
Program of the Sessions

Santa Barbara, California, March 11-12, 2000

Saturday, March 11

Meetings Registration

7:30 AM – 4:30 PM Foyer, Girvetz Hall

AMS Exhibit and Book Sale

7:30 AM – 4:30 PM Foyer, Girvetz Hall

Special Session on Geometric Methods in 3-manifolds, I

8:00 AM – 10:50 AM Room 2128, Girvetz Hall

Organizers: **Daryl Cooper**, University of California, Santa Barbara
Darren Long, University of California, Santa Barbara
Martin Scharlemann, University of California, Santa Barbara

- 8:00AM *Taut foliations with one sided branching.*
(1) **Danny Calegari**, UC Berkeley (951-57-108)
- 8:30AM *Seifert surfaces and sutured handlebodies.*
(2) **Mark W Brittenham**, University of Nebraska (951-57-138)
- 9:00AM *R-covered foliations in 3-manifolds and transverse pseudo-Anosov flows.* Preliminary report.
(3) **Sergio R Fenley**, Washington University (951-57-148)
- 9:30AM *Perturbing foliations.* Preliminary report.
(4) **Rachel Roberts**, Washington University (951-57-30)
- 10:00AM *Laminar Branched Surfaces in 3-manifolds.*
(5) **Tao Li**, California Institute of Technology (951-57-18)
- 10:30AM *The Weil-Petersson metric and the geometry of hyperbolic 3-manifolds.* Preliminary report.
(6) **Jeffrey F Brock**, Stanford University (951-30-159)

Special Session on Subfactors and Free Probability Theory, I

8:30 AM – 10:50 AM Room 2112, Girvetz Hall

Organizers: **Dietmar Bisch**, University of California, Santa Barbara
Sorin Popa, University of California, Los Angeles
Dan Voiculescu, University of California, Berkeley

- 8:30AM *A representation theory for standard lattices.*
(7) **Sorin Popa**, UCLA (951-46-181)
- 9:20AM *The classification of higher Coxeter ADE graphs, and the finite subgroups of quantum SU(3).*
▶ (8) **Adrian Ocneanu**, The Pennsylvania State University (951-22-74)
- 10:10AM *A new approach to index less than four subfactors.*
(9) **Vaughan Jones**, UC Berkeley (951-46-187)

Special Session on Geometric Analysis, I

8:40 AM – 10:50 AM Room 2129, Girvetz Hall

Organizers: **Xian-Zhe Dai**, University of California, Santa Barbara
Doug Moore, University of California, Santa Barbara
Guofang Wei, University of California, Santa Barbara
Rick Ye, University of California, Santa Barbara

- 8:40AM *Non-Abelian Seiberg-Witten Invariants for 3-manifolds (Preliminary Report).* Preliminary report.
(10) **Yuhan Lim**, UC Santa Barbara (951-58-126)
- 9:25AM *Complex and Hypercomplex Structures associated to Heisenberg groups.* Preliminary report.
(11) **Yat Sun Poon***, UC Riverside, **Henrik Pedersen**, Southern Denmark University, and **Gueo Grantcharov**, UC Riverside (951-53-174)

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 (▶) 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.

10:10AM *A Proof of the Well Conjecture using Ricci Flow.*
 (12) Preliminary report.
Christine M Guenther, Pacific University
 (951-58-163)

Special Session on History of Mathematics, I

9:00 AM – 10:50 AM Room 2127, Girvetz Hall

Organizer: **James Tattersall**, Providence College

9:00AM *Mathematics at West Point during the Twentieth*
 ► (13) *Century: Courses, Textbooks, Content, Faculty,*
Students, and Influences.
David C Arney, United States Military Academy
 (951-01-16)

9:30AM *Learn from the Students! A senior seminar in the*
 ► (14) *history of mathematics.*
Betty Mayfield, Hood College (951-01-60)

10:00AM *The Development of the Riemann Zeta-Function.*
 ► (15) Preliminary report.
Jennifer Beineke, Trinity College (951-01-82)

10:30AM *Extending Euler: A little-known episode in the*
 ► (16) *prehistory of quaternions.*
Adrian C Rice, Randolph-Macon College
 (951-01-40)

Special Session on Automorphic Forms, I

9:00 AM – 10:50 AM Room 2119, Girvetz Hall

Organizers: **Ozlem Imamoglu**, University of
 California, Santa Barbara
Jeffrey Stoppie, University of
 California, Santa Barbara

