THEMATICAL TIMETABLE

AUGUST 27, 1984

MONDAY, AUGUST 27

TUESDAY, AUGUST 28

Commutative Algebra 247 AH 3:00 pm
Organizational meeting.

Geometric Potpourri 241 AH 2:00 pm
Organizational meeting.

Pascal Seminar 102 AH 4:00 pm
Organizational meeting. If you are interested but cannot attend this meeting, please contact Cameron Smith (101 AH, 3-1076).

WEDNESDAY, AUGUST 29

PH.D. Final Exam 449 AH 3:00 pm
Mr. Jamil Hashimi; Title: Maximal Operators on $H^P$ Classes.
Chairman: Professor Earl Berkson. Professor Robert Kaufman, Director of Thesis Research.

THURSDAY, AUGUST 30

Mathematics Colloquium 314 AH 4:00 pm
Professor Angus Macintyre, Yale University and the University of Illinois, An application of logic to the rationality of Poincaré series. Note: Professor Macintyre is the senior visitor here in connection with the Special Year in Logic.

ABSTRACT: A classical result of Tarski for the field of real numbers (quantifier elimination) leads to a decision procedure for large parts of elementary mathematics and many other applications. This talk will deal with quantifier elimination for the $p$-adic numbers (in analogy with Tarski's result). This elimination has recently been used by Denef to settle affirmatively problems of Serre and others on rationality of various Poincaré series over $O_p$. In addition, new proofs were given of older results of this type, which hitherto needed resolution of singularities. The talk will be accessible to anyone acquainted with the $p$-adic numbers.

Commutative Algebra 247 AH 3:00 pm
Professor Robert Fossum, Group Actions on Rings.
MONDAY, SEPTEMBER 3

All campus holiday – offices closed

There will be a seminar on Combinatorics/Discrete Mathematics Mondays at 4:00 pm beginning Monday September 10. Interested parties please contact Doug West.

TUESDAY, SEPTEMBER 4

APPLE Lab 102 AH 4:00 pm
Staff: Introduction of lab staff and organization meeting. If you want to learn, use, or criticize our APPLES, please come to this meeting.

Commutative Algebra 247 AH 3:00 pm
Professor Dan Grayson, Cyclic homology of A. Connes.

Geometric Potpourri 241 AH 2:00 pm
Professor George Francis, Perspective geometry.

Logic 245 AH 2:00 pm
Professor Julia Knight, Notre Dame & University of Illinois; Effective construction of models. (NOTE: If you wish to attend the Logic Lunch, meet in the mail room at 11:20 on Tuesdays.)

Math/CS Seminar 239 DCL 3:00 pm
Professor S. Kamin, Lazy evaluation in Sweden.

Number Theory 247 AH 1:00 pm
Professor Adolf Hildebrand, Integers without large prime factors.

PASCAL 102 AH 11:00 am
Mr. Cameron Smith, See bulletin board for announcement.

Ph.D. Final Examination 449 AH 3:30 pm
Mr. Peter Lindsay; Professor David Muller, Director of Thesis Research.

Probability & Statistics 241 AH 11:00 am
Professor Stephen Portnoy, Asymptotics when the number of parameters is large.
WEDNESDAY, SEPTEMBER 5

THURSDAY, SEPTEMBER 6

**Algebra** 243 AH 2:00 pm
Professor Carlos Moreno, Goppa codes and modular curves (the state of the art in algebraic coding theory).

**Classical Analysis** 245 AH 2:00 pm
Professor Lee Rubel, The "between" property of derivatives applied to algebraic differential equations.

**Commutative Algebra** 247 AH 3:00 pm
Professor Robert Fossum, Group actions on rings.

**Functional Analysis** 241 AH 2:00 pm
Organizational meeting.

**Number Theory** 247 AH 1:00 pm
Professor Paul Bateman, Fermat's assertion about expressing positive integers as sums of polygonal numbers.

