotel's amenities include complimentary Wi-Fi and complimentary continental breakfast, as well as free parking for guests.

The deadline for reservations at this rate is **October 2, 2018**.

Housing Warning:

Please beware of aggressive housing bureaus that target potential attendees of a meeting. They are sometimes called “room poachers” or “room-block pirates” and these companies generally position themselves as a meeting’s housing bureau, convincing attendees to unknowingly book outside the official room block. They call people who they think will more likely than not attend a meeting and lure them with room rates that are significantly less than the published group rate—for a limited time only. And people who find this offer tempting may hand over their credit card data, believing they have scored a great rate and their housing is a done deal. Unfortunately, this often turns out to be the start of a long, costly nightmare.

These housing bureaus are not affiliated with the American Mathematical Society or any of its meetings, in any way. The AMS would never call anyone to solicit reservations for a meeting. The only way to book a room at a rate negotiated for an AMS Sectional Meeting is through AMS Sectional Meetings pages. The AMS cannot be responsible for any damages incurred as a result of hotel bookings made with unofficial housing bureaus.

Food Services

On Campus: There are many dining options on campus within walking distance of the meeting. The hours of the on-campus restaurants vary on the weekends. Please see a complete listing here: <https://www.dineoncampus.com/razorbacks/campus-dining-map>.

Off Campus: Fayetteville offers many dining options of all types of cuisine. Dickson Street which runs through campus, is famous for its restaurants, bars and grills. For more information on dining throughout Fayetteville, please visit, <https://www.visitfayettevillenc.com/things-to-do/dining>. And for more information on visiting Fayetteville in general please visit, <https://www.visitfayettevillenc.com>.

Some of the nearby off-campus dining options include:
A Taste of Thai, 31 East Center Street, #100; originalatasteofthai.com

Petra Cafe, 31 East Center Street, #101; thepetracafe.com
Vetro, 17 East Center Street; vetro1925.com

Hugo’s, 2 1/2 North Block Avenue; hugosfayetteville.com

Hammontree’s, 326 Northwest Avenue, #8; hammontreescheese.com

Emelia’s Kitchen, 309 West Dickson Street; lese1nashville.com

Wasabi, 313 West Dickson Street, #105; wasabifayetteville.com

US Pizza, 202 West Dickson Street; uspizzaco.net

Registration and Meeting Information

Advance Registration: Advance registration for this meeting will open on **August 1st**. Advance registration fees are US\$63 for AMS members, US\$95 for nonmembers, and US\$10 for students, unemployed mathematicians, and

emeritus members. Participants may cancel registrations made in advance by emailing mmsb@ams.org. The deadline to cancel is the first day of the meeting.

On-site Information and Registration: The registration desk, AMS book exhibit, and coffee service will be located in the 3rd floor lobby of Champions Hall. The Invited Addresses will be held in Gearhart Hall, Room 0026. Special Sessions and Contributed Paper Sessions will take place in classrooms in Science Engineering Hall.

For additional information on building locations and a printable campus map, visit https://campusmaps.uark.edu/?pn1_disp=Y

The registration desk will be open on Saturday, November 3, 7:30 am–4:00 pm and Sunday, November 5, 8:00 am–12:00 pm. The same fees apply for on-site registration, as for advance registration. Fees are payable on-site via cash, check, or credit card.

Other Activities

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free expression and exchange of ideas. The AMS supports equality of opportunity and treatment for all participants, regardless of gender, gender identity or expression, race, color, national or ethnic origin, religion or religious belief, age, marital status, sexual orientation, disabilities, or veteran status.

Harassment is a form of misconduct that undermines the integrity of AMS activities and mission.

The AMS will make every effort to maintain an environment that is free of harassment, even though it does not control the behavior of third parties. A commitment to a welcoming environment is expected of all attendees at AMS activities, including mathematicians, students, guests, staff, contractors and exhibitors, and participants in scientific sessions and social events. To this end, the AMS will include a statement concerning its expectations towards maintaining a welcoming environment in registration materials for all its meetings, and has put in place a mechanism for reporting violations. Violations may be reported confidentially and anonymously to 855-282-5703 or at www.mathsociety.ethicspoint.com. The reporting mechanism ensures the respect of privacy while alerting the AMS to the situation. Violations may also be brought to the attention of the coordinator for the meeting (who is usually at the meeting registration desk), and that person can provide advice about how to proceed.

For AMS policy statements concerning discrimination and harassment, see the AMS Anti-Harassment Policy at see the www.ams.org/about-us/governance/policy-statements/anti-harassment-policy.

Questions about this welcoming environment policy should be directed to the AMS Secretary at www.ams.org/about-us/governance/sec-contact.

Local Information and Maps

This sectional will take place on the Main Campus of the University of Arkansas in Fayetteville, Arkansas. A campus map can be found at https://campusmaps.uark.edu/?pn1_disp=Y. Information about the University of Arkansas Department of Mathematical Sciences can be found at <https://fulbright.uark.edu/departments/math>. For additional information about the University please visit the University of Arkansas website at <https://www.uark.edu>.

The meeting will occupy space in Science Engineering Hall, Gearhart Hall, and Champions Hall. A campus map for the University of Arkansas can be found here, campusmaps.uark.edu/?pn1_disp=Y.

Parking

Parking is available at the Harmon Garage (847 Williams Street) just a few blocks away from Champion Hall, Gearhart Hall, and Science Engineering Hall. A map showing the location of Harmon Garage can be found here, <https://www.google.com/maps/dir/36.0652781,-94.1725431/@36.0689086,-94.1774083,1500m/data=!3m1!1e3>. The cost for parking is \$16 per day.

