
Program of the Sessions

Columbia, South Carolina, March 16–18, 2001

Friday, March 16

Meeting Registration

8:00 AM – 4:30 PM Lobby, Gambrell Hall

Special Session on Banach Spaces, I

8:00 AM – 11:50 AM Room 005, Gambrell Hall

Organizers: **George Androulakis**, University of South Carolina, Columbia
Stephen Dilworth, University of South Carolina, Columbia
Maria K. Girardi, University of South Carolina, Columbia

- 8:00AM *Notes on Subspaces of Certain Rearrangement Invariant Spaces.*
(1) **Andrew B Perry**, Springfield College (963-46-188)
- 8:30AM *On Lorentz spaces $\Gamma_{p,w}$.* Preliminary report.
(2) **Anna H Kamińska***, The University of Memphis, Memphis, TN, and **Lech Maligranda**, Lulea University of Technology, Lulea, Sweden (963-46-186)
- 9:00AM *A disjointness type property of averaging operators.*
(3) **Beata Randrianantoanina**, Miami University, Ohio (963-46-197)
- 9:30AM *Non-commutative subsequence principles.*
(4) Preliminary report.
Narcisse Randrianantoanina, Miami University (963-46-99)
- 10:00AM *Representation spaces for the essential spectra of positive operators.*
(5) **Vladimir G Troitsky**, University of Texas, Austin. (963-46-225)
- 10:30AM *The pseudo-Daugavet property of Banach spaces.*
(6) **Timur Oikhberg**, The University of Texas at Austin (963-46-202)
- 11:00AM *An Operator Hilbert space without the operator approximation property.*
(7) **Alvaro Arias**, University of Texas at San Antonio (963-46-105)

- 11:30AM *Convex combinations of extreme points in operator algebras.*
(8) **Elias Katsoulis**, East Carolina University (963-47-54)

Special Session on Discrete and Computational Geometry and Graph Drawing, I

8:30 AM – 11:20 AM Room 431, Gambrell Hall

Organizers: **Farhad Shahrokhi**, University of North Texas
Laszlo A. Szekely, University of South Carolina, Columbia

- 8:30AM *Geometric Inclusion Orders.* Preliminary report.
► (9) **William T. Trotter**, Arizona State University (963-06-72)
- 9:30AM *Point Pattern Matching and Almost Congruent Subsets.* Preliminary report.
► (10) **Peter Brass**, Free University, Berlin (963-52-56)
- 10:00AM *The number of directions determined by points in the three-dimensional Euclidean space.*
► (11) **Aart Blokhuis**, Technical University of Technology, and **Ákos Seress***, The Ohio State University, Columbus, Ohio (963-52-70)
- 10:30AM *Crossings in geometric complete graphs.*
► (12) Preliminary report.
Heiko Harborth, Techn. Univ. Braunschweig, Germany (963-05-19)
- 11:00AM *Unit chords of a convex domain.* Preliminary report.
(13) **Bernardo M. Ábrego** and **Silvia Fernández***, Rutgers University (963-52-76)

Special Session on Algebras, Lattices, Varieties, I

8:30 AM – 11:45 AM Room 247, Gambrell Hall

Organizers: **George F. McNulty**, University of South Carolina
Ralph S. Freese, University of Hawaii
James B. Nation, University of Hawaii

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 22, 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.

- 8:30AM (14) *Submonoids of the Additive Monoid of Natural Numbers*. Preliminary report.
Leslie Cohn, The Citadel (963-06-148)
- 9:00AM (15) *Semidistributive inverse semigroups*.
Katherine G Johnston-Thom*, University of Charleston, SC, and **Peter R Jones**, Marquette University (963-08-63)
- 9:30AM (16) *Sheaf Representations Revisited*. Preliminary report.
Stephen D Comer, The Citadel (963-08-67)
- 10:00AM (17) *The Controversy About Continuous Clustering*. Preliminary report.
Melvin F Janowitz, Dimacs-Rutgers University (963-62-45)
- 10:30AM (18) *Posets That Locally Resemble Distributive Lattices: An Extension of Stanley's Theorem (with Connections to Buildings and Diagram Geometries)*.
Jonathan D Farley*, Vanderbilt University, and **Stefan E Schmidt**, University of Mainz (963-06-235)
- 11:00AM (19) *Canonical extensions of bounded distributive lattice expansions*.
Mai Gehrke, New Mexico State University, and **Bjarni Jónsson***, Vanderbilt University (963-06-112)

Special Session on Mathematical Biology, I

9:15 AM – 11:25 AM Room 321, Gambrell Hall

Organizers: **Douglas B. Meade**, University of South Carolina, Columbia
Matthew Miller, University of South Carolina, Columbia
David Wethey, University of South Carolina, Columbia

- 9:15AM (20) *Using delay differential equations in studying data from individuals infected with HIV-1*.
Patrick Nelson, University of Michigan (963-92-217)
- 10:00AM (21) *Linear Conjecture for Spread in Cooperative Models*. Preliminary report.
Bingtuan Li*, University of Utah, **Hans F Weinberger**, University of Minnesota, and **Mark A Lewis**, University of Utah (963-92-138)
- 10:30AM (22) *An Algebraic Combinatorial Model of Emerging Biochemical Reaction Networks*.
Joseph S. Oliveira*, **Janet Jones-Oliveira**, Pacific North West National Laboratory, and **Colin G. Bailey**, Victoria University, Wellington (963-92-64)
- 11:00AM (23) *A mathematical model of in vitro cancer cell growth and treatment with the antimetabolic agent Curacin A*.
Frank Kozusko*, Hampton University, **Pao-Hsiu Chen**, Dept. of Environmental & Occupational Health, University of Pittsburg, **Stephen G. Grant**, Magee-Womens Research Institute and University of Pittsburgh Cancer Institute, **Billy W. Day**, University of Pittsburgh Cancer Institute, and **John Carl Panetta**, St. Jude Children's Research Hospital (963-92-219)

Special Session on Combinatorics and Graph Theory, I

9:30 AM – 11:50 AM Room 402, Gambrell Hall

Organizer: **Jerrold R. Griggs**, University of South Carolina, Columbia

- 9:30AM (24) *Domination Dot-Critical Graphs*.
David P Sumner* and **Tamara A Burton**, University of South Carolina (963-05-231)
- 10:00AM (25) *Grundy and Parsimoneous Proper Colorings of Graphs*.
S T Hedetniemi and **R. C. Laskar***, Clemson University (963-05-111)

