Program of the Sessions
Lafayette, Louisiana, April 14–16, 2000

Friday, April 14

Meeting Registration
12:30 PM – 5:00 PM Room 315, Griffin Hall

AMS Exhibit and Book Sale
12:30 PM – 5:00 PM Room 315, Griffin Hall

Welcoming and Opening Remarks
1:15 PM – 1:25 PM Room 147, Griffin Hall

Invited Address
1:25 PM – 2:15 PM Room 147, Griffin Hall

Special Session on Rings and Their Generalizations, I
2:30 PM – 6:20 PM Room 318, Griffin Hall
Organizers: Gary F. Birkenmeier, University of Louisiana at Lafayette
Henry E. Heatherly, University of Louisiana at Lafayette

2:30 PM Generalized centers of near-rings.
(1) Strings, duality, and geometry.
Paul S. Aspinwall, Duke University (954-51-06)

3:00 PM Left self distributively generated structural matrix rings.
(2) Mark Farag, University of Louisiana at Lafayette (954-16-140)
(3) John A. Lewallen, University of Louisiana at Lafayette (954-16-151)

3:30 PM Distributive Elements of Centralizer Near-Rings.
(4) Preliminary report.
Andrew M Diener, Texas A&M University (954-16-125)

4:00 PM Adjoint Clifford Rings. Preliminary report.
(5) Ralph P Tucci*, Loyola U. New Orleans, and Henry Heatherly, University of Louisiana at Lafayette (954-16-59)

4:30 PM M-injective modules and prime M-ideals. Preliminary report.
John A. Beachy, Northern Illinois University (954-16-16)

5:00 PM On annihilator ideals of a polynomial ring over a noncommutative ring.
Yasuyuki Hirano, Okayama University (954-16-85)

5:30 PM Maximal and Minimal Right Ideals in the Nearring of Polynomials. Preliminary report.
Alan Cannon and Lucyna Kabza*, Southeastern Louisiana University (954-16-172)

6:00 PM Group Homomorphism Generated Near-rings and Rings.
(9) Gregory M Boudreaux, University of Louisiana at Lafayette (954-16-204)

Special Session on Mathematical Models in the Biological and Physical Sciences, I
2:30 PM – 5:50 PM Room 401, Griffin Hall
Organizers: Azmy S. Ackleh, University of Louisiana at Lafayette
Lan Ke, University of Louisiana at Lafayette
Robert D. Sidman, University of Louisiana at Lafayette

2:30 PM Quantifying Uncertainty in Parameter Estimation Problems.
(10) H. T. Banks, North Carolina State University (954-49-144)

3:00 PM Global Dynamics of Some Matrix Models with Applications to Optimal Life Cycle Strategies. Preliminary report.
Jim M Cushing, University of Arizona (954-92-139)

3:30 PM Multiple Attractors and Resonance in Periodically Forced Population Models.
(12) Shandelle M Henson, College of William and Mary (954-92-157)

The time limit for each contributed paper in the sessions is ten minutes. In the Special Sessions the time limit varies from session to session and within sessions. To maintain the schedule, time limits will be strictly enforced.

For papers with more than one author, an asterisk follows the name of the author who plans to present the paper at the meeting.
Papers flagged with a solid triangle (I) have been designated by the author as being of possible interest to undergraduate students.

Abstracts of papers presented in the sessions at this meeting will be found in Volume 21, Issue 2 of Abstracts of papers presented to the American Mathematical Society, ordered according to the numbers in parentheses following the listings. The middle two digits, e.g., 897-20-1136, refer to the Mathematical Reviews subject classification assigned by the individual author. Groups of papers for each subject are listed chronologically in the Abstracts. The last one to four digits, e.g., 897-20-1136, refer to the receipt number of the abstract; abstracts are further sorted by the receipt number within each classification.
JUNE/JULY 2000 NOTICES OF THE AMS Appendix±27

Special Session on Scientific Computing, I

2:30 PM - 4:20 PM  Room 402, Griffin Hall

Organizers: R. Baker Kearfott, University of Louisiana at Lafayette
Qin Sheng, University of Louisiana at Lafayette
Christo Christov, University of Louisiana at Lafayette

2:30 PM  Precise numerical solution of partial derivative problems. Preliminary report.
Oliver Aberth, Texas A & M University (954-35-124)

3:00 PM  The Role of Operator Symbols in Classical Elliptic Wave Propagation.
Louis Fishman, Naval Research Laboratory/University of New Orleans (954-35-23)