Travel

The University of Arkansas in Fayetteville, Arkansas.

By Air:

Northwest Arkansas Regional Airport (XNA) is the closest airport to the University of Arkansas. Northwest Arkansas Regional Airport is located approximately 30 miles from the University.

Rental cars are available at XNA can be found here, www.flyxna.com/getting-around/rental-cars. Taxi, limousine and shuttle services are also available at the airport. For a complete listing, please visit www.flyxna.com/getting-around/rental-cars. For more information, please visit the Northwest Arkansas Regional Airport website: www.flyxna.com.

To drive from the Northwest Arkansas Regional Airport to the meeting at the University of Arkansas:

Upon leaving the airport, turn left onto Tower Drive and then turn right onto Regional Avenue. Then, turn left onto Airport Boulevard and turn left onto AR-265/Healing Spring Road. In 3.8 miles, turn right onto AR-112/AR-264/North Main Street. Turn left onto AR-264/East Lowell Avenue. Take ramp right for I-49 South toward Fayetteville/Springdale and follow for 11.6 miles. At Exit 66, take ramp right for AR-112 South toward Fayetteville and then, turn right onto AR-112/North Garland Avenue/North Highway 112. Bear right onto North Garland Avenue and then turn left onto West Dickson Street. Then, turn right onto North Duncan Avenue and your destination is on the right. 201 North Duncan Avenue (Harmon Garage, parking lot on campus near the meeting).

By Train: Amtrak does not have a train station in Fayetteville. One can take a Greyhound bus from the Little Rock Amtrak Station to the Fayetteville Greyhound Station. Please contact Amtrak at Tel: 800-USA-RAIL, website: www.amtrak.com

By Bus: The Greyhound Bus station located at 3075 West Wedington Drive, Fayetteville, AR 72704 is located about 2.5 miles from the meeting at the University of Arkansas. Please contact Greyhound Tel: 1-800-231-2222; Website: www.greyhound.com.

By Car: All driving directions will end at the Harmon Parking Garage on the campus of the University of Arkansas.

From the north: Take I-49 South toward Fayetteville. At exit 66, take ramp right for AR-112 South toward Fayetteville and then turn right onto AR-112/North Garland Ave/N Highway 112. Bear right onto North Garland Avenue and then turn left onto West Dickson Street. Then, turn right onto North Duncan Avenue and your destination is on the right. 201 North Duncan Avenue (Harmon Garage, parking lot on campus near the meeting).

From the south: Take I-49 North toward Fayetteville for 40 miles. At exit 60, take ramp right for AR-265 toward Fayetteville Executive Airport. Turn right onto AR-265/South Cato Springs Road and then keep straight onto South Razorback Road. Keep straight onto AR-16 and then turn right onto West Indian Trail. Turn left onto South Paris Avenue/South Stadium Drive. The road name

changes to Sout Virginia Avenue. Turn right onto South California Boulevard/West Clinton Drive. The road name changes to West Center Street. Then, turn right onto North Duncan Avenue and your destination is on the right. 201 North Duncan Avenue (Harmon Garage, parking lot on campus near the meeting).

From the east: Take US-412 West to AR-45. Stay on AR-45 West for 18.6 miles. Turn right onto US-71 BR/North College Avenue and then immediately turn left onto East Lafayette Street. Road name changes to West Lafayette Street. Turn left onto North Gregg Avenue and then turn right onto West Dickson Street. Then, turn left onto North Duncan Avenue and your destination is on the right. 201 North Duncan Avenue (Harmon Garage, parking lot on campus near the meeting).

From the west: Take US-412 East. Bear right onto AR-16 SPUR / East Kenwood Street and then turn right onto AR-16/Progress Avenue. Keep straight onto AR-112 SPUR/AR-16 and then turn right onto AR-112/North Garland Avenue. Bear right onto North Garland Avenue and then turn left onto West Dickson Street. Then, turn right onto North Duncan Avenue and your destination is on the right. 201 North Duncan Avenue (Harmon Garage, parking lot on campus near the meeting).

Local Transportation

Car Rental: *Hertz* is the official car rental company for the meeting. To make a reservation accessing our special meeting rates online at www.hertz.com, click on the box "I have a discount," and type in our convention number (CV): 04N30008. You can also call *Hertz* directly at 800-654-2240 (US and Canada) or 405-749-4434 (other countries). At the time of your reservation, the meeting rates will be automatically compared to other *Hertz* rates and you will be quoted the best comparable rate available. Meeting rates include unlimited mileage and are subject to availability. Advance reservations are recommended, blackout dates may apply.

Taxi Service: Licensed, metered taxis are available in Fayetteville through *Dynasty Taxi Service*. Tel: 479-521-8294; Website: www.dynastytaxi.com.

Both *Lyft* and *Uber* also operate in the Fayetteville area.

Bus Service: The University of Arkansas Razorback Transit System has several bus stops in the area of the meeting. Service is free. For a map and schedule, please visit: <https://parking.ark.edu/transit-services/transit-operations/maps-and-schedules.php>.

Weather

The average high temperature in Fayetteville for November is in the low 60s, Fahrenheit and the average low is in the upper 30s/lower 40s, Fahrenheit. Visitors should be prepared for inclement weather and check weather forecasts in advance of their arrival.

Social Networking

Attendees and speakers are encouraged to tweet about the meeting using the hashtag #AMSmtg.

Information for International Participants

Visa regulations are continually changing for travel to the United States. Visa applications may take from three to four months to process and require a personal interview, as well as specific personal information. International participants should view the important information about traveling to the US found at <https://travel.state.gov/content/travel/en.html>. If you need a preliminary conference invitation in order to secure a visa, please send your request to mac@ams.org.