- 10:30AM (26) *A distance-degree condition and non-separating paths*.
Stephen C Locke*, Florida Atlantic University, and **H.-J. Voss**, Technical University Dresden (963-05-241)
- 11:00AM (27) *Shattering News*.
Richard P Anstee, University of British Columbia, **Lajos Ronyai**, Computer and Automation Institute, Hungarian, and **Attila Sali***, Department of Computer Science, Indiana University-Purdue University at Fort Wayne (963-05-240)
- 11:30AM (28) *Equitable colorings of outerplanar graphs*. Preliminary report.
Alexandr V Kostochka, University of Illinois at Urbana-Champaign (963-05-118)

Special Session on Analytic Number Theory, I

10:00 AM – 11:20 AM Room 151, Gambrell Hall

Organizers: **Michael A. Filaseta**, University of South Carolina, Columbia
Ognian Trifonov, University of South Carolina, Columbia

- 10:00AM (29) *Turan's method and ridge approximation of harmonic functions*.
Konstantin I Oskolkov, University of South Carolina (963-41-207)
- 10:30AM (30) *A New Irreducibility Test for Lacunary 0,1-Polynomials*.
Douglas B Meade, University of South Carolina (963-11-124)
- 11:00AM (31) *Further Results on Generalizations of Irreducibility Theorems of I. Schur*. Preliminary report.
Martha A Allen, University of South Carolina (963-11-185)

AMS Exhibit and Book Sale

NOON – 4:30 PM Lobby, Gambrell Hall

Invited Address

1:15 PM – 2:20 PM Room 153, Gambrell Hall

- 1:15PM (32) Welcome and Opening Remarks
Herbert Edelsbrunner, Duke University and Raindrop Geomagic (963-68-01)

Special Session on Discrete and Computational Geometry and Graph Drawing, II

2:30 PM – 5:20 PM Room 431, Gambrell Hall

Organizers: **Farhad Shahrokhi**, University of North Texas
Laszlo A. Szekely, University of South Carolina, Columbia

- 2:30PM (33) *Cutting Circles into Pseudo-segments and Improved Bounds for Incidences*.
Boris Aronov, Polytechnic University, and **Micha Sharir***, Tel Aviv University (963-05-60)
- 3:30PM (34) *Some Remarks on Combinatorial Geometry and Additive Number Theory*.
György Elekes*, Eötvös University, Budapest, and **Imre Z. Ruzsa**, Rényi Institute, Budapest (963-52-84)
- 4:00PM (35) *Contact graphs of translative packings of convex discs in the plane*.
Konrad J Swanepoel, University of South Africa (963-52-59)

- 4:30PM *On Curves Morphings*. Preliminary report.
 ► (36) **Alon Efrat**, University of Arizona (963-68-82)
- 5:00PM *Almost disjoint triangles in 3-space – On a problem of Gil Kalai*. Preliminary report.
 (37) **Gyula A Karolyi**, Eotvos University, Budapest (963-52-68)

Special Session on Algebraic Structures Associated with Lie Theory, I

2:30 PM – 4:50 PM Room 124, Gambrell Hall

- Organizers: **Ben L. Cox**, College of Charleston
Elizabeth Jurisich, College of Charleston
Oleg Smirnov, College of Charleston
- 2:30PM *Explicit algebraic constructions on topological vertex operator algebras (Preliminary Report)*. Preliminary report.
 (38) **Fusun Akman**, Coastal Carolina University (963-17-167)
- 3:00PM *Two Realizations of Toroidal $sl(2)$* .
 (39) **Ben L Cox**, College of Charleston (963-17-141)
- 3:30PM *The Space of One-Point Correlation Functions for Certain $c = 24$ Holomorphic Vertex Operator Algebras*.
 (40) **Katherine L Hurley**, University of California, Santa Cruz (963-17-126)
- 4:00PM Break
- 4:30PM *Twisted vertex representations and spin groups*.
 (41) **Naihuan Jing**, North Carolina State Univ. (963-17-139)

Special Session on Combinatorics and Graph Theory, II

2:30 PM – 5:20 PM Room 402, Gambrell Hall

- Organizer: **Jerrold R. Griggs**, University of South Carolina, Columbia
- 2:30PM *On the circular-coloring integer critical graphs*.
 (42) **Bing Zhou**, Trent University (963-05-166)
- 3:00PM *The relaxed coloring game on chordal graphs*.
 (43) **Charles Dunn** and **H. A Kierstead***, Arizona State University (963-05-242)
- 3:30PM *Defective Coloring Revisited*. Preliminary report.
 ► (44) **Lenore Cowen**, Johns Hopkins University (963-05-232)
- 4:00PM *Graph Minors and Reliable Single Message Transmission*.
 (45) **Andre Kundgen***, California State University, San Marcos, **Faith E Fich**, University of Toronto, **Mike Pelsmajer** and **Radhika Ramamurthi**, University of Illinois (963-05-191)
- 4:30PM *Density of Integral Sets with Missing Differences*.
 (46) **Daphne Der-Fen Liu***, California State University, Los Angeles, and **Xuding Zhu**, National Sun Yat-sen University, Taiwan (963-05-187)
- 5:00PM *Graph Partitions*.
 (47) **Pavol Hell**, Simon Fraser University (963-05-147)

Special Session on Approximation and Wavelets, I

2:30 PM – 5:20 PM Room 152, Gambrell Hall

- Organizers: **Konstantin Oskolkov**, University of South Carolina, Columbia
Pencho Petrushev, University of South Carolina, Columbia
Vladimir Temlyakov, University of South Carolina, Columbia

- 2:30PM *Multiresolution Analysis Based on Hilbert Transform*.
 (48) **Peter G Binev**, University of South Carolina (963-41-226)
- 3:00PM *Constructions of wavelet frames*. Preliminary report.
 (49) **Alexander Petukhov**, University of South Carolina (963-41-98)
- 3:30PM *On efficiency of numerical optimization in fuzzy c -means clustering*.
 (50) **Yingkang Hu*** and **Richard Hathaway**, Georgia Southern University (963-49-93)
- 4:00PM *Lyapunov's Functions and Boundedness of the Solutions of Impulsive Hybrid Differential Equations*.
 (51) **Snezhnana G. Hristova*** and **Don D. Fausett**, Georgia Southern University (963-34-159)
- 4:30PM *Entropic and Relaxed Entropic Schemes for Conservation Laws*. Preliminary report.
 (52) **Bojan D Popov**, Vanderbilt University (963-41-114)
- 5:00PM *Wavelets and Besov regularity of solutions of elliptic PDE*. Preliminary report.
 (53) **Marius Mitrea**, University of Missouri-Columbia (963-35-168)