3:30 PM  Fourier-Coleurkin Method for Localized Solutions of Equations with Cubic Nonlinearity.
Marios Christou* and Christo I Christov, Department of Mathematics, University of Louisiana at Lafayette (954-65-38)

4:00 PM  Computational Aspects of Adaptive Signal Processing.
William W Edmonson*, Scott McCullough and Murali Rao, University of Florida (954-94-165)

Special Session on Nonlinear Differential Equations and Their Applications, I

2:30 PM - 5:50 PM  Room 205, Griffin Hall

Organizers: C. Y. Chan, University of Louisiana at Lafayette
Keng Deng, University of Louisiana at Lafayette
A. S. Vatsala, University of Louisiana at Lafayette

2:30 PM  Nonlinear elliptic eigenvalue problems with discontinuities.
Shouchuan Hu, Southwest Missouri State University (954-35-201)

3:00 PM  Qualitative Behavior of Solutions of Chemotactic Diffusion Systems.
Xuefeng Wang, Tulane University (954-35-160)

3:30 PM  Recent progress on free boundary problems modeling cell growth.
Bei Hu, University of Notre Dame (954-35-99)

4:00 PM  Multivariate Interpolation in Fluid-Structure-Interaction Using Radial Basis Function.
Holger Wendland, Institut fuer Numerische und Angewandte Mathematik (954-35-97)

4:30 PM  An Efficient Meshless method for Nonlinear Diffusion Equations.
Michael A Golberg, Las Vegas, Nevada, and C.S. Chen*, University of Nevada, Las Vegas (954-35-74)

5:00 PM  Solving Multi-layer Hydrodynamic Equations by Radial Basis Functions Method. Preliminary report.
S.M. Wong*, Open University of Hong Kong, and Y.C. Hon, City University of Hong Kong (954-35-152)

5:30 PM  Radial Basis Function Collocation: The Nonsymmetric Approach.
Gregory E Fasshauer, Illinois Institute of Technology (954-65-53)

Special Session on Continuum Theory, I

2:30 PM - 5:50 PM  Room 301, Griffin Hall

Organizer: Thelma R. West, University of Louisiana at Lafayette

2:30 PM  Variation and uniqueness of outchannels. Preliminary report.
John C Mayer, University of Alabama at Birmingham (954-54-159)

3:00 PM  Hyperspaces homeomorphic to cones. Preliminary report.
Maria de Jesus Lopez, Fac. de Ciencias, UNAM, Mexico (954-54-175)

3:30 PM  The fixed point property for cones and product spaces. Preliminary report.
Marcus M Marsh, California State University, Sacramento (954-54-131)

4:00 PM  Some problems on hyperspace determined continua. Preliminary report.
Janusz J Charatonik, IMATE, UNAM, Mexico (954-54-91)

4:30 PM  Asymmetric span of continua. Preliminary report.
Fernando Macias-Romero, B. Universidad Autonoma de Puebla, Mexico (954-54-163)

5:00 PM  The Property N on Dendroids.
Veronica Martinez-de-la-Vega, Instituto de Matematicas, UNAM, Mexico. (954-54-92)

5:30 PM  On confluent maps of the plane. Preliminary report.
Lex G Oversteegen, UAB (954-54-106)
Program of the Sessions – Lafayette, LA, Friday, April 14 (cont’d.)

Special Session on Recent Advances in Statistics
2:30 PM – 5:20 PM Room 403, Griffin Hall
Organizers: Calvin Berry, University of Louisiana at Lafayette
Kalimuthu Krishnamurthy, University of Louisiana at Lafayette
Nabendu Pal, University of Louisiana at Lafayette

2:30PM A fundamental difficulty in estimating the distributions of post-model-selection estimators. Preliminary report.
Hannes Leeb and Benedikt M Poetscher*, Department of Statistics, University of Vienna (954-62-40)

Kalimuthu Krishnamurthy*, University of Louisiana at Lafayette, and Denise F Benton, U of L at Lafayette (954-62-197)

3:30PM VAR Measurement of the Risk in Stochastic Frontier Semiparametric Model.
Hengqing Tong, Wuhan University of Technology (954-62-31)

4:00PM Estimation of the smaller and larger of two exponential scale parameters.
Nabendu Pal* and Alvard Arzayan, University of Louisiana at Lafayette (954-62-202)