If you discover you do need a visa, the National Academies website (see above) provides these tips for successful visa applications:

- * Visa applicants are expected to provide evidence that they are intending to return to their country of residence. Therefore, applicants should provide proof of "binding" or sufficient ties to their home country or permanent residence abroad. This may include documentation of the following:

- family ties in home country or country of legal permanent residence
- property ownership
- bank accounts
- employment contract or statement from employer stating that the position will continue when the employee returns;

- * Visa applications are more likely to be successful if done in a visitor's home country than in a third country;

- * Applicants should present their entire trip itinerary, including travel to any countries other than the United States, at the time of their visa application;

- * Include a letter of invitation from the meeting organizer or the US host, specifying the subject, location and dates of the activity, and how travel and local expenses will be covered;

- * If travel plans will depend on early approval of the visa application, specify this at the time of the application;

- * Provide proof of professional scientific and/or educational status (students should provide a university transcript).

This list is not to be considered complete. Please visit the websites above for the most up-to-date information.

Baltimore, Maryland

Baltimore Convention Center, Hilton Baltimore, and Baltimore Marriott Inner Harbor Hotel

January 16–19, 2019

Wednesday – Saturday

Meeting #1145

Joint Mathematics Meetings, including the 125th Annual Meeting of the AMS, 102nd Annual Meeting of the Mathematical Association of America (MAA), annual meetings of the Association for Women in Mathematics (AWM) and

MEETINGS & CONFERENCES

the National Association of Mathematicians (NAM), and the winter meeting of the Association of Symbolic Logic (ASL), with sessions contributed by the Society for Industrial and Applied Mathematics (SIAM).

Associate secretary: Steven H. Weintraub

Announcement issue of *Notices*: October 2018

Program first available on AMS website: November 1, 2018

Issue of *Abstracts*: Volume 40, Issue 1

Deadlines

For organizers: Expired

For abstracts: September 25, 2018

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/national.html.

Joint Invited Addresses

Sarah Koch, University of Michigan, *Title to be announced* (AMS-MAA Invited Address).

Bryna Kra, Northwestern University, *Title to be announced* (AWM-AMS Noether Lecture).

Cathy O'Neil, ORCAA, *Title to be announced* (MAA-AMS-SIAM Gerald and Judith Porter Public Lecture).

Daniel Spielman, Yale University, *Title to be announced* (AMS-MAA Invited Address).

AMS Invited Addresses

Jesus De Loera, University of California Davis, *Title to be announced*.

Benedict Gross, Harvard University, *Title to be announced* (AMS Colloquium Lectures: Lecture I).

Benedict Gross, Harvard University, *Title to be announced* (AMS Colloquium Lectures: Lecture II).

Benedict Gross, Harvard University, *Title to be announced* (AMS Colloquium Lectures: Lecture III).

Peter Oszvath, Princeton University, *Title to be announced*.

Lior Pachter, University of California Berkeley, *Title to be announced*.

Karen Parshall, University of Virginia, *Title to be announced*.

Alan Perelson, Los Alamos National Laboratory, *Title to be announced* (AMS Josiah Willard Gibbs Lecture).

Lillian Pierce, Duke University, *Title to be announced*.

AMS Special Sessions

If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the abstract submission form found at jointmathematicsmeetings.org/meetings/abstracts/abstract.pl?type=jmm.

Some sessions are cosponsored with other organizations. These are noted within the parenthesis at the end of each listing, where applicable.

25 years of Conferences for African-American Researchers in the Mathematical Sciences (CAARMS times 25) (Code: SS 82A), **William A. Massey**, Princeton University.

A Showcase of Number Theory at Undergraduate Institutions (Code: SS 76A), **Adriana Salerno**, Bates College, and **Lola Thompson**, Oberlin College.

Advances and Applications in Integral and Differential Equations (Code: SS 40A), **Jeffrey T. Neugebauer**, Eastern Kentucky University, and **Min Wang**, Rowan University.

Advances by Early Career Women in Discrete Mathematics (Code: SS 75A), **Jessalyn Bolkema**, State University of New York at Oswego, and **Jessica De Silva**, California State University, Stanislaus.

Advances in Operator Theory, Operator Algebras, and Operator Semigroups (Code: SS 30A), **Joseph Ball**, Virginia Tech, **Marat Markin**, California State University, Fresno, **Igor Nikolaev**, St. John University, and **Ilya Spitkovsky**, New York University, Abu Dhabi.

Advances in Quantum Walks, Quantum Simulations, and related Quantum Theory (Code: SS 18A), **Radhakrishnan Balu**, US Army Research Lab, **Chaobin Liu**, Bowie State University, and **Takuya Machida**, Nihon University, Japan.

Agent-based Modeling in Biological and Social Systems (a Mathematics Research Communities Session) (Code: SS 15A), .

Algebraic Structures Motivated by Knot Theory (Code: SS 51A), **Mikhail Khovanov**, Columbia University, and **Jozef H. Przytycki** and **Alexander Shumakovitch**, George Washington University.

Algebraic and Geometric Methods in Discrete Optimization (Code: SS 2A), **Amitabh Basu**, Johns Hopkins University, and **Jesus De Loera**, University of California, Davis.

Algebraic, Discrete, Topological and Stochastic Approaches to Modeling in Mathematical Biology (Code: SS 43A), **Olcay Akman**, Illinois State University, **Timothy D. Comar**, Benedictine University, **Daniel Hrozencik**, Chicago State University, and **Raina Robeva**, Sweet Briar College.