Special Session on Banach Spaces, II

2:30 PM – 5:20 PM Room 005, Gambrell Hall

- Organizers: **George Androulakis**, University of South Carolina, Columbia
Stephen Dilworth, University of South Carolina, Columbia
Maria K. Girardi, University of South Carolina, Columbia
- 2:30PM *Twisted sums and extensions of operators*.
 (54) **Nigel J Kalton**, University of Missouri (963-46-48)
- 3:00PM *Quasi-Banach spaces that Encode Topological Information*. Preliminary report.
 (55) **James W Roberts**, University of South Carolina (963-46-142)
- 3:30PM *Lebesgue spaces and the projective tensor product*. Preliminary report.
 (56) **Qingying Bu**, Kent State University, and **Joe Diestel***, Banach Center, Kent State (963-46-218)
- 4:00PM *The fixed point property for subsets of c_0* .
 (57) **Patrick N Dowling***, Miami University, **Chris Lennard**, University of Pittsburgh, and **Barry Turett**, Oakland University (963-46-210)
- 4:30PM *Non-weakly compact, closed, bounded, convex subsets of c_0 and the failure of the FPP*.
 (58) **Paddy Dowling**, Miami U., **Chris Lennard***, U. Pittsburgh and Miami U., and **Barry Turett**, Oakland U. (963-46-237)
- 5:00PM *Complemented isometric copies of L_1 in dual Banach spaces*.
 (59) **James N Hagler**, University of Denver (963-46-94)

Special Session on Geometry of Curves and Surfaces, I

2:30 PM – 5:45 PM Room 302, Gambrell Hall

- Organizers: **Mohammad Ghomi**, University of South Carolina, Columbia
Ralph E. Howard, University of South Carolina, Columbia
- 2:30PM *Integrable Geometric Evolution Equations for Curves*. Preliminary report.
 (60) **Thomas A. Ivey**, College of Charleston (963-53-13)
- 3:00PM *Evolving piecewise linear convex curves in the plane*. Preliminary report.
 (61) **Alina Stancu**, Universite des Sciences et Technologies de Lille (963-53-149)

- 3:30PM *Constructing Knot Isotopies with Geometric Constraints Using Holonomic Space Curves.*
 ▶ (62) **Eddie Fuller**, Duke University (963-53-140)
- 4:00PM *A notion of criticality for ropelength.* Preliminary report.
 (63) **Joseph H Fu**, University of Georgia (963-49-196)
- 4:30PM *Ropelength, thickness and conformal modulus of links.* Preliminary report.
 ▶ (64) **Rob Kusner**, University of Massachusetts at Amherst (963-53-192)
- 5:00PM *Many knot energies are minimized by circles.*
 ▶ (65) Preliminary report.
Aaron Abrams, Jason H Cantarella*, Joseph Fu, University of Georgia, **Mohammad Ghomi** and **Ralph Howard**, University of South Carolina (963-53-216)

Special Session on Analytic Number Theory, II

2:30 PM – 4:50 PM Room 151, Gambrell Hall

Organizers: **Michael A. Filaseta**, University of South Carolina, Columbia
Ognian Trifonov, University of South Carolina, Columbia

- 2:30PM *Factorization of polynomials with small Euclidean norm.*
 ▶ (66) **Robert F Murphy**, University of South Carolina (963-11-221)
- 3:00PM *On union-closed families.* Preliminary report.
 (67) **Theresa P Vaughan**, UNC-Greensboro (963-05-73)
- 3:30PM *Non-uniformities in Chebyshev's Bias.* Preliminary report.
 (68) **Richard H Hudson**, University of South Carolina (963-11-125)
- 4:00PM *Distribution of prime ideals of quadratic fields and prime values of binary quadratic forms.*
 (69) **Glyn Harman**, University of London, **Angel V Kumchev***, University of South Carolina, and **Philip Lewis**, University of Wales (963-11-223)
- 4:30PM *New bounds for the Riemann zeta function and applications.*
 (70) **Kevin Ford**, University of South Carolina (963-11-74)

Special Session on Mathematical Biology, II

2:30 PM – 4:55 PM Room 321, Gambrell Hall

Organizers: **Douglas B. Meade**, University of South Carolina, Columbia
Matthew Miller, University of South Carolina, Columbia
David Wethey, University of South Carolina, Columbia

- 2:30PM *Nonlinear Phenomena in Population Dynamics: Models, Mathematical/Statistical Analyses, and Biological Experiments.* Preliminary report.
 ▶ (71) **J. M Cushing**, University of Arizona (963-92-106)
- 3:00PM *Frequency-dependent interactions and coexistence among species.*
 ▶ (72) **Jane Molofsky***, University of Vermont, **James D Bever**, Indiana University, **Janis Antonovics** and **Timothy J Newman**, University of Virginia (963-92-88)
- 3:30PM Discussion
- 3:30PM Discussion

- 4:00PM **Discussion: Individual or Aggregate Models?** Is this a genuine conflict in approach or do these tools simply have different domains of applicability, perhaps based on scale? If they do share a common domain, which should be preferred and why? Is it a matter of when and how the statistics enters, or does it simply come back to the core fact that all computer simulations are ultimately discrete?

- 4:30PM **Discussion: Mathematics and Biology—A Stable Mixture?** Is there a stable equilibrium of coexistence between the fields of mathematics and biology? Or, are we all ultimately either one or the other? Current trends suggest that this coexistence is easier to achieve in ecology than in cellular and molecular biology, for example. What is the basis for these distinctions? Can they be eliminated?

Special Session on Algebras, Lattices, Varieties, II

2:30 PM – 5:50 PM Room 247, Gambrell Hall

Organizers: **George F. McNulty**, University of South Carolina
Ralph S. Freese, University of Hawaii
James B. Nation, University of Hawaii

- 2:30PM *Solution of Birkhoff's problem and redefining the arithmetic of finite ordered sets.*
 (73) **Ralph N McKenzie**, Vanderbilt University (963-06-108)
- 3:30PM *On the variety generated by tournaments.*
 (74) **Miklos Maroti**, Vanderbilt University (963-08-180)
- 4:00PM *Varieties having Boolean factor congruences.* Preliminary report.
 (75) **Ross Willard**, University of Waterloo (963-08-95)
- 4:30PM *Structure of subdirectly irreducible algebras in finitely decidable locally finite varieties.* Preliminary report.
 (76) **Dejan Delic**, Vanderbilt University (963-08-199)
- 5:00PM *Interpretations Preserving Pseudorecursiveness.*
 ▶ (77) **Benjamin Wells**, University of San Francisco (963-08-136)
- 5:30PM *A note on homomorphic images, subalgebras and various products.*
 (78) **Boza R Tasic**, University of Waterloo, Canada (963-08-75)