**PASCAL Seminar** 102 AH 11:00 am
Mr. Cameron Smith, See bulletin board for announcement.

FRIDAY, SEPTEMBER 7
MATHEMATICAL TIMETABLE

September 10-14, 1984

MONDAY, SEPTEMBER 10

TUESDAY, SEPTEMBER 11

APPLE Lab 102 AH 4:00 pm
George Francis, Keeping your grades, exams and other stuff on an APPLE disk.

Combinatorics/Discrete Mathematics 241 AH 4:00 pm
Professor Nachum Dershowitz, CS Dept.; Patterns in trees.

Commutative Algebra 247 AH 3:00 pm
Professor Dan Grayson, Cyclic homology of A. Connes, II

Differential Geometry 241 AH 3:00 pm
Professor Sam Goldberg, Non-negatively curved contact manifold and the Poincare conjecture, I

Geometric Potpourri 241 AH 2:00 pm
Professor George Francis, Perspective geometry, II

Logic 245 AH 2:00 pm
Professor Julia Knight, Notre Dame & University of Illinois; Effective construction of models, II

Math/CS Seminar 239 DCL 2:00 pm
Professor S. Kamin, Lazy evaluation in Sweden, II (NOTE TIME CHANGE)

Max New Topology 243 AH 11:00 am
Organizational meeting.

Number Theory 247 AH 1:00 pm
Professor Harold Diamond, Daboussi's new elementary proof of the prime number theorem, I (Repeat of last year's lecture)

PASCAL I 102 AH 11:00 am
Mr. Cameron Smith, See bulletin board for announcement.

Probability & Statistics 241 AH 11:00 am
Professor Frank Knight, Strict sense Cramer-Hida representation.

Representation Theory 243 AH 2:00 pm
Professor A. Jones, University of Sao Paulo; The Green ring of a finite group.
Mathematics Timetable

WEDNESDAY, SEPTEMBER 12

Combinatorial Algorithms 237 DCL 4:00 pm
Professor Michael Loui, EE & CSL; On time versus space, III

PASCAL II 102 AH 12:00 noon
Ms. Laura Bordeaux, See bulletin board for details

THURSDAY, SEPTEMBER 13

Mathematics Colloquium 314 AH 4:00 pm
Professor Peter Li, Purdue University; Schrödinger operator on a Riemannian manifold
Coffee & Tea 321 AH 3:15 pm

Algebra 243 AH 2:00 pm
Professor Carlos Moreno, Goppa codes and modular curves (the state of the art in algebraic coding theory), II

Classical Analysis 245 AH 1:00 pm
Professor Joseph Miles, A characterization of the exponential function. (NOTE TIME CHANGE)

Commutative Algebra 247 AH 3:00 pm
Professor Robert Fossum, Group actions on rings.

Functional Analysis 241 AH 2:00 pm
Professor H. Lotz, The Hardy-Littlewood theorem and strongly ergodic positive operators.

Number Theory 247 AH 1:00 pm
Professor Harold Diamond, Daboussi's new elementary proof of the prime number theorem, II (Repeat of last year's lecture)

PASCAL I 102 AH 11:00 am
Mr. Cameron Smith, See bulletin board for announcement.