Christo I Christov, Department of Mathematics, University of Louisiana at Lafayette (954-60-47)

5:00PM On The Existence of a Modal Category.
J. Calvin Berry, University of Louisiana at Lafayette, Lafayette, LA (954-62-156)

Special Session on Fluid Dynamics, I
2:30 PM – 4:50 PM Room 404, Griffin Hall
Organizer: Michael Renardy, Virginia Polytechnic Institute & State University

2:30PM On the existence of finger solutions in Hele-Shaw Equation.
Jianzhong Su, University of Texas at Arlington (954-35-09)

3:00PM Reconstruction of the Velocity from the Vorticity.
Giles Auchmuty, University of Houston (954-76-11)

3:30PM Numerical simulations of two-fluid flows of viscous immiscible liquids.
Yuriko Renardy* and Jie Li, Virginia Tech (954-76-33)

4:00PM The Onset of Chaos in Vortex Sheet Roll-Up. Preliminary report.
Robert Krasny*, University of Michigan, and Monika Nitsche, University of New Mexico (954-76-43)

Jerry L Bona*, University of Texas at Austin, and Hongqiu Chen, City University of New York (954-76-45)

Special Session on Graph Theory, I
2:30 PM – 5:20 PM Room 215, Griffin Hall
Organizers: Robin Thomas, Georgia Institute of Technology
Dhruv Mubayi, Georgia Institute of Technology

2:30PM Some exact results and new asymptotics for hypergraph Turan numbers.
Dhruv Mubayi, Georgia Tech (954-05-95)

3:00PM Graphs with small Ramsey numbers. Preliminary report.
Alexandr V Kostochka*, University of Illinois at Urbana-Champaign, and Vojtech Rödl, Emory University (954-05-81)

3:30PM Equivalent Conditions of Regularity.
Yoshiharu Koyayawaka, University of Sao Paulo, Vojtech Rödl and Jozef Skokan*, Emory University (954-05-51)

4:00PM Two Extremal Problems for Set Systems.
Brendan T Nagle, Georgia Institute of Technology (954-05-190)

4:30PM Ramsey Numbers for Trees of Small Maximum Degree.
Penny E Haxell, University of Waterloo (954-05-183)

5:00PM Graphs without C6.
Zoltan Furedi, University of Illinois at Urbana-Champaign (954-05-179)

Saturday, April 15

Meeting Registration
7:30 AM – 5:00 PM Room 315, Griffin Hall

AMS Exhibit and Book Sale
7:30 AM – 5:00 PM Room 315, Griffin Hall

Special Session on Rings and Their Generalizations, II
8:30 AM – 10:50 AM Room 318, Griffin Hall
Organizers: Gary F. Birkenmeier, University of Louisiana at Lafayette
Henry E. Heatherly, University of Louisiana at Lafayette

8:30AM Equations over modules. Preliminary report.
John Dauns, Tulane University (954-16-68)

9:00AM Some results about projection idempotents in endomorphism nearrings. Preliminary report.
Gary L Peterson, James Madison University (954-16-120)

9:30AM Generalized Triangular Matrix Rings and the Fully Invariant Extending Property.
Gary F Birkenmeier, Department of Mathematics, University of Louisiana at Lafayette, Jae Keol Park*, Department of Mathematics, Busan National University, and S. Tariq Rizvi, Department of Mathematics, Ohio State University at Lima (954-16-169)

10:00AM Forcing Linearity Number of a Module.
Carlton J Maxson, Texas A&M University (954-16-41)

10:30AM Rings, near-rings, and dynamical systems.
Gunter F Pilz, Univ. of Linz, Austria (954-16-75)

Special Session on Mathematical Models in the Biological and Physical Sciences, II
8:30 AM – 10:50 AM Room 401, Griffin Hall
Organizers: Azmy S. Ackleh, University of Louisiana at Lafayette
Lan Ke, University of Louisiana at Lafayette
Appendix-29

Lafayette, LA, Saturday, April 15 – Program of the Sessions

**Special Session on Nonlinear Differential Equations and Their Applications, II**

8:30 AM - 10:50 AM
Room 205, Griffin Hall
Organizers: C. Y. Chan, University of Louisiana at Lafayette
Keng Deng, University of Louisiana at Lafayette
A. S. Vatsala, University of Louisiana at Lafayette

8:30 AM
A Singular Perturbation Problem of Carrier and Pearson.
Walter G Kelley, University of Oklahoma (954-34-08)