Algorithmic Dimensions and Fractal Geometry (Code: SS 37A), **Jack H. Lutz**, Iowa State University, and **Elvira Mayordomo**, University of Zaragoza, Spain (AMS-ASL).

Analysis and Geometry of Nonlinear Evolution Equations (Code: SS 65A), **Marius Beceanu**, University at Albany, State University of New York, and **Dan-Andrei Geba**, University of Rochester.

Analysis of Fractional, Stochastic, and Hybrid Dynamic Systems with Applications (Code: SS 19A), **John R. Graef**, University of Tennessee at Chattanooga, **G. S. Ladde**, University of South Florida, and **A. S. Vatsala**, University of Louisiana at Lafayette.

Analytic Number Theory (Code: SS 33A), **Thomas A. Hulse**, Morgan State University, **Angel V. Kumchev** and **Nathan McNew**, Towson University, and **John Miller**, The Johns Hopkins University.

Arithmetic Statistics (Code: SS 53A), **Michael Chou** and **Robert Lemke Oliver**, Tufts University, and **Ari Shnidman**, Center for Communications Research-Princeton.

Bifurcations of Difference Equations and Discrete Dynamical Systems with Applications (Code: SS 72A), **Arzu Bilgin**, Recep Tayyip Erdogan University, Turkey, and **Toufik Khyat**, Trinity College.

Commutative Ring Theory: Research for Undergraduate and Early Graduate Students (Code: SS 60A), **Nicholas**

Baeth, Franklin and Marshall College, and **Branden Stone**, Hamilton College.

Continued Fractions (Code: SS 35A), **Geremias Polanco Encarnacion**, Hampshire College, **James McLaughlin**, West Chester University, **Barry Smith**, Lebanon Valley College, and **Nancy J. Wyshinski**, Trinity College.

Counting Methods in Number Theory (Code: SS 6A), **Lillian Pierce**, Duke University, **Arindam Roy**, Rice University, and **Jiyua Wang**, University of Wisconsin.

Definability and Decidability Problems in Number Theory (Code: SS 24A), **Kirsten Eisentrager**, Pennsylvania State University, **Deidre Haskell**, McMaster University, Ontario, Canada, **Jennifer Park**, University of Michigan, and **Alexandra Shlapentokh**, East Carolina University (AMS-ASL).

Differential Equations on Fractals (Code: SS 87A), **Patricia Alonso-Ruiz**, University of Connecticut, **Joe Chen**, Colgate University, **Luke Rogers**, University of Connecticut, **Robert Strichartz**, Cornell University, and **Alexander Teplyaev**, University of Connecticut.

Enumerative Combinatorics (Code: SS 26A), **Miklos Bona**, University of Florida, and **Cheyne Homberger**, University of Maryland, Baltimore County.

Financial Mathematics (Code: SS 66A), **Maxim Bichuch**, Johns Hopkins University, **Anja Richter**, Baruch College, City University of New York, and **Stephan Sturm**, Worcester Polytechnic Institute.

Geometric and Topological Combinatorics (Code: SS 39A), **Anastasia Chavez** and **Jamie Haddock**, University of California, Davis, and **Annie Raymond**, University of Massachusetts, Amherst.

Geometric and Topological Generalization of Groups (Code: SS 74A), **Amrita Acharyya**, University of Toledo, and **Bikash C. Das**, University of North Georgia.

Geometry Labs United: Research, Visualization, and Outreach (Code: SS 57A), **Marianne Kortén**, Kansas State University, and **Sean Lawton** and **Anton Lukyanenko**, George Mason University.

Geometry and Dynamics of Continued Fractions (Code: SS 47A), **Anton Lukyanenko**, George Mason University, and **Joseph Vandehey**, Ohio State University.

Geometry of Representation Spaces (Code: SS 58A), **Sean Lawton**, George Mason University, **Chris Manon**, University of Kentucky, and **Daniel Ramras**, Indiana University-Purdue University Indianapolis.

Group Representation Theory and Character Theory (Code: SS 38A), **Mohammad Reza Darafsheh**, University of Tehran, Iran, and **Manouchehr Misaghian**, Prairie View A&M University.

Harmonic Analysis, Partial Differential Equations, and Applications (Code: SS 44A), **Russell Brown**, University of Kentucky, and **Irina Mitrea**, Temple University.

Harmonic Analysis: New Developments in Oscillatory Integrals (a Mathematics Research Communities Session) (Code: SS 12A), .

History of Mathematics (Code: SS 42A), **Sloan Despeaux**, Western Carolina University, **Jemma Lorenat**, Pitzer College, **Daniel E. Otero**, Xavier University, and **Adrian Rice**, Randolph-Macon College (AMS-MAA-ICHM).

Hopf Algebras and Tensor Categories (Code: SS 62A), **Siu-Hung Ng**, Louisiana State University, **Julia Plavnik**, Texas A&M University, and **Henry Tucker**, University of California, San Diego.

How to Guard an Art Gallery and Other Discrete Mathematical Adventures (In Memory of T. S. Michael, 1960 to 2016) (Code: SS 16A), **Joseph Bonin**, The George Washington University, **Carolyn Chun**, US Naval Academy, and **Nancy Neudauer**, Pacific University.

If You Build It They Will Come: Presentations by Scholars in the National Alliance for Doctoral Studies in the Mathematical Sciences (Code: SS 54A), **David Goldberg**, Purdue University, and **Phil Kutzko**, University of Iowa.

Latinx in Math (Code: SS 34A), **Alexander Diaz-Lopez**, Villanova University, **Laura Escobar**, University of Illinois, and **Juanita Pinzon-Caicedo**, North Carolina State University.