9:00AM *Koecher-Maass Series for Jacobi Forms.*
 (17) **Aloys Krieg**, RWTH Aachen (951-11-73)

9:40AM *Jacobi forms and codes over \mathbb{Z}_2^m .*
 (18) **Youngju Choie*** and **Namsik Kim**, Pohang Univ
 (951-11-130)

10:20AM *Classifying lattices using modular forms.*
 (19) **Rudolf Scharlau**, University of Dortmund, Germany
 (951-11-113)

Special Session on Representation Theory of Algebras, I

9:00 AM – 10:50 AM Room 2123, Girvetz Hall

Organizers: **F. W. Anderson**, University of Oregon
K. R. Fuller, University of Iowa
B. Huisgen-Zimmermann, University
 of California, Santa Barbara

9:00AM *Almost split sequences for comodules.* Preliminary
 (20) report.
William Chin, DePaul University, **Mark Kleiner*** and
Declan Quinn, Syracuse University (951-16-115)

9:30AM *Representations and classification of semisimple*
 (21) *Hopf algebras.*
Yevgenia Kashina, Mathematical Sciences Research
 Institute (951-16-47)

10:00AM *Hereditary and finite type questions for strongly*
 (22) *graded orders.*
Jeremy Haefner, University of Colorado (951-16-55)

10:30AM *Crossed products over hereditary orders over a*
 (23) *complete DVR.* Preliminary report.
Christopher J Pappacena, Baylor University
 (951-16-119)

Special Session on Uniformly and Partially Hyperbolic Dynamical Systems, I

9:00 AM – 10:50 AM Room 2116, Girvetz Hall

Organizers: **Bjorn Birnir**, University of California,
 Santa Barbara
Nicolai T. A. Haydn, University of
 Southern California

9:00AM *Twoscale asymptotics and mean fields for*
 (24) *Navier-Stokes systems for oscillatory incompressible*
fluids.
Nils EM Svanstedt, Department of Mathematics,
 Chalmers University (951-76-142)

9:30AM *Undercompressive Shocks in Thin Film Flows.*
 (25) **Andrea L Bertozzi***, Duke University, **Andreas**
Muench, Tech. Univ. Munich, and **Michael Shearer**,
 North Carolina State University (951-35-53)

10:00AM *The Stochastic Navier Stokes Equations: Invariant*
 (26) *Measures and Trivial Attractors.*
Jonathan C Mattingly*, MaStanford University, **Ya**
Sinai and **Weinan E**, Princeton University
 (951-37-172)

10:30AM *The Energy Spectrum of the Camassa-Holm*
 (27) *Equations.*
Eric J Olson, University of California, Irvine
 (951-76-155)

Special Session on Schrodinger-Type Operators, I

9:30 AM – 10:50 AM Room 2115, Girvetz Hall

Organizers: **Abel Klein**, University of California,
 Irvine
Svetlana Jitomirskaya, University of
 California, Irvine

9:30AM *Holonomic Constraints in Classical and Quantum*
 (28) *Mechanics (preliminary report).* Preliminary report.
Ira W Herbst*, University of Virginia, and **Richard**
Froese, University of British Columbia (951-81-146)

10:20AM *Subdiffusive quantum transport for a 3D finite*
 (29) *difference Hamiltonian with absolutely continuous*
spectrum.
Hermann Schulz-Baldes, University of California at
 Irvine (951-81-36)

Invited Address

11:10 AM – NOON Room 1004, Girvetz Hall

(30) *Analytical and Combinatorial Aspects of Subfactors.*
Dietmar Bisch, UCSB (951-46-103)

Invited Address

1:30 PM – 2:20 PM Room 1004, Girvetz Hall

(31) *The classification problem for hyperbolic*
3-manifolds.
Yair Minsky, SUNY Stony Brook (951-57-190)

Special Session on History of Mathematics, II

3:00 PM – 4:50 PM Room 2127, Girvetz Hall

Organizer: **James Tattersall**, Providence College

3:00PM *The Remarkable History of Logarithms.*
 ► (32) **Robert g Stein**, Cal State San Bernardino
 (951-01-112)

3:30PM *Topological Methods for Quasilinear BVP.*
 (33) Preliminary report.
Victor L. Shapiro, University of California, Riverside
 (951-35-35)