9:00 AM
Mark A McKibben, Coucher College (954-34-07)

9:30 AM
Generalized Quasilinearization Applied to First Order Difference Equations.
Donna S Stutson, Xavier University in Louisiana (954-34-178)

10:00 AM
G. S. Ladde, University of Texas at Arlington (954-34-22)

10:30 AM
A Class of Singular Nonlinear Boundary Value Problems.
John V Baxley* and Kristina P Sorrells, Wake Forest University (954-34-205)

**Special Session on Scientific Computing, II**

8:30 AM - 10:20 AM
Room 402, Griffin Hall
Organizers: R. Baker Kearfott, University of Louisiana at Lafayette
Qin Sheng, University of Louisiana at Lafayette
Christo Christov, University of Louisiana at Lafayette

8:30 AM
Chenyi Hu*, Univ. of Houston-Downtown, and Baker R Kearfott, University of Louisiana (954-68-171)

9:00 AM
Efficient Verification of the Topological Index of Real Solutions to Algebraic Systems.
Jianwei Dian and Baker Kearfott*, University of Louisiana at Lafayette (954-65-70)

9:30 AM
Properties, Decompositions and Applications of Generalized Reflexive Matrices.
Hsin-Chu Chen, Clark Atlanta University (954-15-100)

10:00 AM
The Calculus, TELSTAR, ROCKLAND, and the Continuing mRL(e)**2 Neglect on Computational Processing. Preliminary report.
Odessa K. Burgees, C.F.T.E. Foundation (954-01-35)

**Special Session on Quantum Topology, II**

8:30 AM - 10:50 AM
Room 321, Griffin Hall
Organizer: Patrick M. Gilmer, Louisiana State University

8:30 AM
Braid conjugation in handlebodies, knot complements and 3-manifolds. Preliminary report.
Sofia Lambropoulou, Mathematics Institut, Goettingen Universitat (954-57-198)

9:30 AM
Strong Shift Equivalence and Diffeomorphisms. Preliminary report.
Janusz J. Charatonik, University of Oklahoma, and Janusz R. Prajs, Texas Tech University, Lubbock, TX (954-54-104)

10:00 AM
Daniel Silver and Susan G Williams, University of South Alabama (954-57-168)

**Special Session on Continuum Theory, II**

8:30 AM - 10:50 AM
Room 301, Griffin Hall
Organizer: Thelma R. West, University of Louisiana at Lafayette

8:30 AM
AANR spaces and absolute retracts for tree-like continua. Preliminary report.
Janusz R. Prajs*, Texas Tech University, Lubbock, TX, and Janusz J. Charatonik, UNAM, Mexico City, Mexico (954-54-113)

9:00 AM
Continua whose homeomorphism groups are generated by small neighborhoods of the identity. Preliminary report.
Wayne Lewis, Texas Tech University (954-54-57)

9:30 AM
On the nonexistence of almost continuous surjections between certain continua.
Sam B Nadler, Jr., West Virginia University (954-54-104)

10:00 AM
An aspect of homogeneous spaces.
James T Rogers, Jr., Tulane University (954-54-110)

10:30 AM
A classification of brain tumors and solids by trees. Preliminary report.
Taeil Yi*, university of florida at gainesville, fl, and Matthew Harvey, University of florida at gainesville (954-51-195)

**Special Session on Fluid Dynamics, II**

8:30 AM - 10:50 AM
Room 404, Griffin Hall
Organizer: Michael Renardy, Virginia Polytechnic Institute & State University

8:30 AM
On a stochastic hyberic system.
Jong U Kim, Virginia Tech (954-35-48)

9:00 AM
Christo I Christov*, University of Louisiana at Lafayette, and George M Homys, Stanford University (954-76-49)
Program of the Sessions – Lafayette, LA, Saturday, April 15 (cont’d.)