Lattice Path Combinatorics and Applications (Code: SS 68A), **Christian Krattenthaler**, University of Vienna, Austria, and **Alan Krinik** and **Randall J. Swift**, California State Polytechnic University.

Localization and Delocalization for Disordered Quantum Systems (Code: SS 83A), **Peter D. Hislop**, University of Kentucky, **Christoph A. Marx**, Oberlin College, and **Jeffery Schenker**, Michigan State University.

Low Complexity Models in Data Analysis and Machine Learning (Code: SS 55A), **Emily J. King**, University of Bremen, Germany, **Nate Strawn**, Georgetown University, and **Soledad Villar**, New York University.

Mappings on Metric and Banach Spaces with Applications to Fixed Point Theory (Code: SS 63A), **Torrey M. Gallagher**, Bucknell University, and **Christopher J. Lennard**, University of Pittsburgh.

Mathematical Analysis in Fluid Dynamics (Code: SS 31A), **Yanqiu Guo**, Florida International University, **Jinkai Li**, South China Normal University, **Jing Tian**, Towson University, and **Yuncheng You**, University of South Florida.

Mathematical Investigations of Spatial Ecology and Epidemiology (Code: SS 79A), **Leah Shaw** and **Junping Shi**, College of William and Mary, and **Zhisheng Shuai**, University of Central Florida.

Mathematical Models in Ecology, Epidemiology, and Medicine (Code: SS 85A), **Paula Grajdeanu**, Shenandoah University, and **Najat Ziyadi**, Morgan State University.

Mathematicians at Sea (in the Sky, or on Land): Defense Applications of Mathematics (Code: SS 21A), **Tegan Emerson**, **Timothy Doster**, and **George Stantchev**, Naval Research Laboratory.

Mathematics in the Realm of Cyber Research (Code: SS 22A), **Daniel Bennett**, Army Cyber Institute, **Paul Goethals**, United States Military Academy, and **Natalie Scala**, Towson University.

Mathematics of Coding Theory and Applications (Code: SS 78A), **Hiram Lopez-Valdez**, **Felice Manganiello**, and **Gretchen L. Matthews**, Clemson University.

Mathematics of Gravity and Light (a Mathematics Research Communities Session) (Code: SS 11A), .

Multiscale Problems in the Calculus of Variations (Code: SS 46A), **Elisa Davoli**, University of Vienna, Austria, and

MEETINGS & CONFERENCES

Rita Ferreira, King Abdullah University of Science and Technology, Saudi Arabia.

Natural Resources Modeling (Code: SS 56A), **Julie Blackwood**, Williams College, and **Shandelle M. Henson**, Andrews University.

Network Science (Code: SS 52A), **David Burstein**, Swarthmore College, **Franklin Kenter**, United States Naval Academy, and **Feng Bill Shi**, University of North Carolina.

New Directions in the Theory of Complex Multiplication (Code: SS 1A), **Henri Darmon**, McGill University, **Samit Dasgupta**, University of California, Santa Cruz, and **Benedict Gross**, Harvard University.

Nonlinear Evolution Equations and Their Applications (Code: SS 20A), **Mingchao Cai**, Morgan State University, **Gisele Mophou Loudjom**, University of French West Indies, Guadeloupe, France, and **Gaston NGuerekata**, **Alexander Pankov**, **Xuming Xie**, and **Guoping Zhang**, Morgan State University.

Not KNERds: A Community for Knot Theory (Code: SS 77A), **Moshe Cohen**, Vassar College, **Elizabeth Denne**, Washington and Lee University, and **Adam Lowrance**, Vassar College.

Number Theoretic Methods in Hyperbolic Geometry (a Mathematics Research Communities Session) (Code: SS 14A), **Samantha Fairchild**, University of Washington, **Junxian Li**, University of Illinois Urbana Champaign, and **Richard Vradenburgh**, University of Virginia.

Number Theory, Arithmetic Geometry, and Computation (Code: SS 61A), **Brendan Hassett**, Brown University, **Drew Sutherland**, Massachusetts Institute of Technology, and **John Voight**, Dartmouth College.

Numerical Methods for PDEs and Applications (Code: SS 41A), **Wenrui Hao**, **Qingguo Hong**, and **Jinchao Xu**, Pennsylvania State University.

Optimal Methods in Applicable Analysis: Variational Inequalities, Low Rank Matrix Approximations, Systems Engineering, Cyber Security (Code: SS 81A), **Aritra Dutta**, King Abdullah University of Science and Technology, Saudi Arabia, **Ram Mohapatra**, University of Central Florida, **Gayatri Pany**, Singapore University of Technology and Design, Singapore, and **Nabin Kumar Sahu**, Dhirubhai Ambani Institute of Information and Communication Technology, India.

Orthogonal Polynomials, Quantum Probability, Harmonic and Stochastic Analysis (Code: SS 27A), **Nobuhiro Asai**, Aichi University of Education, Kariya, Japan, **Rodica Costin**, The Ohio State University, **Aurel I. Stan**, The Ohio State University at Marion, and **Hiroaki Yoshida**, Ochanomizu University, Tokyo, Japan.

Partition Theory and Related Topics (Code: SS 80A), **Dennis Eichhorn**, University of California, Irvine, **Tim Huber**, University of Texas, Rio Grande Valley, and **Amita Malik**, Rutgers University.

Problems in Partial Differential Equations (Code: SS 36A), **Alex Himonas**, University of Notre Dame, and **Curtis Holliman**, The Catholic University of America.