- 4:00PM *Surface Area*. Preliminary report.
 ► (34) **Harriet M Lord**, Cal Poly Pomona (951-01-93)

Special Session on Geometric Methods in 3-manifolds, II

3:00 PM – 6:20 PM Room 2128, Girvetz Hall

- Organizers: **Daryl Cooper**, University of California, Santa Barbara
Darren Long, University of California, Santa Barbara
Martin Scharlemann, University of California, Santa Barbara
- 3:00PM *Spherical orbifolds and cone-manifolds*. Preliminary report.
 (35) **Daryl Cooper**, UC Santa Barbara, **Craig D Hodgson**, Univ. of Melbourne, and **Steven P Kerckhoff***, Stanford University (951-53-31)
- 3:30PM *Kleinian groups generated by 2 parabolics*. Preliminary report.
 (36) **Ian Agol**, UC Davis (951-57-34)
- 4:00PM *Arithmetic Links and 3-Manifolds*.
 (37) **Mark D Baker**, Universite de Rennes 1 (951-57-19)
- 4:30PM *Arithmetic knots in 3-manifolds*. Preliminary report.
 (38) **Alan W Reid***, University of Texas, and **Mark D Baker**, I.R.M.A.R. (951-57-140)
- 5:00PM *Self-bumping of deformation spaces of hyperbolic 3-manifolds*.
 (39) **Kenneth W Bromberg*** and **John H Holt**, University of Michigan (951-57-29)
- 5:30PM *A Diameter Bound for Closed Hyperbolic 3-Manifolds*.
 (40) **Matthew E White**, U.C. Santa Barbara (951-57-161)
- 6:00PM *Small Eigenvalues of Sequences of Hyperbolic 3-Manifolds*.
 (41) **Carol E. Fan***, Loyola Marymount University, and **Jay Jorgenson**, City College of New York (951-58-20)

Special Session on Geometric Analysis, II

3:00 PM – 5:55 PM Room 2129, Girvetz Hall

- Organizers: **Xian-Zhe Dai**, University of California, Santa Barbara
Doug Moore, University of California, Santa Barbara
Guofang Wei, University of California, Santa Barbara
Rick Ye, University of California, Santa Barbara
- 3:00PM *Special Lagrangian Fibrations and Mirror Symmetry*.
 (42) **Ilia H Zharkov**, University of Pennsylvania (951-51-41)
- 3:45PM *A gluing construction for solutions of the Einstein constraint equations*. Preliminary report.
 (43) **Daniel Pollack***, University of Washington, **Jim Isenberg**, University of Oregon, and **Rafe Mazzeo**, Stanford University (951-83-107)
- 4:30PM *Critical Behavior in Wave Maps*.
 (44) **James A Isenberg***, University of Oregon, **Steven L Liebling**, Southampton College, and **Eric W Hirschmann**, Southampton college (951-35-105)
- 5:15PM *Analysis on Stratified Spaces*. Preliminary report.
 (45) **Rafe Mazzeo**, Stanford University (951-58-179)

Special Session on Automorphic Forms, II

3:00 PM – 5:30 PM Room 2119, Girvetz Hall

- Organizers: **Ozlem Imamoglu**, University of California, Santa Barbara
Jeffrey Stopple, University of California, Santa Barbara
- 3:00PM *On Kummer's conjecture*. Preliminary report.
 (46) **Yiannis N Petridis*** and **Ram M Murty**, Queen's University (951-11-50)
- 3:40PM *A Relaxing Interlude with 2x2 Matrices*.
 (47) **Stephanie Harrison**, Oklahoma State University (951-11-58)
- 4:20PM *Some Maass forms on Hecke congruence subgroups*. Preliminary report.
 ► (48) **David W Farmer***, Bucknell University, and **Stefan Johansson**, Institute for Advanced Study (951-11-52)
- 5:00PM *Mean values of L-functions and symmetry*.
 (49) **Brian Conrey***, American Institute of Mathematics, and **David Farmer**, Bucknell University (951-11-75)