FRIDAY, SEPTEMBER 14

PASCAL II 102 AH 12:00 noon
Ms. Laura Bordeaux, See bulletin board for details.
<table>
<thead>
<tr>
<th>Time</th>
<th>Course</th>
<th>Room</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00</td>
<td>Gillies Memorial Lecture</td>
<td>141 Loomis</td>
<td>Urbana-Champaign</td>
</tr>
<tr>
<td>4:00</td>
<td>Combinatorics/Discrete Mathematics</td>
<td>241 AH</td>
<td>Urbana-Champaign</td>
</tr>
<tr>
<td>3:00</td>
<td>Comutative Algebra</td>
<td>247 AH</td>
<td>Urbana-Champaign</td>
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<tr>
<td>3:00</td>
<td>Differential Geometry</td>
<td>241 AH</td>
<td>Urbana-Champaign</td>
</tr>
<tr>
<td>2:00</td>
<td>Geometric Potpourri</td>
<td>241 AH</td>
<td>Urbana-Champaign</td>
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<tr>
<td>2:00</td>
<td>Logic</td>
<td>245 AH</td>
<td>Urbana-Champaign</td>
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<tr>
<td>2:00</td>
<td>Math/CS Seminar</td>
<td>239 DCL</td>
<td>Urbana-Champaign</td>
</tr>
<tr>
<td>11:00</td>
<td>Max New Topology</td>
<td>243 AH</td>
<td>Urbana-Champaign</td>
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<tr>
<td>1:00</td>
<td>Number Theory</td>
<td>247 AH</td>
<td>Urbana-Champaign</td>
</tr>
<tr>
<td>11:00</td>
<td>PASCAL I</td>
<td>102 AH</td>
<td>Urbana-Champaign</td>
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<tr>
<td>11:00</td>
<td>Probability &amp; Statistics</td>
<td>241 AH</td>
<td>Urbana-Champaign</td>
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<tr>
<td>2:00</td>
<td>Representation Theory</td>
<td>243 AH</td>
<td>Urbana-Champaign</td>
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</tbody>
</table>
Mathematics Timetable

WEDNESDAY, SEPTEMBER 19

Combinatorial Algorithms
To be announced.

PASCAL II
Ms. Laura Bordeaux, See bulletin board for details

THURSDAY, SEPTEMBER 20

Mathematics Colloquium
Professor Donald Lutz, UWMilwaukee; Identification and stability of some formal invariants for singular differential equations.

Professor Carlos Moreno, Goppa codes and modular curves (the state of the art in algebraic coding theory), III

Mr. Aristomenis Siskakis, Cesaro operators in $H^p$ spaces.

Professor Robert Fossum, Group actions on rings, II

Dr. Werner Ricker, Fulbright Fellow visiting from Flinders; Uniform operator $\sigma$-additivity of indefinite integrals induced by scalar-type spectral operators.

Professor Bruce Berndt, Elliptic functions according to Ramanujan, I (No previous knowledge of elliptic functions required.)

Mr. Cameron Smith, See bulletin board for announcement.

FRIDAY, SEPTEMBER 21

Integration
Informal discussion = Free for all. I. Kluvanek & J. Uhl, moderators.

Ms. Laura Bordeaux, See bulletin board for details.
## TUESDAY, SEPTEMBER 25

**Mathematics Colloquium**

314 AH  
4:00 pm

Professor Joel Shapiro, Michigan State University; The role of $H^p$ spaces in non-locally-convex functional analysis.

Coffee & Tea  
321 AH  
3:15 pm

**Abstract:** This talk will focus on the role played by the Hardy spaces $H^p$ (0 < p < 1) of analytic functions in the study of non-locally convex $F$-spaces, with particular emphasis on the contributions of Duren, Romberg, and Shields; Kalton, Roberts, and Korenblum, and Aleksandrov.

**Classical Analysis**

245 AH  
1:00 pm

Professor Joel Shapiro, Michigan State University; Compact composition operators on spaces of functions holomorphic in a disc.

**Combinatorics/Discrete Mathematics**

241 AH  
4:00 pm

Mr. Thomas Kratzke, The independence ratio of a planar graph.

**Commutative Algebra**

247 AH  
3:00 pm

Professor Dan Grayson, Cyclic homology & Lie algebra homology, II

**Differential Geometry**

241 AH  
3:00 pm

Professor Sam Goldberg, Non-negatively curved contact manifold and the Poincare conjecture, III

**Geometric Potpourri**

241 AH  
2:00 pm

Professor Bruce Reznick, Better inequalities through balance: shifting the arithmetic-geometric inequality into fourth.