Department of Mathematics Reception

5:45 PM – 6:30 PM Roof Garden, Gambrell Hall

Erdos Memorial Lecture

6:30 PM – 7:30 PM Room 153, Gambrell Hall

- (79) *Babe Ruth, Hank Aaron, Paul Erdős, and me.*
Carl Pomerance, Bell Laboratories - Lucent Technologies (963-11-06)

Saturday, March 17

Meeting Registration

8:00 AM – 4:30 PM Lobby, Gambrell Hall

AMS Exhibit and Book Sale

8:00 AM – 4:30 PM Lobby, Gambrell Hall

Special Session on Banach Spaces, III

8:00 AM – 10:50 AM Room 005, Gambrell Hall

Organizers: **George Androulakis**, University of South Carolina, Columbia
Stephen Dilworth, University of South Carolina, Columbia
Maria K. Girardi, University of South Carolina, Columbia

- 8:00AM (80) *Poincare-type inequalities and reverse doubling weights.* Preliminary report.
Ritva Hurri-Syrjanen, University of Kentucky (963-46-198)
- 8:30AM (81) *An asymptotically Hilbertian space failing the approximation property.*
Cesar L Garcia*, Texas A&M University, **Peter G Casazza**, University of Missouri, and **William B Johnson**, Texas A&M University (963-46-27)
- 9:00AM (82) *Constructing isomorphic preduals of ℓ_1 .* Preliminary report.
Dale E. Alspach, Oklahoma State University (963-46-175)
- 9:30AM (83) *On the structure of the spreading models of a Banach space.*
Edward Odell*, The University of Texas at Austin, Austin, TX, **George Androulakis**, University of South Carolina, Columbia, and **Thomas Schlumprecht**, Texas A&M University (963-46-85)
- 10:00AM (84) *Hereditarily Indecomposable Banach Spaces and the Invariant Subspace Problem.*
George Androulakis, University of South Carolina, and **Thomas B Schlumprecht***, Texas A&M University (963-46-176)
- 10:30AM (85) *On contractively complemented subspaces of separable L_1 -preduals.*
Ioannis Gasparis, Oklahoma State University (963-46-53)

Special Session on Discrete and Computational Geometry and Graph Drawing, III

8:30 AM – 10:20 AM Room 431, Gambrell Hall

Organizers: **Farhad Shahrokhi**, University of North Texas
Laszlo A. Szekely, University of South Carolina, Columbia

- 8:30AM (86) *Topological Persistence and Simplification.* Preliminary report.
Herbert Edelsbrunner*, Duke University, **David Letscher**, Oklahoma State University, and **Afra Zomorodian**, Stanford University (963-05-211)
- 9:30AM (87) *Visibility Graphs of Simple Polygons.*
James Abello, AT&T Shannon Laboratories (963-52-35)
- 10:00AM (88) *Improved Approximations of Crossings in Graph Drawings and VLSI Layout Areas.*
Guy Even*, Tel Aviv Univ., **Sudipto Guha**, AT&T Labs, and **Baruch Schieber**, IBM T. J. Watson Research Center (963-68-24)

Special Session on Approximation and Wavelets, II

8:30 AM – 10:20 AM Room 152, Gambrell Hall

Organizers: **Konstantin Oskolkov**, University of South Carolina, Columbia
Pencho Petrushev, University of South Carolina, Columbia
Vladimir Temlyakov, University of South Carolina, Columbia

- 8:30AM (89) *Distribution of general interpolation arrays for exponential weights.*
Steven B Damelin, Georgia Southern University (963-41-86)
- 9:00AM (90) *Bounds for polynomials with a unit discrete norm.* Preliminary report.
Evguenii A Rakhmanov, USF (963-41-173)
- 9:30AM (91) *Poisson transformation for imaginary Lobachevskii plane.*
Igor' Chitikov, St. Petersburg, Florida (963-33-213)
- 10:00AM (92) *Interpolation by Functions of Several Variables.* Preliminary report.
Boris Shekhtman, U.S.F. Tampa, FL (963-41-127)

Special Session on Geometry of Curves and Surfaces, II

8:30 AM – 10:45 AM Room 302, Gambrell Hall

Organizers: **Mohammad Ghomi**, University of South Carolina, Columbia
Ralph E. Howard, University of South Carolina, Columbia

- 8:30AM (93) *Skew Loops and Quadric Surfaces.*
Mohammad Ghomi*, University of South Carolina, and **Bruce Solomon**, Indiana University (963-53-179)
- 9:00AM (94) *Explicit Solutions to the H-Surface Equation on Tori.*
Henry C Wente, The University of Toledo (963-53-174)
- 9:30AM (95) *The Convex Hull Property and Topology of Hypersurfaces with Nonnegative Curvature.*
Stephanie Alexander*, University of Illinois at Urbana-Champaign, and **Mohammad Ghomi**, University of South Carolina (963-53-224)
- 10:00AM (96) *The Second Hull of a Knotted Curve.*
John M Sullivan*, University of Illinois, **Jason Cantarella**, Univ. of Georgia, **Rob Kusner**, UMass/Amherst, and **Greg Kuperberg**, UC Davis (963-51-184)

Special Session on Analytic Number Theory, III

8:30 AM – 10:50 AM Room 151, Gambrell Hall

Organizers: **Michael A. Filaseta**, University of South Carolina, Columbia
Ognian Trifonov, University of South Carolina, Columbia

- 8:30AM (97) *Exponents of Class Groups of Real Quadratic Fields.* Preliminary report.
Gang Yu, University of Michigan (963-11-190)
- 9:00AM (98) *Heights of Algebraic Numbers over Finite Groups in $PGL(2, Q)$.*
Gregory P Dresden, Washington & Lee University (963-11-220)
- 9:30AM (99) *Decomposition of polytopes and polynomials.*
Shuhong Gao, Clemson University (963-11-214)
- 10:00AM (100) *Average Frobenius distributions for elliptic curves with prescribed torsion subgroups.* Preliminary report.
Kevin L James, Clemson University (963-11-208)
- 10:30AM (101) *On a character sum problem of H. Cohn.*
Par M Kurlberg, University of Georgia (963-11-90)

Special Session on Algebras, Lattices, Varieties, III

8:30 AM – 10:45 AM Room 247, Gambrell Hall

Organizers: **George F. McNulty**, University of South Carolina
Ralph S. Freese, University of Hawaii