Special Session on Subfactors and Free Probability Theory, II

3:00 PM – 6:10 PM Room 2112, Girvetz Hall

- Organizers: **Dietmar Bisch**, University of California, Santa Barbara
Sorin Popa, University of California, Los Angeles
Dan Voiculescu, University of California, Berkeley
- 3:00PM *commutators associated to a subfactor and the relative commutant*.
 ► (50) **Hsiang-Ping Huang**, Dept of Math UC Berkeley (951-46-98)
- 3:50PM *Microstates free entropy and cost of equivalence relations*.
 (51) **Dimitri Y Shlyakhtenko**, UCLA (951-46-72)
- 4:40PM *Free stochastic measures via noncrossing partitions*.
 (52) **Michael Anshelevich**, UC Berkeley (951-46-139)
- 5:30PM *A quantum dynamics generator in free group factor(s) constructed out of operators with automorphic symbol*.
 (53) **Florin G Radulescu**, University of Iowa, Dept. Math (951-46-177)

Special Session on Representation Theory of Algebras, II

3:00 PM – 5:50 PM Room 2123, Girvetz Hall

- Organizers: **F. W. Anderson**, University of Oregon
K. R. Fuller, University of Iowa
B. Huisgen-Zimmermann, University of California, Santa Barbara
- 3:00PM *Examples of FCR-algebras*. Preliminary report.
 (54) **Ellen E Kirkman**, Wake Forest University (951-16-122)
- 3:30PM *Universal deformations and embedding problems*. Preliminary report.
 (55) **Frauke M. Bleher***, Southern Illinois University, and **Ted Chinburg**, University of Pennsylvania (951-16-129)
- 4:00PM *Representation-finite algebras with vanishing first Hochschild cohomology group*. Preliminary report.
 ► (56) **Ragnar-Olaf Buchweitz**, University of Toronto, and **Shiing Liu***, University of Sherbrooke (951-16-62)

- 4:30PM *Invariant basis number and types for strongly graded rings.* Preliminary report.
(57) **Gene D Abrams**, University of Colorado (951-16-66)
- 5:00PM *Rings with solvable quivers.* Preliminary report.
(58) **Barbara K D'Ambrosia***, John Carroll University, and **Frank W Anderson**, University of Oregon (951-16-117)
- 5:30PM *Binomial Algebras.*
(59) **Jessica K Sklar**, University of Oregon (951-16-78)

Special Session on Uniformly and Partially Hyperbolic Dynamical Systems, II

3:00 PM – 5:50 PM Room 2116, Girvetz Hall

Organizers: **Bjorn Birnir**, University of California, Santa Barbara
Nicolai T. A. Haydn, University of Southern California

- 3:00PM *Random Expanding Maps.*
(60) **William J Cowieson**, USC (951-37-123)
- 3:30PM *Transient chaotic time series.*
(61) **Eric J Kostelich**, Arizona State University (951-37-92)
- 4:00PM *A stochastic adding machine and quadratic dynamics.*
(62) **Thomas J Taylor**, Arizona State University (951-37-91)
- 4:30PM *Random walks generated by irrational rotations.*
(63) **Francis Edward Su**, Harvey Mudd College and Cornell University (951-60-141)
- 5:00PM *Hyperbolic and parabolic billiard dynamics.* Preliminary report.
(64) **Eugene Gutkin**, University of Southern California (951-37-63)
- 5:30PM *Inducing and Return Time Statistics.* Preliminary report.
(65) **Henk Bruin**, California Institute of Technology (951-37-61)

Special Session on Schrodinger-Type Operators, II

3:00 PM – 5:55 PM Room 2115, Girvetz Hall

Organizers: **Abel Klein**, University of California, Irvine
Svetlana Jitomirskaya, University of California, Irvine

- 3:00PM *Anderson localization and regularity of the integrated density of states for Schroedinger equations on \mathbb{Z} with deterministic potentials.*
(66) **Wilhelm Schlag**, Princeton University (951-39-157)
- 3:45PM *Wegner's estimate and the spectral shift function.*
(67) **Peter D Hislop**, Mathematics Department, University of Kentucky, Lexington, KY (951-81-84)
- 4:30PM *On subharmonic functions in spectral theory.*
▶ (68) **Oliver R Knill**, University of Texas (951-31-125)
- 5:15PM *Some applications of scattering theory to random operators.*
(69) **David Damanik**, Caltech, **Fritz Gesztesy**, Univ. of Missouri, **Robert Sims** and **Gunter Stolz***, Univ. of Alabama at Birmingham (951-81-120)

Session for Contributed Papers

3:00 PM – 5:10 PM Room 2108, Girvetz Hall

- 3:00PM *Paradox Logic and How to Count to Two.*
▶ (70) **Nathaniel S Hellerstein**, City College of San Francisco (951-03-151)