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<th>Time</th>
<th>Session</th>
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| 2:30 PM – 5:50 PM | Room 215, Griffin Hall  
Organizers: Robin Thomas, Georgia Institute of Technology  
Dhruv Mubayi, Georgia Institute of Technology |
|               | Special Session on Graph Theory, II                                      |
| 3:30 PM       | Two Dimensional Nilpotent Topological Nearrings.  
Preliminary report. |
| 4:00 PM       | Semiprime pm-rings - Preliminary Report.  
Preliminary report. |
| 4:30 PM       | Polynomial functions on Ω-groups.  
|               | Erhard Aichinger, Johannes Kepler University Linz  
Austria (954-16-88) |
| 5:00 PM       | Endomorphism Rings of Modules.  
|               | Ulrich F Albrecht, Auburn University (954-1B-36) |
| 5:30 PM       | Baer-type Conditions on Polynomials and Formal Power Series.  
|               | Peng-Kuo Huang* and Gary F Birkenmeier,  
Department of Mathematics, University of Louisiana at Lafayette (954-16-137) |

Special Session on Mathematical Models in the Biological and Physical Sciences, III

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<th>Time</th>
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| 2:30 PM – 5:20 PM | Room 401, Griffin Hall  
Organizers: Azmy S. Ackleh, University of Louisiana at Lafayette  
Lan Ke, University of Louisiana at Lafayette  
Robert D. Sidman, University of Louisiana at Lafayette |
|               | Special Session on Mathematical Models in the Biological and Physical Sciences, III |
| 3:30 PM       | Breakdown of strong convergence in nonlinear viscoelasticity.  
Preliminary report. |
| 3:00 PM       | Symmetry Analysis of a Higher Order Diffusion Equation.  
|               | Danny Arrigo, University of Central Arkansas (954-35-136) |
|               | Robert R Ferdinand* and Michael D Bay, East Central University, Ada, OK, U.S.A. (954-35-50) |
| 4:00 PM       | Combining Techniques to Model the Human Brain: From Mathematics to Magnets and Back Again.  
Preliminary report. |
| 4:30 PM       | A strategy for analyzing co-registered EEG electroencephalographic (EEG) and MRI (magnetic resonance imaging) data.  
|               | Robert D Sidman*, C.H. Chu and Marie Ernie, University of Louisiana at Lafayette (954-92-61) |
| 5:00 PM       | Mathematical Models of Respiratory Function.  
|               | Preliminary report. |
| 5:00 PM       | Mathematical Models of Respiratory Function.  
|               | Sanjukta Kota, Assistant Professor, Fisk University, Nashville, TN (954-92-52) |

Special Session on Nonlinear Differential Equations and Their Applications, III

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<tr>
<th>Time</th>
<th>Session</th>
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| 2:30 PM – 5:50 PM | Room 205, Griffin Hall  
Organizers: C. Y. Chan, University of Louisiana at Lafayette  
Keng Deng, University of Louisiana at Lafayette  
A. S. Vatsala, University of Louisiana at Lafayette |
|               | Special Session on Nonlinear Differential Equations and Their Applications, III |
| 2:30 PM       | On The Generalization of the Courant Nodal Domain Theorem.  
|               | Stephen B Robinson*, Wake Forest University, and Pavel Drabek, University of West Bohemia (954-35-194) |
JUNE/JULY 2000 NOTICES OF THE AMS Appendix±31

Lafayette, LA, Saturday, April 15 – Program of the Sessions

3:00PM Location of quenching points for degenerate semilinear parabolic equations.

Chiu-yung Chan, Department of Mathematics, University of Louisiana at Lafayette, and Hon-hung Terence Liu*. Department of Applied Mathematics, Tatung University (954-35-108)

3:30PM Complete Blow-up of Solutions for Degenerate Semilinear Parabolic Equations.

C. Y. Chan, University of Louisiana at Lafayette, and W. Y. Chan*, University of Science and Arts of Oklahoma (954-35-76)

4:00PM Blow-up of the solution for a degenerate semilinear parabolic problem due to a concentrated source. Preliminary report.

C. Y. Chan and Huiyan Tian*, Univ. of Louisiana at Lafayette (954-35-132)

4:30PM Finite time extinction in nonlinear diffusion models with absorption and convection. Preliminary report.

Jeffrey R Anderson, Winona State University (954-35-87)

5:00PM Blow-up of Solutions of Some Semilinear Hyperbolic Systems and Parabolic Systems.

Jianmin K Zhu, Fort Valley State University (954-35-107)

5:30PM Blow-up versus quenching.

Keng Deng and Cheng-Lin Zhao*, University of Louisiana at Lafayette (954-35-191)

Special Session on Scientific Computing, III

2:30 PM – 4:50 PM Room 402, Griffin Hall
Organizers: R. Baker Kearfott, University of Louisiana at Lafayette
Qin Sheng, University of Louisiana at Lafayette
Christo Christov, University of Louisiana at Lafayette

2:30PM A parallel Monte Carlo method for computing physical measures.