- James B. Nation**, University of Hawaii
- 8:30AM (102) *Congruence lattices that force transitivity.*
Steve W Seif, University of Louisville (963-06-238)
- 9:00AM (103) *Edge Algebras and Equational Bounds on the Finite Algebra Membership Problem for Varieties.*
Zoltan Szekely, Gallaudet University (963-08-230)
- 9:30AM (104) *Finite-basis problems and techniques.* Preliminary report.
Kirby A Baker*, University of California, Los Angeles, and **Ju Wang**, Institute of Software, Academia Sinica, visiting U. of S. Carolina (963-08-227)
- 10:00AM (105) *Compatibility of spaces with equations.*
Walter Taylor, University of Colorado (963-08-107)

Session for Contributed Papers, I

8:30 AM – 10:25 AM Room 201, Gambrell Hall

- 8:30AM (106) *Notes on the equation $\sum x^k = (\sum x)^2$.* Preliminary report.
Andrew B Perry*, Springfield College, **Cordelia Aitkin**, Williams College, **Thomas Colthurst**, BBN, **Kathryn Kollett**, Williams College, **Steven Levandosky**, Stanford Univ., and **Eugene Stern**, Williams College (963-05-102)
- 8:45AM (107) *The maximum toughness of a graph.*
▶ **Kevin K Ferland**, Bloomsburg University (963-05-08)
- 9:00AM (108) *The Generalized Ménage Problem with Small Tables.* Preliminary report.
▶ **Yan-Chyuan Lin**, Institute for Secondary School Teachers (963-05-129)
- 9:15AM (109) *A Question Concerning Graph Labeling.*
John McSorley and **Walter D Wallis***, Southern Illinois University (963-05-243)
- 9:30AM (110) *Murad's Generalization And Collatz's Problem.*
Murad A Aldamen, Jerash University (963-11-10)
- 9:45AM (111) *Weakly prime ideals.*
D D Anderson* and **Eric Smith**, University of Iowa (963-13-42)
- 10:00AM (112) *The Second Fraenkel Model.*
Henry A Gore, Jackson State University (963-03-182)
- 10:15AM (113) *On The Diophantine Equation: $Ax + By = Cz$.*
▶ **Susil K Jena**, Bhubaneswar (963-11-09)

Special Session on Semigroups and Evolution Equations, I

9:00 AM – 10:50 AM Room 006, Gambrell Hall

- Organizer: **Anton R. Schep**, University of South Carolina, Columbia
- 9:00AM (114) *Operatorvalued Multiplier Theorems and Maximal Regularity for Evolution Equations.*
Lutz Weis, University of Karlsruhe (963-47-203)
- 9:30AM (115) *Recent progress on maximal regularity.*
Nigel J Kalton, University of Missouri (963-46-47)
- 10:00AM (116) *On the asymptotic behaviour of C_0 -semigroups with H^∞ local resolvents.*
Jan van Neerven, Technical University of Delft (963-47-205)
- 10:30AM (117) *Hyperbolicity of semigroups and Fourier multipliers.*
Roman Shvydkoy* and **Yuri Latushkin**, University of Missouri-Columbia (963-42-80)

Special Session on Algebraic Structures Associated with Lie Theory, II

9:30 AM – 10:50 AM Room 124, Gambrell Hall

- Organizers: **Ben L. Cox**, College of Charleston
Elizabeth Jurisich, College of Charleston
Oleg Smirnov, College of Charleston
- 9:30AM (118) *Multi-color partitions and generalized Rogers-Ramanujan identities.*
Kailash C Misra, North Carolina State University (963-17-123)
- 10:00AM (119) *Modules for Generalized Kac-Moody Lie algebras.*
Elizabeth G Jurisich, The College of Charleston (963-17-120)
- 10:30AM (120) *On Completions and Crystal Bases of Some Representations of Quantum Groups.* Preliminary report.
Dijana Jakelic, University of Texas, Austin (963-16-228)

Special Session on Combinatorics and Graph Theory, III

9:30 AM – 10:50 AM Room 402, Gambrell Hall

- Organizer: **Jerrold R. Griggs**, University of South Carolina, Columbia
- 9:30AM (121) *Generalized sum-free sets in abelian groups and constructions of spherical designs.* Preliminary report.
▶ **Béla Bajnok**, Gettysburg College (963-05-92)
- 10:00AM (122) *On the Erdős-Simonovits-Sós Conjecture about the anti-Ramsey numbers of cycles.*
Tao Jiang, Michigan Technological University, and **Douglas B West***, University of Illinois (963-05-137)
- 10:30AM (123) *New types of coding problems.* Preliminary report.
Gyula O.H. Katona, Rényi Institute (963-05-234)

Invited Address

11:00 AM – 11:50 AM Room 153, Gambrell Hall

- (124) *Some thoughts on teaching mathematics.*
Daniel J. Kleitman, Massachusetts Institute of Technology

Invited Address

2:00 PM – 2:50 PM Room 153, Gambrell Hall

- (125) *Harmonic analysis and image processing.*
Albert A. Cohen, University of Paris VI

Special Session on Discrete and Computational Geometry and Graph Drawing, IV

3:00 PM – 5:20 PM Room 431, Gambrell Hall

- Organizers: **Farhad Shahrokhi**, University of North Texas
Laszlo A. Szekely, University of South Carolina, Columbia
- 3:00PM (126) *Disentangling a polygon.*
▶ **Janos Pach***, Courant Institute, NYU, and **Gabor Tardos**, Renyi Institute, Hungarian Academy of Science (963-05-36)
- 4:00PM (127) *Drawing Series Parallel Digraphs Symmetrically in Three Dimensions.*
Seokhee Hong* and **Peter Eades**, University of Sydney (963-68-57)

Program of the Sessions – Columbia, SC, Saturday, March 17 (cont'd.)

- 4:30PM *A multi-dimensional approach to force-directed layouts of large graphs.*
 ▶ (128) **Pawel Gajer, Michael T Goodrich**, Johns Hopkins University, and **Stephen G Kobourov***, University of Arizona (963-68-21)
- 5:00PM *A framework for the visualization of networks.*
 (129) Preliminary report.
Janet M. Six and **Ionnis G. Tollis***, University of Texas at Dallas (963-68-79)