**Logic**

245 AH  
2:00 pm

Professor Lee Rubel, Analog computability and analysis, II

**Math/CS Seminar**

239 DCL  
2:00 pm

Mr. Dave Carr, The theory and practice of transforming call-by-need into call-by-value.

**Max Newton Topology**

243 AH  
11:00 am

Professor R. Craggs, On inverses of group presentations, II

**Number Theory**

247 AH  
1:00 pm

Professor Kenneth Stolarsky, Diophantine approximation and random walks.

**PASCAL I**

102 AH  
11:00 am

Mr. Cameron Smith, See bulletin board for announcement.

**Probability & Statistics**

241 AH  
11:00 am

See Friday listing.

**Representation Theory**

243 AH  
2:00 pm

Professor A. Jones, University of Sao Paulo; The Green ring of a finite
<table>
<thead>
<tr>
<th>Date</th>
<th>Course</th>
<th>Location</th>
<th>Time</th>
<th>Speaker/Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WEDNESDAY, SEPTEMBER 26</strong></td>
<td><strong>Combinatorial Algorithms</strong></td>
<td>237 DCL</td>
<td>4:00 pm</td>
<td>Mr. Pravid Vaidya, A fast approximation algorithm for minimum spanning trees in k-dimensional space.</td>
</tr>
<tr>
<td></td>
<td><strong>PASCAL II</strong></td>
<td>102 AH</td>
<td>12:00 noon</td>
<td>Ms. Laura Bordeaux, See bulletin board for details</td>
</tr>
<tr>
<td><strong>THURSDAY, SEPTEMBER 27</strong></td>
<td><strong>Algebra</strong></td>
<td>243 AH</td>
<td>2:00 pm</td>
<td>Professor Leon McCulloh, Stickelberger indices – the beef's on the minus side.</td>
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<td></td>
<td><strong>Classical Analysis</strong></td>
<td>245 AH</td>
<td>1:00 pm</td>
<td>See Tuesday listing.</td>
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<tr>
<td></td>
<td><strong>Commutative Algebra</strong></td>
<td>247 AH</td>
<td>3:00 pm</td>
<td>Professor Amassa Fauntleroy, Rational equivalence of Tango bundles, I</td>
</tr>
<tr>
<td></td>
<td><strong>Functional Analysis</strong></td>
<td>241 AH</td>
<td>2:00 pm</td>
<td>See Tuesday's classical analysis listings.</td>
</tr>
<tr>
<td></td>
<td><strong>Number Theory</strong></td>
<td>247 AH</td>
<td>1:00 pm</td>
<td>Professor Bruce Berndt, Elliptic functions according to Ramanujan, II (No previous knowledge of elliptic functions required.)</td>
</tr>
<tr>
<td></td>
<td><strong>PASCAL I</strong></td>
<td>102 AH</td>
<td>11:00 am</td>
<td>Mr. Cameron Smith, See bulletin board for announcement.</td>
</tr>
<tr>
<td><strong>FRIDAY, SEPTEMBER 28</strong></td>
<td><strong>Integration</strong></td>
<td>347 AH</td>
<td>3:15 pm</td>
<td>Informal discussion - Free for all. I. Kluvanek &amp; J. Uhl, moderators, II</td>
</tr>
<tr>
<td></td>
<td><strong>PASCAL II</strong></td>
<td>102 AH</td>
<td>12:00 noon</td>
<td>Ms. Laura Bordeaux, See bulletin board for details.</td>
</tr>
<tr>
<td></td>
<td><strong>Probability &amp; Statistics</strong></td>
<td>140 COM WEST</td>
<td>3:00 pm</td>
<td>Professor Mary-Ellen Bock, Purdue University; Distributions of quadratic forms-some results and applications. (Joint with Economics)</td>
</tr>
</tbody>
</table>
MATHEMATICAL TIMETABLE

MONDAY, OCTOBER 1

TUESDAY, OCTOBER 2

APPLE Lab
No meeting this week.