Quantum Symmetries: Subfactors and Fusion Categories (a Mathematics Research Communities Session) (Code: SS 13A), **Cain Edie-Michell**, Australian National University,

Lauren Ruth, UC Riverside, and **Yilong Wang**, Ohio State University.

Quaternions (Code: SS 28A), **Terrence Blackman**, Medgar Evers College, City University of New York, and **Johannes Familton** and **Chris McCarthy**, Borough of Manhattan Community College, City University of New York.

Recent Advancements in Mathematical Modeling of Cancer (Code: SS 49A), **Kamila Larripa**, Humboldt State University, and **Hwayeon Ryu**, University of Hartford.

Recent Advances and Trends in Computable Structure Theory (in honor of J. Remmel) (Code: SS 64A), **Jennifer Chubb**, University of San Francisco, and **Tim McNicholl**, Iowa State University.

Recent Advances in Biological Modeling and Related Dynamical Analysis (Code: SS 69A), **Joshi Raj Hem**, Xavier University, and **Yanyu Xiao**, University of Cincinnati.

Recent Advances in Homological and Commutative Algebra (Code: SS 70A), **Neil Epstein**, George Mason University, **Claudiu Raicu**, Notre Dame University, and **Alexandra Seceleanu**, University of Nebraska.

Recent Advances in Inverse Problems and Imaging (Code: SS 25A), **Kui Ren**, University of Texas at Austin, and **Yang Yang**, Michigan State University.

Recent Advances in Regularity Lemmas (Code: SS 71A), **Gabriel Conant**, University of Notre Dame, **Rehana Patel**, and **Julia Wolf**, University of Bristol, UK.

Recent Progress in Multivariable Operator Theory (Code: SS 86A), **Dmitry Kaliuzhnyi-Verbovetsky** and **Hugo Woerdeman**, Drexel University.

Research in Mathematics by Early Career Graduate Students (Code: SS 84A), **Marat Markin**, **Morgan Rodgers**, **Khang Tran**, and **Oscar Vega**, California State University, Fresno.

Research in Mathematics by Undergraduates and Students in Post-Baccalaureate Programs (Code: SS 32A), **Darren A. Narayan**, Rochester Institute of Technology, **Khang Tran**, California State University, Fresno, **Mark David Ward**, Purdue University, and **John Wierman**, The Johns Hopkins University (AMS-MAA-SIAM).

Riordan Arrays (Code: SS 50A), **Alexander Burstein** and **Dennis Davenport**, Howard University, **Asamoah Nkwanta**, Morgan State University, **Lou Shapiro**, Howard University, and **Leon Woodson**, Morgan State University.

Statistical, Variational, and Learning Techniques in Image Analysis and their Applications to Biomedical, Hyperspectral, and Other Imaging (Code: SS 45A), **Justin Marks**, Gonzaga University, **Laramie Paxton**, Washington State University, and **Viktorija Taroudaki**, Eastern Washington University.

Stochastic Analysis and Applications in Finance, Actuarial Science and Related Fields (Code: SS 17A), **Julius N. Esunge**, University of Mary Washington, **See Keong Lee**, University of the Sciences, Malaysia, and **Aurel I. Stan**, The Ohio State University at Marion.

Stochastic Differential Equations and Applications (Code: SS 59A), **Carey Caginalp**, University of Pittsburgh.

Symbolic Dynamics (Code: SS 9A), **Van Cyr**, Bucknell University, and **Bryna Kra**, Northwestern University.

The Mathematics of Historically Black Colleges and Universities (HBCUs) in the Mid-Atlantic (Code: SS 88A), **Edray Goins**, Purdue University, **Janis Oldham**, North Carolina A&T, **Talitha Washington**, Howard University, and **Scott Williams**, University at Buffalo, State University of New York.

Topological Data Analysis: Theory and Applications (Code: SS 73A), **Justin Curry**, University at Albany, State University of New York, **Mikael Vejdemo-Johansson**, College of Staten Island, City University of New York, and **Sara Kalisnik Verovsek**, Wesleyan University.

Topology, Structure and Symmetry in Graph Theory (Code: SS 48A), **Lowell Abrams**, George Washington University, and **Mark Ellingham**, Vanderbilt University.

Using Modeling to Motivate the Study of Differential Equations (Code: SS 29A), **Robert Kennedy**, Centennial High School, Ellicott City MD, **Audrey Malagon**, Virginia Wesleyan University, **Brian Winkel**, SIMIODE, Cornwall NY, and **Dina Yagodich**, Frederick Community College.

Women in Topology (Code: SS 67A), **Jocelyn Bell**, Hobart and William Smith Colleges, **Rosemary Guzman**, University of Chicago, **Candice Price**, University of San Diego, and **Arunima Ray**, Max Planck Institute for Mathematics, Germany.

Auburn, Alabama

Auburn University

March 15–17, 2019

Friday – Sunday

Meeting #1146

Southeastern Section

Associate secretary: Brian D. Boe

Announcement issue of *Notices*: To be announced

Program first available on AMS website: January 31, 2019

Issue of *Abstracts*: Volume 40, Issue 2

Deadlines

For organizers: August 15, 2018

For abstracts: January 22, 2019

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/sectional.html.

Invited Addresses

Grigoriy Blekherman, Georgia Institute of Technology, *To be announced.*

Carina Curto, Pennsylvania State University, *To be announced.*

Ming Liao, Auburn University, *To be announced.*

Special Sessions

If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the ab-

stract submission form found at www.ams.org/cgi-bin/abstracts/abstract.pl.

Combinatorial Matrix Theory (Code: SS 2A), **Zhongshan Li**, Georgia State University, and **Xavier Martínez-Rivera**, Auburn University.