Jiu Ding* and Zizhong Wang, University of Southern Mississippi (954-65-24)

3:00PM Singular Integral Equations and their Numerical Analysis. Preliminary report.

Xuefeng Li, Mathematics and Computer Science, Loyola University (954-65-121)

3:30PM A Moving Grid Approach to Degenerate Semilinear Parabolic Equations with Singular Source Terms.

Qin Sheng and Hong Cheng*, University of Louisiana (954-65-42)

4:00PM Slope Sets and Generalized Gradients.

Baker Kearfott and Humberto Munoz*, University of Louisiana at Lafayette (954-65-34)

4:30PM On the penalty finite element approximations of the power-law Stokes flows. Preliminary report.

Dongming Wei, University of New Orleans (954-76-164)

Special Session on Quantum Topology, III

2:30 PM – 5:50 PM Room 321, Griffin Hall
Organizer: Patrick M. Gilmer, Louisiana State University

2:30PM The Torelli Group at Roots of Unity. Preliminary report.

Thomas Kerler, The Ohio State University (954-57-141)

3:00PM A new theory of “finite type” invariants for 3-manifolds. Preliminary report.

Jerome P Levine, Brandeis University (954-57-133)

3:30PM The Yang-Mills Measure in the Kauffman bracket skein module.

Doug Bullock, Boise State University, Charlie Frohman*, University of Iowa, and Joanna Kania-Bartoszynska, Boise State University (954-57-118)

4:00PM An analytic definition of the Yang-Mills measure.

Douglas Bullock, Charlie Frohman and Joanna Kania-Bartoszynska*, Boise State University (954-57-119)

4:30PM On the Homflypt skein module of S^1 × S^2.

Jianyuan Zhong* and Patrick M Gilmer, Louisiana State University (954-57-78)

Special Session on Continuum Theory, III

2:30 PM – 5:50 PM Room 301, Griffin Hall
Organizer: Thelma R. West, University of Louisiana at Lafayette

2:30PM A continuum Z such that the hyperspace C(Z) is not g-contractible.

Alejandro Illanes, Universidad Nacional Autonoma de Mexico (954-54-109)

3:00PM The generic homeomorphism is complicated, but not chaotic.

Ethan Akin, City College, Michael G Hurley, Case Western Reserve University, and Judy A Kennedy*, University of Delaware (954-54-103)

3:30PM A continuous decomposition of the plane into nondegenerate acyclic continua each of which contains an arc. Preliminary report.

Carl R Seaquist, Texas Tech University (954-54-153)

4:00PM Components and Quasicomponents in Subspaces of Continua.

Bobby E Wilder and Eric L McDowell*, Berry College (954-54-170)

4:30PM Peano Mappings. Preliminary report.

Raul Escobedo, Universidad Autonoma de Puebla, Mexico (954-54-176)

5:00PM Irreducible continua of type λ with almost unique hyperspace. Preliminary report.

Gerardo Acosta, Universidad Nacional Autonoma de Mexico (954-06-46)

5:30PM Retractions between hyperspaces.

Sergio Macias, Instituto de Matematicas, U. N. A. M. (954-54-25)

Special Session on Fluid Dynamics, III

2:30 PM – 4:50 PM Room 404, Griffin Hall
Organizer: Michael Renardy, Virginia Polytechnic Institute & State University

2:30PM Traveling Waves in Thin Film Flow.

Michael Shearer, NC State University (954-35-187)

3:00PM Two problems for the Navier-Stokes equations having moving boundaries.

Max D Gunzburger, Iowa State University (954-76-185)

3:30PM Scalar intermittency in shear models and the rigorous calculation of a PDF tail.

Richard M McLaughlin*, UNC Chapel Hill, and Jared C Bronski, University of Illinois (954-76-187)

4:00PM Proving Existence of Transonic Shocks Using Free Boundary Problems Technique s.