Combinatorics/Discrete Mathematics
102 AH
4:00 pm

Mr. Thomas Kratzke, Szemeredi regularity lemma and Ramsey graph theory.

Commutative Algebra
247 AH
3:00 pm

No meeting today.

Differential Geometry
241 AH
3:00 pm

Professor Patricio Aviles, Conformal deformations of complete manifolds.

Geometric Potpourri
241 AH
2:00 pm

Professor Bruce Reznick, Better inequalities through balance: shifting the arithmetic-geometric inequality into fourth, II (A remake, not a sequel - what I should have said last week.

Logic
245 AH
2:00 pm

Dr. Masahiro Yasumto, G.A. Miller Visiting Scholar, Nonstandard arithmetic and class numbers. (Also see Thursday listing)

Math/CS Seminar
239 DCL
2:00 pm

Professor John Gray, Diagramatic representations of computer programs, or, is this FP with types?

Max Newman Topology
243 AH
11:00 am

Professor R. Craggs, On inverses of group presentations, III

Number Theory
247 AH
1:00 pm

Professor P. T. Bateman, The Cauchy-Legendre theorem that every sufficiently large positive integer is a sum of at most four pentagonal numbers, five hexagonal numbers, four heptagonal numbers, five octagonal numbers, etc.

PASCAL I
102 AH
11:00 am

Mr. Cameron Smith, See bulletin board for announcement.

Probability & Statistics
241 AH
11:00 am

Professor Erich Lehmann, UC-Berkeley; Comparing Experiments. (Everyone is invited to join Professor Lehmann for pizza lunch after the seminar.)

Representation Theory
243 AH
2:00 pm

Professor A. Jones, University of Sao Paulo; The Green ring of a finite group, IV
Mathematics Timetable

WEDNESDAY, OCTOBER 3

Combinatorial Algorithms
To be announced.

PASCAL II
Ms. Laura Bordeaux, See bulletin board for details

THURSDAY, OCTOBER 4

Mathematics Colloquium
Professor Robert McEliece, CalTech; Even more about the birthday surprise.

Algebra
Professor Leon McCulloh, Stickelberger indices - the beef's on the minus side, II

Classical Analysis
Professor Robert Kaufman, Lengths and the Hardy-Littlewood property.

Commutative Algebra
Professor Amassa Fauntleroy, Rational equivalence of Tango bundles, I

Functional Analysis
Professor J. J. Uhl, Pettis integration.

Logic
Mr. John Derrick, University of Leeds; Some half baked (or perhaps totally raw) ideas about cut elimination in set theory.

Number Theory
Professor Bruce Berndt, Elliptic functions according to Ramanujan, III (No previous knowledge of elliptic functions required.)

PASCAL I
Mr. Cameron Smith, See bulletin board for announcement.

FRIDAY, OCTOBER 5

Integration
Informal discussion = Free for all. I. Kluvanek & J. Uhl, moderators, III

PASCAL II
Ms. Laura Bordeaux, See bulletin board for details.
MATHMATICAL TIMETABLE

MONDAY, OCTOBER 8

TUESDAY, OCTOBER 9

**Department Meeting**
314 AH
Professor H. Halberstam, presiding.
Coffee & Tea
321 AH

(note: Melody Armstrong will be present for the coffee hour today. She will be presented with her gift.)

**APPLE Lab**
102 AH

No meeting this week.

**Combinatorics/Discrete Mathematics**
241 AH

No meeting this week.

**Commutative Algebra**
247 AH

To be announced.

**Differential Geometry**
241 AH

Professor Patricio Aviles, Conformal deformations of complete manifolds, II

**Geometric Potpourri**
241 AH

Professor Bruce Reznick, Better inequalities through balance: shifting the arithmetic-geometric inequality into fourth, III

**Logic**
245 AH

Dr. Masahiro Yasumto, G.A. Miller Visiting Scholar, Nonstandard arithmetic and class numbers, II (Also see Thursday listing)

**Math/CS Seminar**
239 DCL

Professor John Gray, Diagramatic representations of computer programs, or, is this FP with types?, II

**Max Newman Topology**
243 AH

Professor R. Craggs, On inverses of group presentations, IV

**Number Theory**
247 AH

Professor Heini Halberstam, On the zeroes of the solution of a differential difference equation (Classical analysts welcome.)