Commutative and Combinatorial Algebra (Code: SS 3A), **Selvi Kara Beyarslan**, University of South Alabama, and **Alessandra Costantini**, Purdue University.

Developments in Commutative Algebra (Code: SS 1A), **Eloísa Grifo**, University of Michigan, and **Patricia Klein**, University of Kentucky.

Graph Theory in Honor of Robert E. Jamison's 70th Birthday (Code: SS 4A), **Robert A Beller**, East Tennessee State University, and **Gretchen Matthews** and **Beth Novick**, Clemson University.

Honolulu, Hawaii

University of Hawaii at Manoa

March 22–24, 2019

Friday – Sunday

Meeting #1147

Central Section

Associate secretaries: Georgia Benkart and Michel L. Lapidus

Announcement issue of *Notices*: To be announced

Program first available on AMS website: February 7, 2019

Issue of *Abstracts*: Volume 40, Issue 2

Deadlines

For organizers: Expired

For abstracts: January 29, 2019

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/sectional.html.

Invited Addresses

Barry Mazur, Harvard University, *On the Arithmetic of Curves* (Einstein Public Lecture in Mathematics).

Aaron Naber, Northwestern University, *Analysis of Geometric Nonlinear Partial Differential Equations.*

Deanna Needell, University of California, Los Angeles, *Simple approaches to complicated data analysis.*

Katherine Stange, University of Colorado, Boulder, *Title to be announced.*

Andrew Suk, University of California, San Diego, *Title to be announced.*

Hartford, Connecticut

University of Connecticut Hartford
(Hartford Regional Campus)

April 13–14, 2019

Saturday – Sunday

Meeting #1148

Eastern Section

Associate secretary: Steven H. Weintraub

Announcement issue of *Notices*: To be announced

Program first available on AMS website: February 21, 2019

Issue of *Abstracts*: Volume 40, Issue 2

Deadlines

For organizers: September 13, 2018

For abstracts: February 5, 2019

*The scientific information listed below may be dated.
For the latest information, see www.ams.org/amsmtgs/sectional.html.*

Invited Addresses

Olivier Bernardi, Brandeis University, *Title to be announced.*

Brian Hall, Notre Dame University, *Title to be announced.*

Christina Sormani, City University of New York, *Title to be announced.*

Special Sessions

If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the abstract submission form found at www.ams.org/cgi-bin/abstracts/abstract.pl.

Analysis, Geometry, and PDEs in Non-smooth Metric Spaces (Code: SS 1A), **Vyron Vellis**, University of Connecticut, **Xiaodan Zhou**, Worcester Polytechnic Institute, and **Scott Zimmerman**, University of Connecticut.

Computability Theory (Code: SS 2A), **Damir Dzhafarov** and **Reed Solomon**, University of Connecticut, and **Linda Brown Westrick**, Pennsylvania State University.

Modeling and Qualitative Study of PDEs from Materials Science and Geometry. (Code: SS 6A), **Yung-Sze Choi**, **Changfeng Gui**, and **Xiaodong Yan**, University of Connecticut.

Recent Development of Geometric Analysis and Nonlinear PDEs (Code: SS 3A), **Ovidiu Munteanu**, **Lihan Wang**, and **Ling Xiao**, University of Connecticut.

Special Session on Regularity Theory of PDEs and Calculus of Variations on Domains with Rough Boundaries (Code: SS 5A), **Murat Akman**, University of Connecticut, and **Zihui Zhao**, University of Washington.

Stochastic Processes, Random Walks, and Heat Kernels (Code: SS 4A), **Patricia Alonso Ruiz**, University of Connecticut, and **Phanuel Mariano**, Purdue University.

Quy Nhon City, Vietnam

Quy Nhon University

June 10–13, 2019

Monday – Thursday

Meeting #1149

Associate secretary: Brian D. Boe

Announcement issue of *Notices*: To be announced

Program first available on AMS website: To be announced

Issue of *Abstracts*: To be announced

Deadlines

For organizers: November 30, 2018

For abstracts: To be announced

*The scientific information listed below may be dated.
For the latest information, see www.ams.org/amsmtgs/internmtgs.html.*

Invited Addresses

Henry Cohn, Microsoft Research, *To be announced.*

Robert Guralnick, University of Southern California, *To be announced.*

Le Tuan Hoa, Hanoi Institute of Mathematics, *To be announced.*

Nguyen Dong Yen, Hanoi Institute of Mathematics, *To be announced.*

Zhiwei Yun, Massachusetts Institute of Technology, *To be announced.*

Nguyen Tien Zung, Toulouse Mathematics Institute, *To be announced.*

Madison, Wisconsin

University of Wisconsin-Madison

September 14–15, 2019

Saturday – Sunday

Meeting #1150

Central Section

Associate secretary: Georgia Benkart

Announcement issue of *Notices*: To be announced

Program first available on AMS website: July 23, 2019

Issue of *Abstracts*: Volume 40, Issue 3

Deadlines

For organizers: February 14, 2019

For abstracts: July 16, 2019

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/sectional.html.

Invited Addresses

Nathan Dunfield, University of Illinois, Urbana-Champaign, *Title to be announced.*

Teena Gerhardt, Michigan State University, *Title to be announced.*

Lauren Williams, University of California, Berkeley, *Title to be announced* (Erdős Memorial Lecture).

Special Sessions

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Homological and Characteristic $p > 0$ Methods in Commutative Algebra (Code: SS 1A), **Michael Brown**, University of Wisconsin-Madison, and **Eric Canton**, University of Michigan.