Suncica Canic*, Barbara L Keyfitz, University of Houston, and Gary Lieberman, Iowa State University (954-35-188)
### Appendix–32

**NOTICES OF THE AMS**

**VOLUME 47, NUMBER 6**

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**Program of the Sessions – Lafayette, LA, Saturday, April 15 (cont’d.)**

4:30PM  Flows of liquid crystalline polymers.  
(136) Greg Forest, University of North Carolina at Chapel Hill (954-76-200)

**Special Session on L-functions, Periods, and Arithmetic, I**

2:30 PM – 4:50 PM Room 405, Griffin Hall  
Organizers: Fernando Rodriguez Villegas, University of Texas at Austin  
Jeff Vaaler, University of Texas at Austin

- 2:30PM  Mahler’s measure of A-polynomials and special values of Dirichlet L-functions. Preliminary report.  
David W Boyd, University of British Columbia (954-11-199)

- 3:00PM  The analytic non class-number formula.  
(138) Robert V Perlis, NSF and LSU (954-11-13)

- 3:30PM  Jabobi Sums.  
(139) Paul B van Wamelen, Louisiana State University (954-11-20)

4:00PM  On the tame kernel of number fields. Preliminary report.  
Jürgen Hurrelbrink, Louisiana State University (954-11-28)

4:30PM  Stark’s Conjecture over Complex Cubic Number Fields.  
(141) David S Dummit, University of Vermont, and Brett A Tangedal*, University of Charleston (954-11-37)

**Special Session on Graph Theory, III**

2:30 PM – 5:50 PM Room 215, Griffin Hall  
Organizers: Robin Thomas, Georgia Institute of Technology  
Dhruv Mubayi, Georgia Institute of Technology

- 2:30PM  Isoperimetric numbers of infinite planar graphs: I.  
Serge Lawrencenko, Michael D. Plummer*, Department of Mathematics, Vanderbilt University, and Xiaoya Zha, Department of Mathematical Sciences, Middle Tennessee State University (954-05-116)

- 3:00PM  Isoperimetric numbers of infinite planar graphs: II.  
Serge Lawrencenko, Michael D. Plummer, Department of Mathematics, Vanderbilt University, and Xiaoya Zha*, Department of Mathematical Sciences, Middle Tennessee State University (954-05-116)

- 3:30PM  Independent Sets in Triangle-Free Cubic Planar Graphs.  
Christopher Carl Heckman* and Robin Thomas, Georgia Institute of Technology (954-05-129)

- 4:00PM  Excluding any graph as a minor allows a low tree-width 2-coloring.  
Dirk Vertigan, Louisiana State University (954-05-162)

- 4:30PM  Large 4-connected nonplanar graphs.  
(146) Guoli Ding, Bogdan Oporowski*, and Louisiana State University (954-05-173)

- 5:00PM  On removable circuits in graphs and matroids.  
Manoel Lemos, Universidade Federal de Pernambuco, and James Oxley*, Louisiana State University (954-05-161)

- 5:30PM  Connected (g, f)-factors.  
(148) Mark N. Ellingham*, Vanderbilt University, Yunsum Nam, Ewha Woman’s University, and Heinz-Jürgen Voss, Technical University Dresden (954-05-123)

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**Session for Contributed Papers**

2:30 PM – 3:25 PM Room 403, Griffin Hall

- 2:30PM  Regular filter spaces.  
(149) N. Rath, Arkansas Tech University (954-54-14)

- 2:45PM  Regularization of an Integral Equation with Delta Function Solutions. Preliminary report.  
William L. Perry, Texas A&M University (954-45-21)

- 3:00PM  A Non-Strongly Normal Regular Digital Picture Space.  
(151) Michael S McClendon, University of Louisiana (954-54-64)

- 3:15PM  Regularity for the Hodge-Weyl Decomposition.  
(152) Ahmad S Qawasmi, Lecturer/Univ. of Houston (954-35-130)

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**Sunday, April 16**

**Invited Address**

8:30 AM – 9:20 AM Room 147, Griffin Hall

- 8:30AM  Periods, L-functions, and arithmetic.  
Fernando Rodriguez Villegas, University of Texas at Austin (954-11-03)

**Special Session on Rings and Their Generalizations, IV**

9:30 AM – 11:50 AM Room 318, Griffin Hall  
Organizers: Gary F. Birkenmeier, University of Louisiana at Lafayette  
Henry E. Heatherly, University of Louisiana at Lafayette

- 9:30AM  Near-Rings Formed Using the Set of Solutions of Conditional Cauchy Equations.  
Chris G Devillier, Louisiana State University at Eunice (954-08-181)

- 10:00AM  A class of 2-primal rings that satisfy (PS I). Preliminary report.  
Greg T Marks, University of California at Berkeley (954-16-83)