Vladimir Temlyakov, University of South Carolina, Columbia

- 3:00PM *General Haar systems and greedy approximation.*
 (139) **Anna Kamont**, Instytut Matematyczny PAN, Poland (permanent), University of South Carolina (visiting) (963-41-134)
- 3:30PM *Frequency localization of finite quadrature filters.*
 (140) **Morten Nielsen**, University of South Carolina (963-42-104)
- 4:00PM *Nonlinear approximation with Schauder bases.*
 (141) **Rémi Gribonval***, IRISA-INRIA, and **Morten Nielsen**, IMI, Univ. South Carolina (963-41-91)
- 4:30PM *Monotone-iterative Technique of V. Lakshmikantham for Impulsive Hybrid Differential Equations with Fixed Moments of Jumps.*
 (142) **Snezhana Hristova** and **Cynthia Sikes***, Georgia Southern University (963-34-165)
- 5:00PM *On the polynomial gridge series.*
 (143) **Konstantin I Oskolkov**, University of South Carolina (963-42-212)
- 5:30PM *One-Bit Quantization of Bandlimited Functions: New Results on Sigma-Delta Systems.*
 (144) **Sinan Gunturk**, Institute for Advanced Study (963-41-41)
- 6:00PM *A criterion for convergence of Weak Greedy Algorithms.*
 (145) **Vladimir N Temlyakov**, University of South Carolina (963-41-96)

Special Session on Algebraic Structures Associated with Lie Theory, III

3:00 PM – 5:20 PM **Room 124, Gambrell Hall**

Organizers: **Ben L. Cox**, College of Charleston
Elizabeth Jurisich, College of Charleston
Oleg Smirnov, College of Charleston

- 3:00PM *Functorial version of Tits-Kantor-Koecher Construction.* Preliminary report.
 (130) **Oleg Smirnov**, College of Charleston (963-17-113)
- 3:30PM *Root multiplicities of some indefinite Kac-Moody Lie Algebras.* Preliminary report.
 ▶ (131) **Jennifer M. Hontz**, Meredith College (963-17-18)
- 4:00PM Break
- 4:30PM *Jantzen's sum formula and Ext groups between Verma modules.* Preliminary report.
 (132) **Upendra B Kulkarni**, Truman State University (963-17-189)
- 5:00PM *On the Admissibility of Nilpotent Orbits of Simple Exceptional Real Lie Groups of Inner Type.*
 (133) Preliminary report.
Alfred G Noel, M.I.T (963-22-12)

Special Session on Combinatorics and Graph Theory, IV

3:00 PM – 6:20 PM **Room 402, Gambrell Hall**

Organizer: **Jerrold R. Griggs**, University of South Carolina, Columbia

- 3:00PM *40% of a conjecture of Füredi on chain partitions of the Boolean lattice.*
 ▶ (134) **Timothy M Hsu**, Pomona College, **Mark Logan**, Claremont McKenna College, **Shahriar Shahriari***, Pomona College, and **Christopher Towse**, Scripps College (963-05-58)
- 3:30PM *Polynomial LYM-inequalities.*
 (135) **Christian Bey**, University of Rostock, Germany (963-05-194)
- 4:00PM *Some New Results on Isoperimetric-Type Problems.*
 ▶ (136) Preliminary report.
Sergei L Bezrukov, University of Wisconsin - Superior (963-05-78)
- 4:30PM *Circular Permutations with Low Discrepancy Consecutive k-sums.*
 (137) **Richard P Anstee***, **Ron Ferguson**, U.B.C., Canada, and **Jerrold R Griggs**, University of South Carolina (963-05-164)
- 5:00PM *Meet and join within the lattice of set partitions.*
 ▶ (138) **Rod Canfield**, University of Georgia (963-05-131)
- 5:30PM Problem session

Special Session on Approximation and Wavelets, III

3:00 PM – 6:20 PM **Room 152, Gambrell Hall**

Organizers: **Konstantin Oskolkov**, University of South Carolina, Columbia
Pencho Petrushev, University of South Carolina, Columbia

Special Session on Banach Spaces, IV

3:00 PM – 6:50 PM **Room 005, Gambrell Hall**

Organizers: **George Androulakis**, University of South Carolina, Columbia
Stephen Dilworth, University of South Carolina, Columbia
Maria K. Girardi, University of South Carolina, Columbia

- 3:00PM *Probabilistic approach to sections of star bodies.*
 (146) Preliminary report.
Alexander Koldobsky*, University of Missouri-Columbia, and **Mikhail Lifshits**, St Petersburg State University, Russia (963-52-39)
- 3:30PM *Random vs. Pseudorandom Matrices, Banach Spaces.* Preliminary report.
 (147) **Stanislaw J Szarek**, Case Western Reserve University and University Paris VI (963-46-233)
- 4:00PM *Families of Random Projections of Symmetric Convex Bodies.*
 (148) **Piotr Mankiewicz**, Polish Academy of Science, and **Nicole Tomczak-Jaegermann***, University of Alberta (963-46-163)
- 4:30PM *On the dynamics of homeomorphisms of the unit ball of R^n .*
 (149) **Nilson C Bernardes**, Fluminense Federal University, and **Per Enflo***, Kent State University (963-46-170)
- 5:00PM *Almost isometries of balls.*
 (150) **Eva Matoušková**, Mathematical Institute, Prague, Czech Republic (963-46-117)
- 5:30PM *Asymptotic Structure in Banach Spaces.* Preliminary report.
 (151) **Robert Judd**, University of Missouri-Columbia (963-46-200)
- 6:00PM *Zeros of polynomials and matrices.* Preliminary report.
 (152) **Branko Curgus** and **Vania Mascioni***, Western Washington University (963-30-119)
- 6:30PM *Banach spaces with at least two non-isomorphic complex structures.* Preliminary report.
 (153) **Razvan L Anisca**, University of Alberta (963-46-97)

Special Session on Geometry of Curves and Surfaces, III

3:00 PM – 6:15 PM Room 302, Gambrell Hall

Organizers: **Mohammad Ghomi**, University of South Carolina, Columbia
Ralph E. Howard, University of South Carolina, Columbia

- 3:00PM *Nonpositively curved surfaces in Euclidean Space.* Preliminary report. (154)
Andrejs E Treibergs, University of Utah (963-53-30)
- 3:30PM *Isometric immersions of the Euclidean plane into Euclidean 4-space.* Preliminary report. (155)
Joel L Weiner, University of Hawaii at Manoa (963-53-128)
- 4:00PM *Smooth minimal surfaces in the Heisenberg group.* (156)
Scott D Pauls, Rice University (963-53-16)
- 4:30PM *On the finite time singularities of the heat flow for harmonic maps from surfaces.* Preliminary report. (157)
Jie Qing, UCSC (963-53-145)
- 5:00PM *Continua of singular minimal graphs.* Preliminary report. (158)
▶ **John McCuan**, Georgia Tech (963-53-150)
- 5:30PM *Area-minimizing Surfaces in Cones.* (159)
▶ **Frank Morgan**, Williams College (963-49-181)