- 3:15PM *A Confidence Based Decision Rule.*
▶ (71) **Rod A Freed**, California State University at Dominguez Hills (951-00-135)
- 3:30PM *Mathematical Education: On Its Purpose via the Historical Perspective.* Preliminary report.
▶ (72) **Danielle Mihram**, Univ of Southern California, and **G. Arthur Mihram***, Princeton, NJ 08542-1188. (951-01-21)
- 3:45PM *Topological pseudoisotopy of 4-manifolds.*
(73) **Frank Quinn**, Virginia Tech (951-57-158)
- 4:00PM *Properties of generalized vector-valued sequence spaces generated by infinite matrices.*
(74) **Nandita Rath**, Russellville, Ar 72801. (951-40-27)
- 4:15PM *A Unifying Field In Logics: Neutrosophic Logic. / Neutrosophic Probability, Neutrosophic Set.* Preliminary report.
(75) **Florentin Smarandache**, University of New Mexico (951-03-03)
- 4:30PM *Sequences, Geometry, and the East Haddam Cases.*
(76) **C. S. Felicitas*** and **M. W. Auslander**, C.F.C.T.E. Foundation, Inc. (951-51-04)
- 4:45PM *Functional measure for separable systems with dynamical activity.*
(77) **C. S. Felicitas**, C.F.C.T.E., Inc., and **M. W. Auslander***, The Gottlieb Library (951-28-02)
- 5:00PM *"Blending" TO BE ADDED.* Preliminary report.
▶ (78) **Edward Siegel**, FUZZYICS (951-03-183)

Sunday, March 12

Meetings Registration

7:45 AM – 1:30 PM Foyer, Girvetz Hall

AMS Exhibit and Book Sale

7:45 AM – 1:30 PM Foyer, Girvetz Hall

Special Session on Geometric Methods in 3-manifolds, III

8:00 AM – 10:50 AM Room 2128, Girvetz Hall

Organizers: **Daryl Cooper**, University of California, Santa Barbara
Darren Long, University of California, Santa Barbara
Martin Scharlemann, University of California, Santa Barbara

- 8:00AM *Complexity of algorithms for 3-manifolds.* Preliminary report.
(79) **Joachim H Rubinstein***, University of Melbourne, **William H Jaco**, Oklahoma State University, **Ben Burton**, University of Melbourne, and **David Lestcher**, Oklahoma State University (951-57-22)
- 8:30AM *Layered triangulations and Heegaard splittings of lens spaces and small Seifert fibered spaces.*
(80) **William H Jaco***, **David Letscher**, Oklahoma State University, **Hyam Rubinstein**, University of Melbourne, and **Eric Sedgwick**, DePaul University (951-57-23)
- 9:00AM *Geometric Triangulations of 3-Manifolds.*
(81) **David Letscher***, Oklahoma State, and **Greg Leibon**, Dartmouth (951-57-28)
- 9:30AM *Brunnian links are determined by their complements.*
(82) **Brian S Mangum***, Barnard College, Columbia University, and **Theodore Stanford**, United States Naval Academy (951-57-121)

Program of the Sessions – Santa Barbara, CA, Sunday, March 12 (cont'd.)

- 10:00AM *Virtual Betti Numbers of Closed Bundles.*
(83) Preliminary report.
Joseph D Masters, Rice University (951-57-51)
- 10:30AM *Convex subgroups and torsion in CAT(0) groups.*
(84) **Eric L Swenson**, BYU (951-20-167)

Special Session on Schrodinger-Type Operators, III

8:00 AM – 10:50 AM Room 2115, Girvetz Hall

Organizers: **Abel Klein**, University of California, Irvine
Svetlana Jitomirskaya, University of California, Irvine

- 8:00AM *A Cwikel–Lieb–Rozenblum bound for Schrödinger operators with operator-valued potentials.*
(85) **Dirk Hundertmark**, Caltech (951-81-154)
- 8:35AM *Multi-scale analysis implies strong dynamical localization.*
(86) **David Damanik***, California Institute of Technology, and **Peter Stollmann**, Frankfurt University (951-47-70)
- 9:10AM *Generalized eigenfunctions for waves in inhomogeneous media.*
(87) **Abel Klein** and **Maximilian Seifert***, University of California, Irvine (951-78-168)
- 9:45AM *Strong Dynamical Localization for Classical Waves in Random Media.*
(88) **François Germinet**, Université de Lille I, and **Abel Klein***, University of California, Irvine (951-78-160)
- 10:20AM *Zero-dimensionality of spectral measure for quasiperiodic operators with analytic potential.*
(89) **Michael D Landrigan**, UC Irvine (951-81-170)