Binghamton, New York

Binghamton University

October 12–13, 2019

Saturday – Sunday

Meeting #1151

Eastern Section

Associate secretary: Steven H. Weintraub

Announcement issue of *Notices*: To be announced

Program first available on AMS website: August 29, 2019

Issue of *Abstracts*: Volume 40, Issue 3

Deadlines

For organizers: March 12, 2019

For abstracts: August 20, 2019

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/sectional.html.

Invited Addresses

Richard Kenyon, Brown University, *Title to be announced.*

Tony Pantev, University of Pennsylvania, *Title to be announced.*

Lai-Sang Young, New York University, *Title to be announced.*

Gainesville, Florida

University of Florida

November 2–3, 2019

Saturday – Sunday

Meeting #1152

Southeastern Section

Associate secretary: Brian D. Boe

Announcement issue of *Notices*: To be announced

Program first available on AMS website: September 19, 2019

Issue of *Abstracts*: Volume 40, Issue 4

Deadlines

For organizers: April 2, 2019

For abstracts: September 10, 2019

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/sectional.html.

Invited Addresses

Jonathan Mattingly, Duke University, *To be announced.*

Isabella Novik, University of Washington, *To be announced.*

Eduardo Teixeira, University of Central Florida, *To be announced.*

Riverside, California

University of California, Riverside

November 9–10, 2019

Saturday – Sunday

Meeting #1153

Western Section

Associate secretary: Michel L. Lapidus

Announcement issue of *Notices*: To be announced

Program first available on AMS website: September 12, 2019

Issue of *Abstracts*: Volume 40, Issue 4

Deadlines

For organizers: April 9, 2019

For abstracts: September 3, 2019

The scientific information listed below may be dated. For the latest information, see www.ams.org/amsmtgs/sectional.html.

Invited Addresses

Robert Boltje, University of California, Santa Cruz, *Title to be announced.*

Jonathan Novak, University of California, San Diego,
Title to be announced.

Anna Skripka, University of New Mexico, Albuquerque,
Title to be announced.

Special Sessions

If you are volunteering to speak in a Special Session, you should send your abstract as early as possible via the abstract submission form found at www.ams.org/cgi-bin/abstracts/abstract.pl.

Topics in Operator Theory (Code: SS 1A), **Anna Skripka** and **Maxim Zinchenko**, University of New Mexico.

Denver, Colorado

Colorado Convention Center

January 15–18, 2020

Wednesday – Saturday

Meeting #1154

Joint Mathematics Meetings, including the 126th Annual Meeting of the AMS, 103rd Annual 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 of Symbolic Logic (ASL), with sessions contributed by the Society for Industrial and Applied Mathematics (SIAM)

Associate secretary: Michel L. Lapidus

Announcement issue of *Notices*: October 2019

Program first available on AMS website: November 1, 2019

Issue of *Abstracts*: To be announced

Deadlines

For organizers: April 1, 2019

For abstracts: To be announced

Charlottesville, Virginia

University of Virginia

March 13–15, 2020

Friday – Sunday

Southeastern Section

Associate secretary: Brian D. Boe

Announcement issue of *Notices*: To be announced

Program first available on AMS website: To be announced

Issue of *Abstracts*: To be announced

Deadlines

For organizers: To be announced

For abstracts: To be announced

Fresno, California

California State University, Fresno

May 2–3, 2020

Saturday – Sunday

Western Section

Associate secretary: Michel L. Lapidus

Announcement issue of *Notices*: To be announced

Program first available on AMS website: To be announced

Issue of *Abstracts*: To be announced

Deadlines

For organizers: To be announced

For abstracts: To be announced

Washington, District of Columbia

Walter E. Washington Convention Center

January 6–9, 2021

Wednesday – Saturday

Joint Mathematics Meetings, including the 127th Annual Meeting of the AMS, 104th Annual 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 of Symbolic Logic (ASL), with sessions contributed by the Society for Industrial and Applied Mathematics (SIAM).

Associate secretary: Brian D. Boe

Announcement issue of *Notices*: October 2020

Program first available on AMS website: November 1, 2020

Issue of *Abstracts*: To be announced

Deadlines

For organizers: April 1, 2020

For abstracts: To be announced

Grenoble, France

Université Grenoble Alpes

July 5–9, 2021

Monday – Friday

Associate secretary: Michel L. Lapidus

Announcement issue of *Notices*: To be announced

Program first available on AMS website: To be announced

Issue of *Abstracts*: To be announced

Deadlines

For organizers: To be announced

For abstracts: To be announced

Buenos Aires, Argentina

The University of Buenos Aires

July 19–23, 2021

Monday – Friday

Associate secretary: Steven H. Weintraub

Announcement issue of *Notices*: To be announced

Program first available on AMS website: To be announced

Issue of *Abstracts*: To be announced

Deadlines

For organizers: To be announced

For abstracts: To be announced

Seattle, Washington

*Washington State Convention Center and
the Sheraton Seattle Hotel*

January 5–8, 2022

Wednesday – Saturday

Associate secretary: Georgia Benkart

Announcement issue of *Notices*: October 2021

Program first available on AMS website: To be announced

Issue of *Abstracts*: To be announced

Deadlines

For organizers: To be announced

For abstracts: To be announced

Boston, Massachusetts

*John B. Hynes Veterans Memorial Con-
vention Center, Boston Marriott Hotel, and
Boston Sheraton Hotel*

January 4–7, 2023

Wednesday – Saturday

Associate secretary: Steven H. Weintraub

Announcement issue of *Notices*: October 2022

Program first available on AMS website: To be announced

Issue of *Abstracts*: To be announced

Deadlines

For organizers: To be announced

For abstracts: To be announced

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