Special Session on Semigroups and Evolution Equations, II

3:00 PM – 5:50 PM Room 006, Gambrell Hall

Organizer: **Anton R. Schep**, University of South Carolina, Columbia

- 3:00PM *The Sunduals of Strongly Continuous Operator Semigroups.* (160)
Willem A Luxemburg, California Institute of Technology (963-47-55)
- 3:30PM *Essential Spectral Mapping Theorems for α -times Integrated Semigroups.* (161)
Colin R Day, Aalen University (963-46-144)
- 4:00PM *Spectral mapping theorems in control theory and for nonlinear Schrödinger and Euler equations.* Preliminary report. (162)
▶ **Yuri Latushkin**, University of Missouri (963-47-100)
- 4:30PM *Spectral Mapping Theorem for a Linearization of the Two-dimensional Euler Equation.* Preliminary report. (163)
Milena O Stanislavova*, University of Massachusetts-Amherst, **Yuri Latushkin** and **Charles Li**, University of Missouri-Columbia (963-35-46)
- 5:00PM *Regularity for a perturbed Hamilton-Jacobi equation.* Preliminary report. (164)
Jerome A Goldstein, The University of Memphis, and **Yudi Soeharyadi***, Southern Illinois University (963-35-65)
- 5:30PM *Viscosity solutions and the Hamilton-Jacobi-Bellmann equation.* (165)
Jan A van Casteren, University of Antwerp (UIA) (963-47-130)

Special Session on Analytic Number Theory, IV

3:00 PM – 5:50 PM Room 151, Gambrell Hall

Organizers: **Michael A. Filaseta**, University of South Carolina, Columbia
Ognian Trifonov, University of South Carolina, Columbia

- 3:00PM *The hypergeometric method and the generalized Ramanujan-Nagell equation.* (166)
▶ **Mark Bauer** and **Michael A Bennett***, University of Illinois (963-11-183)
- 3:30PM *The Arithmetic of Partitions into Distinct Parts.* (167)
Jeremy Lovejoy*, University of Wisconsin, and **Scott Ahlgren**, Colgate University (963-11-169)
- 4:00PM *The p^i -regular partition function modulo p^j .* (168)
David K Penniston, Furman University (963-11-177)
- 4:30PM *A q -series identity and the arithmetic of Hurwitz zeta functions.* (169)
Gwynneth GH Coogan* and **Ken Ono**, University of Wisconsin, Madison (963-11-215)
- 5:00PM *A Distribution Problem for Powerfree Values of Irreducible Polynomials.* (170)
Brian D Beasley*, Presbyterian College, and **Michael Filaseta**, University of South Carolina (963-11-103)
- 5:30PM *The Irreducibility of a Certain Class of Laguerre Polynomials.* Preliminary report. (171)
▶ **Richard L Williams, Jr.***, Columbia, SC, and **Michael A Filaseta**, University of South Carolina (963-11-236)

Special Session on Algebras, Lattices, Varieties, IV

3:00 PM – 6:20 PM Room 247, Gambrell Hall

Organizers: **George F. McNulty**, University of South Carolina
Ralph S. Freese, University of Hawaii
James B. Nation, University of Hawaii

- 3:00PM *Rectangulation: a new centrality concept.* Preliminary report. (172)
Keith A Kearnes*, University of Colorado, and **Emil W Kiss**, Eotvos Lorand University (963-08-89)
- 4:00PM *Definable Principal Congruences and Solvability.* (173)
Matt A Valeriote, McMaster University (963-08-87)
- 4:30PM *Dualizing a non-dualizable algebra.* Preliminary report. (174)
Robert W Quackenbush, University of Manitoba (963-08-209)
- 5:00PM *Congruence-Orderable Quasivarieties.* Preliminary report. (175)
Don L Pigozzi, Iowa State University (963-08-204)
- 5:30PM *Implementing Equational and Quasiequational Logic on the Web.* Preliminary report. (176)
▶ **Peter Jipsen**, Vanderbilt University (963-08-178)
- 6:00PM *Tarski theorems for self-dual varieties.* (177)
R. Padmanabhan, University of Manitoba (963-06-143)

Session for Contributed Papers, II

3:00 PM – 3:40 PM Room 201, Gambrell Hall

- 3:00PM *On the Associativity of Tensor Products in non-Entropic Varieties.* (178)
Fred E.J. Linton, Wesleyan University (963-08-201)
- 3:15PM *Uniformly Starlike and Uniformly Convex Functions.* Preliminary report. (179)
Ioana C Magdas, "Babes-Bolyai" Univ, Cluj-Napoca, Romania (963-30-04)
- 3:30PM *Solution of differential equations by comparison method.* (180)
▶ **Ali A. Salim**, Amman, Jordan (963-34-52)

Sunday, March 18

Invited Address

8:30 AM – 9:20 AM Room 153, Gambrell Hall

- (181) *Analysis with Functional Integrals.*
David C. Brydges, University of Virginia (963-82-03)

Special Session on Discrete and Computational Geometry and Graph Drawing, V

9:30 AM – 11:20 AM Room 431, Gambrell Hall

Organizers: **Farhad Shahrokhi**, University of North Texas
Laszlo A. Szekely, University of South Carolina, Columbia

- 9:30AM *String representations of graphs.* Preliminary report.
 ▶ (182) **János Pach**, NYU and Hungarian Academy of Sciences, and **Géza Tóth***, MIT and Hungarian Academy of Sciences (963-52-37)
- 10:00AM *Gallai-Sylvester theorem for unit circles in the plane.*
 (183) **Rom Pinchasi**, Hebrew University of Jerusalem (963-52-83)
- 10:30AM *A sufficient condition for the existence of large empty convex polygons.*
 ▶ (184) **Pavel Valtr**, Charles University, Prague, Czech Republic (963-52-151)
- 11:00AM *Distances in finite point sets in the plane.*
 ▶ (185) Preliminary report.
Jozsef Solymosi, ETH Zurich (963-52-69)

Special Session on Combinatorics and Graph Theory, V

9:30 AM – 12:20 PM Room 402, Gambrell Hall

Organizer: **Jerrold R. Griggs**, University of South Carolina, Columbia

- 9:30AM *Protein structure matching — an extension of the largest clique size in Erdős-Rényi random graphs.* Preliminary report.
 (186) **Éva Czabarka***, **Stephen H Bryant**, **Tom Madej** and **John L Spouge**, National Institutes of Health, National Library of Medicine, National Center for Biotechnology Information (963-05-172)
- 10:00AM *How many disjoint 2-edge paths must a cubic graph have?*
 (187) **Dhruv Mubayi***, Georgia Tech, and **Alexander Kelmans**, University of Puerto Rico and Rutgers University (963-05-152)
- 10:30AM *Direregularity of digraphs close to Moore bound.* Preliminary report.
 (188) **Mirka Miller**, University of Newcastle (963-05-245)
- 11:00AM *Ramsey Properties For Sequences With Special Caps.* Preliminary report.
 ▶ (189) **Bruce M Landman***, University of North Carolina - Greensboro, and **Aaron J Robertson**, Colgate University (963-05-122)
- 11:30AM *Long cycles through specified edges in k -connected graphs.* Preliminary report.
 (190) **Tristan M Denley*** and **Haidong Wu**, University of Mississippi (963-05-195)
- NOON *Edge list multicoloring trees: An extension of Hall's theorem.* Preliminary report.
 (191) **Matthew Cropper**, Eastern Kentucky University, **Andras Gyarfás**, Hungarian Academy of Sciences, and **Jeno Lehel***, University of Louisville (963-05-247)