Special Session on Subfactors and Free Probability Theory, III

8:30 AM – 10:50 AM Room 2112, Girvetz Hall

Organizers: **Dietmar Bisch**, University of California, Santa Barbara
Sorin Popa, University of California, Los Angeles
Dan Voiculescu, University of California, Berkeley

- 8:30AM *Invariant Subspaces for Voiculescu's Circular Operator (joint work with K. Dykema).*
(90) **Uffe Haagerup**, Odense University, Denmark (951-46-182)
- 9:20AM *The coalgebra of the free difference quotient in free probability theory.* Preliminary report.
(91) **Dan V Voiculescu**, U.C. Berkeley (951-46-101)
- 10:10AM *Free diffusions and matrix models.*
(92) **Philippe Biane**, CNRS, Ecole Normale Supérieure (951-47-80)

Special Session on Uniformly and Partially Hyperbolic Dynamical Systems, III

8:30 AM – 10:50 AM Room 2116, Girvetz Hall

Organizers: **Bjorn Birnir**, University of California, Santa Barbara
Nicolai T. A. Haydn, University of Southern California

- 8:30AM *Vortex motion on a sphere.*
(93) **Paul K. Newton**, University of Southern California (951-34-189)
- 9:00AM *Scalings of Fluvial Landscapes.*
(94) **Bjorn Birnir***, Dept. of Math., UCSB, **Terence R Smith**, Dept. of Geography, UCSB, and **George E Merchant**, Dept. of Geography, UCSB (951-37-145)

- 9:30AM *Computations in Ergodic Theory of Particle Systems.*
(95) **Marek R Rychlik**, University of Arizona (951-37-150)
- 10:00AM *Analysis of a class of strange attractors.*
(96) **Qiudong (Don) Wang**, UCLA (951-34-83)
- 10:30AM *Towards a geometric theory of hybrid systems.*
▶ (97) **Slobodan N Simic**, UC Berkeley (951-37-110)

Special Session on Geometric Analysis, III

8:40 AM – 10:50 AM Room 2129, Girvetz Hall

Organizers: **Xian-Zhe Dai**, University of California, Santa Barbara
Doug Moore, University of California, Santa Barbara
Guofang Wei, University of California, Santa Barbara
Rick Ye, University of California, Santa Barbara

- 8:40AM *A Deformation of Noncompact Einstein Solvmanifolds.* Preliminary report.
(98) **Megan M Kerr**, Wellesley College (951-53-114)
- 9:25AM *On Manifolds with Positive Curvature Almost Everywhere.*
(99) **fred wilhelm***, Univ. of Calif., Riverside, and **Peter Petersen**, UCLA (951-53-99)
- 10:10AM *Orbits of SU(2) - representations and Minimal Isometric Immersions.*
(100) **Christine M Escher***, Oregon State University, and **Gregor Weingart**, Universitaet Bonn (951-53-89)

Special Session on History of Mathematics, III

9:00 AM – 10:50 AM Room 2127, Girvetz Hall

Organizer: **James Tattersall**, Providence College

9:00AM ▶ (101) *Maria Gaetana Agnesi (1718-1799): A commemorative on the 200th anniversary of her death. A Lasting Contribution from the First Surviving Mathematical Work Written by a Woman.* Preliminary report.
S. I. B. Gray, California State University Los Angeles (951-01-05)

- 9:30AM ▶ (102) *The Conics of Gilles Personne de Roberval.*
Barnabas B Hughes, California State University, Northridge (951-01-33)
- 10:00AM ▶ (103) *Fair representation, apportionment and proportional representation: Charles L. Dodgson's approach.*
Francine F Abeles, Kean University (951-01-97)
- 10:30AM ▶ (104) *The Remarkable Gerbert.* Preliminary report.
James J Tattersall, Providence College (951-01-57)

Special Session on Automorphic Forms, III

9:00 AM – 10:50 AM Room 2119, Girvetz Hall

Organizers: **Ozlem Imamoglu**, University of California, Santa Barbara
Jeffrey Stopple, University of California, Santa Barbara