- 10:30AM  Mappings of Finite Groups.  
(156) Alan Oswald*, University of Teesside, UK, and Peter Birch, England (954-08-89)

- 11:00AM  Modules with fully invariant submodules essential in fully invariant summands. Preliminary report.  
Gary F. Birkenmeier, University of Louisiana at Lafayette, Jae K. Park, Busan National University, and Ş. Tariq Rizvi*, The Ohio State University (954-16-84)

- 11:30AM  Stacked bases over h-local Příhoda domains.  
(158) Laszlo Fuchs*, Tulane University, and Sang Bum Lee, Sangmyung University (954-13-94)

**Special Session on Nonlinear Differential Equations and Their Applications, IV**

9:30 AM – 11:20 AM Room 205, Griffin Hall

- 9:30AM  Global bifurcations for models of phase transitions.  
(159) Junping Shi, Department of Mathematics, Tulane University (954-35-60)

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Michael Sever, The Hebrew University (954-35-62)

Viscosity Solutions of Fully Nonlinear Functional Parabolic Differential Equations.
Liu Wei-an, Associate Prof./Central China Normal University (954-39-65)

Analysis of new meshless methods for conservation laws.
Nathalie Lanson and Jean Paul Vila, MIP-INSA (954-35-15)

Special Session on Quantum Topology, IV
9:30 AM ± 11:45 PM Room 321, Griffin Hall
Organizer: Patrick M. Gilmer, Louisiana State University

Relativistic Spin networks, with topological and physical applications.
Louis Crane, Kansas State University (954-83-80)

Presentations of \( q \)-Homotopy Skein Modules of 3-manifolds. Preliminary report.
Uwe Kaiser, Siegen University (954-57-79)

On the noncommutative generalization of the \( A \)-polynomial. Preliminary report.
Razvan Gelca, University of Michigan (954-57-193)

Special Session on Continuum Theory, IV
9:30 AM ± 11:20 AM Room 301, Griffin Hall
Organizer: Thelma R. West, University of Louisiana at Lafayette

A Complete Classification of Inverse Limit Spaces of Tent Maps with Periodical Critical Points.
Brian E Raines, University of Missouri-Rolla (954-54-112)

Weak and small Whitney properties.
(167) Wlodzimierz J. Charatonik, University of Missouri-Rolla (954-54-146)

Investigating the Selection Space of Dendrites. Preliminary report.
Joseph E McParland, National Security Agency (954-54-189)

Spans of the Hilbert Cube.
(169) Isabel Puga Espinosa*, Raul Escobedo Conde, Universidad Nacional Autonoma de Mexico, and Thelma R West, University of Louisiana at Lafayette (954-54-203)

Special Session on Graph Theory, IV
9:30 AM ± 12:20 PM Room 215, Griffin Hall
Organizers: Robin Thomas, Georgia Institute of Technology
Dhruv Mubayi, Georgia Institute of Technology

Totally positive hypergraphs.
(173) Jenó Lehel, University of Louisville (954-05-138)

Fragile Graphs. Preliminary report.
(174) Guangtao Chen, Georgia State University, Ralph J Faudree*, University of Memphis, and Michael S Jacobson, University of Louisville (954-05-134)

Vertex covers by edge disjoint cliques.
(175) Lubos Thoma, Carnegie Mellon University (954-05-182)

From Triangulated Spheres to Triangulated Balls.
(176) Andrei Kotlov, CWI (Amsterdam) (954-05-93)

(177) Jerrold R. Griggs, University of South Carolina (954-05-186)

Growing grids in matroids of high branch-width. Preliminary report.
(178) Thor Johnson, Princeton University, Neil Robertson*, Ohio State University, and Paul Seymour, Princeton University (954-05-192)

Special Session on L-functions, Periods, and Arithmetic, II
9:30 AM ± 11:20 AM Room 405, Griffin Hall
Organizers: Fernando Rodriguez Villegas, University of Texas at Austin
Jeff Vaaler, University of Texas at Austin

Toric Varieties and Modular Forms.
(170) Lev A Borisov and Paul E Gunnells*, Columbia University (954-11-54)

Theta Correspondence and Zeta Series with Respect to a Quadratic Extension (Preliminary Report). Preliminary report.
Zi-Li Dou, Texas Christian University (954-11-55)

Mollifiers, zeros, and mean values of L-functions. Preliminary report.
(171) David W Farmer*, Bucknell University, and J. Brian Conrey, American Institute of Mathematics (954-11-168)