Special Session on Banach Spaces, V

9:30 AM – 12:20 PM

Room 005, Gambrell Hall

Organizers: **George Androulakis**, University of South Carolina, Columbia
Stephen Dilworth, University of South Carolina, Columbia
Maria K. Girardi, University of South Carolina, Columbia

- 9:30AM *Gabor systems and function-valued inner products.* Preliminary report.
 (192) **Peter G Casazza**, University of Missouri, and **Mark C Lammers***, University of South Carolina (963-46-121)
- 10:00AM *Two characterizations of the standard unit vector basis of l_1 .*
 (193) **David S Mitra**, Mercer University (963-46-77)
- 10:30AM *Linear Discrete Operators on the Disk Algebra.*
 ▶ (194) **Ivan V Ivanov***, Texas A&M University, and **Boris Shekhtman**, University of South Florida (963-46-206)
- 11:00AM *Operators of Rademacher and Gaussian subcotype.*
 (195) **Aicke Hinrichs**, Texas A&M University College Station and Friedrich-Schiller University Jena (963-46-116)
- 11:30AM *On d.c. functions and mappings.*
 (196) **Jakub Duda**, University of Missouri, Columbia (963-47-81)
- NOON *On the optimality of a theorem of Elton on ℓ_1^n subsystems.*
 (197) **S. J. Dilworth**, University of South Carolina, and **Denka N. Kutzarova***, Bulgarian Academy of Sciences, currently U.S.C. (963-46-61)

Special Session on Geometry of Curves and Surfaces, IV

9:30 AM – 11:50 AM

Room 302, Gambrell Hall

Organizers: **Mohammad Ghomi**, University of South Carolina, Columbia
Ralph E. Howard, University of South Carolina, Columbia

- 9:30AM *Unfoldings of Space Curves.*
 (198) **Mohammad Ghomi** and **Ralph Howard***, University of South Carolina (963-53-133)
- 10:00AM *Minimal Varieties and p -harmonic maps.* Preliminary report.
 (199) **Shihshu Walter Wei**, Department of Mathematics, University of Oklahoma (963-53-193)
- 10:30AM *An Analysis of Completely-Positive Trace-Preserving Maps on \mathcal{M}_2 .*
 (200) **Mary Beth Ruskai**, University of Massachusetts Lowell, **Stanislaw Szarek** and **Elisabeth M Werner***, Case Western Reserve University (963-81-132)
- 11:00AM *Spines and Topology of Thin Riemannian 3-Manifolds.* Preliminary report.
 (201) **Stephanie B Alexander** and **Richard L Bishop***, University of Illinois at Urbana-Champaign (963-53-222)
- 11:30AM *Diffeomorphisms of the Circle and Hyperbolic Curvature.*
 (202) **David A Singer**, Case Western Reserve University (963-53-50)

Special Session on Semigroups and Evolution Equations, III

11:30AM *Congruence Lattice Problems and Related Topics.*
(216) **William A Lampe**, University of Hawaii (963-08-62)

9:30 AM – 11:20 AM **Room 006, Gambrell Hall**

John L. Bryant
Associate Secretary
Tallahassee, Florida

Organizer: **Anton R. Schep**, University of South Carolina, Columbia

- 9:30AM *Nonlinear Semigroups and dispersive equations of KdV type.*
(203) **Radu C Cascaval**, University of Missouri-Columbia (963-35-146)
- 10:00AM *A Complete Generator Theory for Jointly Continuous Semigroups of Nonlinear Transformations.*
(204) **John W Neuberger**, University of North Texas (963-46-101)
- 10:30AM *On the Regularization and Stabilization of Approximation Schemes for Semigroups.*
(205) Preliminary report.
Frank M Neubrander, Louisiana State University (963-47-109)
- 11:00AM *Approximation of ill-posed evolution problems.*
(206) **Serguei Piskarev**, Moscow State University, Science Research Computer Centre (963-47-110)

Special Session on Analytic Number Theory, V

9:30 AM – 11:50 AM **Room 151, Gambrell Hall**

Organizers: **Michael A. Filaseta**, University of South Carolina, Columbia
Ognian Trifonov, University of South Carolina, Columbia

- 9:30AM *Prime values of polynomials and small class numbers.*
(207) **Andrew Granville***, U of Georgia, and **Richard A Mollin**, U of Calgary (963-11-135)
- 10:00AM *Computations on Catalan's Conjecture.* Preliminary report.
▶ (208) **Jon Grantham*** and **Ferrell Wheeler**, IDA/CCS (963-11-43)
- 10:30AM *Hall's Ray and the Markoff Spectrum.*
(209) **Stephen J Astels**, University of Georgia (963-11-171)
- 11:00AM *Congruences for Degenerate Number Sequences.*
(210) **Paul T Young**, University of Charleston (963-11-115)
- 11:30AM *Explicit Estimate on the Riemann zeta function.*
(211) **Yuanyou F Cheng***, UNC at Chapel Hill, and **Sidney W Graham**, Central Michigan University (963-11-22)

Special Session on Algebras, Lattices, Varieties, V

9:30 AM – 11:20 AM **Room 247, Gambrell Hall**

Organizers: **George F. McNulty**, University of South Carolina
Ralph S. Freese, University of Hawaii
James B. Nation, University of Hawaii

- 9:30AM *Epimorphisms and dominions in varieties of lattices.*
(212) **David R Wasserman**, University of California, Berkeley (963-06-15)
- 10:00AM *The Variety Generated By Tournaments.* Preliminary report.
(213) **Petar Markovic**, Vanderbilt University (963-08-239)
- 10:30AM *Extending partial projective planes.*
▶ (214) **James B. Nation**, University of Hawaii (963-51-17)
- 11:00AM *Lattice tensor products.*
(215) **George A Gratzler***, University of Manitoba, and **Matthew Greenberg**, McGill University (963-06-155)