- 9:00AM (105) *Hidden symmetries for a renormalized integral of Eisenstein series.* Preliminary report.
Jennifer Beineke*, Trinity College, and **Daniel Bump**, Stanford University (951-11-54)
- 9:40AM (106) *A Rankin-Selberg integral using the automorphic minimal representation of SO(7).*
Daniel Bump, Stanford University, **Solomon Friedberg***, Boston College, and **David Ginzburg**, Tel-Aviv University (951-11-81)

10:20AM *Sums of quadratic twists of L-functions*. Preliminary report. (107)
Daniel W Bump, Stanford University (951-11-152)

Special Session on Representation Theory of Algebras, III

9:00 AM – 10:50 AM Room 2123, Girvetz Hall

Organizers: **F. W. Anderson**, University of Oregon
K. R. Fuller, University of Iowa
B. Huisgen-Zimmermann, University of California, Santa Barbara

9:00AM *A proof of the flat cover conjecture, and beyond*. (108)
Paul C. Eklof*, Univ. of California, Irvine, and **Jan Trlifaj**, Charles University, Prague (951-16-38)

9:30AM *Left and right approximations via endoproperties of modules*. Preliminary report. (109)
Lidia Angeleri Huegel, University of Munich, Germany (951-16-96)

10:00AM *A Family of Noetherian Rings with Their Finite Length Modules under Control*. (110)
Markus Schmidmeier, Florida Atlantic University (951-16-164)

10:30AM Discussion

Invited Address

11:10 AM – NOON Room 1004, Girvetz Hall

(111) *Zeta functions and Dirichlet series*.
Ram M Murty, Queen's University (951-11-188)

Invited Address

1:30 PM – 2:20 PM Room 1004, Girvetz Hall

(112) *1D Quasiperiodic operators. Arithmetics and localization*.
Svetlana Jitomirskaya, UCI (951-81-171)

Special Session on Geometric Methods in 3-manifolds, IV

3:00 PM – 5:50 PM Room 2128, Girvetz Hall

Organizers: **Daryl Cooper**, University of California, Santa Barbara
Darren Long, University of California, Santa Barbara
Martin Scharlemann, University of California, Santa Barbara

3:00PM *Alexander and Thurston norms of fibered 3-manifolds*. (113)
Nathan M Dunfield, Harvard University (951-57-137)

3:30PM *A symplectic model for the Seiberg-Witten Floer homology of mapping tori*. Preliminary report. (114)
Michael L Hutchings, Stanford University (951-58-17)

4:00PM *Convexity in Contact Topology*. (115)
John B Etnyre, Stanford University (951-57-14)

4:30PM *Results in geometric group theory*. Preliminary report. (116)
Jeremy Shor, UCSB (951-20-166)

5:00PM *Intrinsically knotted or linked graphs in R^3* . (117)
Erica Flapan, Pomona College, **Ramin Naimi***, Occidental College, and **James Pommersheim**, Pomona College (951-57-85)

5:30PM *Stabilizations of Heegaard Splittings and PL Index 2 Minimal Surfaces*. (118)
Bachman C David, Portland State University (951-57-12)

Special Session on Geometric Analysis, IV

3:00 PM – 5:10 PM Room 2129, Girvetz Hall

Organizers: **Xian-Zhe Dai**, University of California, Santa Barbara
Doug Moore, University of California, Santa Barbara
Guofang Wei, University of California, Santa Barbara
Rick Ye, University of California, Santa Barbara

3:00PM *On locally conformally flat 4-manifolds*. Preliminary report. (119)
Alice Chang, Princeton University, **Jie Qing***, UCSC, and **Paul Yang**, USC and PRINCETON UNIVERSITY (951-53-149)

3:45PM *Weighted inequalities of exponential type in irregular domains*. Preliminary report. (120)
David E Edmunds, University of Sussex, and **Ritva M Hurri-Syrjanen***, University of Helsinki (951-46-24)

4:30PM *Determinant of Dirac Operators and Global Anomalies*. (121)
Siye Wu, University of California at Santa Barbara and University of Adelaide, Australia (951-58-180)

Special Session on Automorphic Forms, IV

3:00 PM – 4:50 PM Room 2119, Girvetz Hall

Organizers: **Ozlem Imamoglu**, University of California, Santa Barbara
Jeffrey Stopple, University of California, Santa Barbara

3:00PM *The modular symbol in the Siegel upper half plane*. (122)
Arpad Toth, University of Michigan (951-11-102)

3:40PM *Applications of Hecke operators on Siegel modular forms*. (123)
Lynne H Walling, University of Colorado at Boulder (951-11-118)

4:20PM *Towards a $GL(3)$ generalization of the Katok-Sarnak formula*. Preliminary report. (124)
Daniel B Lieman, University of Missouri and the American Institute of Mathematics (951-11-156)

Special Session on Subfactors and Free Probability Theory, IV

3:00 PM – 6:10 PM Room 2112, Girvetz Hall

Organizers: **Dietmar Bisch**, University of California, Santa Barbara
Sorin Popa, University of California, Los Angeles
Dan Voiculescu, University of California, Berkeley

3:00PM *Fusion of Positive Energy Representations of LE_8 using von Neumann algebras*. (125)
Antony J Wassermann, CNRS Luminy / DPMMS Cambridge (951-46-127)

3:50PM *Algebraic orbifold conformal field theories*. Preliminary report. (126)
Feng Xu, University of Oklahoma (951-46-116)

4:40PM *Compact Kac algebras and subfactors*. (127)
Teodor Banica, UC Berkeley (951-46-132)

5:30PM *Braid representations and tensor categories*. (128)
Hans G Wenzl, UC San Diego (951-46-144)

Special Session on Representation Theory of Algebras, IV

3:00 PM – 4:50 PM Room 2123, Girvetz Hall

Organizers: **F. W. Anderson**, University of Oregon
K. R. Fuller, University of Iowa
B. Huisgen-Zimmermann, University of California, Santa Barbara

- 3:00PM *Splitting and Dual Pairs*. Preliminary report.
(129) **Juan Jacobo Simon Pinero**, University of Murcia, and **Victor P Camillo***, University of Iowa (951-16-131)
- 3:30PM *Torsion theories of dual extension algebras*.
(130) **Xianneng Du**, Anhui University (951-16-169)
- 4:00PM *Weakly cotilting bimodules of finite injective dimension*.
(131) **Alberto Tonolo**, Universita' di Padova (951-16-90)
- 4:30PM Discussion

Special Session on Uniformly and Partially Hyperbolic Dynamical Systems, IV

3:00 PM – 5:50 PM Room 2116, Girvetz Hall

Organizers: **Bjorn Birnir**, University of California, Santa Barbara
Nicolai T. A. Haydn, University of Southern California

- 3:00PM *Dissipative dynamics of W-flows*. Preliminary report.
(132) **Maciej P Wojtkowski**, University of Arizona (951-58-173)
- 3:30PM *Relaxation in Hamiltonian systems*.
(133) **Peter Smereka**, University of Michigan (951-70-175)
- 4:00PM *On-off intermittency associated with almost invariant manifolds*.
▶ (134) **Dieter Armbruster*** and **Daniel Marthaler**, Arizona State University (951-37-87)
- 4:30PM *An additional Gibbs' state for the cubic Schrodinger equation on the circle*. Preliminary report.
▶ (135) **Kirill L Vaninsky**, Kansas State University (951-35-128)
- 5:00PM *Oscillation properties of solutions of dissipative PDEs*.
(136) **Igor Kukavica**, University of Southern California (951-35-153)
- 5:30PM *A Geometric Analysis of the Averaged Euler Equations*.
(137) **Steve Shkoller**, University of California Davis (951-35-106)

Special Session on Schrodinger-Type Operators, IV

3:00 PM – 5:10 PM Room 2115, Girvetz Hall

Organizers: **Abel Klein**, University of California, Irvine
Svetlana Jitomirskaya, University of California, Irvine

- 3:00PM *First KdV integrals and a.c. spectrum for 1-D Schrodinger operator*. Preliminary report.
(138) **S Molchanov**, **M Novitskii** and **B Vainberg***, UNC at Charlotte (951-35-133)
- 3:45PM *On the Periodic Magnetic Schrödinger Operator*.
(139) Preliminary report.
Yulia Karpeshina, UAB (951-35-77)
- 4:30PM *A problem in constrained minimization*.
(140) **Alexander Y Gordon**, UNC-Charlotte (951-35-162)

Bernard Russo
Associate Secretary
Irvine, California