**PASCAL I**
102 AH

Mr. Cameron Smith, See bulletin board for announcement.

**Probability & Statistics**
241 AH

Professor Robert Wijisman, Sequential confidence intervals in one-parameter families.

**Representation Theory**
243 AH

Dr. Alberto-Ramírez-Cárdenas, The Green ring of a finite group, V
WEDNESDAY, OCTOBER 10

Remembrances
Auditorium, Music Building
A program of music and remembrances in memory of William Boone.

Combinatorial Algorithms
237 DCL
To be announced.

PASCAL II
102 AH
Ms. Laura Bordeaux, See bulletin board for details

THURSDAY, OCTOBER 11

Mathematics Colloquium
314 AH
Professor Graham Higman, Oxford University & UIUC; An intersection of tangent hyperplanes.

Coffee & Tea
321 AH
3:15 pm

NOTE: This is a special colloquium in memory of William Boone.

Algebra
243 AH
2:00 pm
Professor Irving Reiner, New asymptotic formulas for the distribution of left ideals of orders, I

Classical Analysis
245 AH
1:00 pm
Professor J.-M. Wu, Length of paths for subharmonic functions.

Commutative Algebra
247 AH
3:00 pm
Professor Amassa Fauntleroy, Rational equivalence of Tango bundles, II

Functional Analysis
241 AH
2:00 pm
Professor J. J. Uhl, Pettis integration, II

Logic
245 AH
2:00 pm
Mr. John Derrick, University of Leeds; Some half baked (or perhaps totally raw) ideas about cut elimination in set theory.

Number Theory
247 AH
1:00 pm
Professor Bruce Berndt, Elliptic functions according to Ramanujan, IV (No previous knowledge of elliptic functions required.)

PASCAL I
102 AH
11:00 am
Mr. Cameron Smith, See bulletin board for announcement.

FRIDAY, OCTOBER 12

Integration
347 AH
3:15 pm
Informal discussion = Free for all. I. Kluvanek & J. Uhl, moderators, IV

PASCAL II
102 AH
12:00 noon
Ms. Laura Bordeaux, See bulletin board for details.
### MATHEMATICAL TIMETABLE

**October 15–19, 1984**

#### MONDAY, OCTOBER 15

- **Trijitzinsky Lecture**
  - 314 AH
  - 4:00 pm
  - Professor Idun Reiten, University of Trondheim and Brandeis University;
    Manifestations of Dynkin diagrams
  - Coffee & Tea

#### TUESDAY, OCTOBER 16

- **Combinatorics/Discrete Mathematics**
  - 245 AH
  - 3:00 pm
  - Professor Paul Weichsel, Polynomials of graphs. (Note time and room change.)

- **Commutative Algebra**
  - 247 AH
  - 3:00 pm
  - No meeting today.

- **Differential Geometry**
  - 241 AH
  - 3:00 pm
  - Professor Stephanie Alexander, The Riemannian obstacle problem.

- **Geometric Potpourri**
  - 241 AH
  - 2:00 pm
  - Professor Doug West, Decomposition of product graphs into complete bipartite subgraphs.

- **Group Theory**
  - 341 AH
  - 3:00 pm
  - Professor Derek Robinson, Rewriting products of group elements.

- **Logic**
  - 245 AH
  - 2:00 pm
  - Dr. Masahiro Yasumoto, G.A. Miller Visiting Scholar, Nonstandard arithmetic of polynomial rings.

- **Math/CS Seminar**
  - 239 DCL
  - 2:00 pm
  - Professor John Gray, Diagramatic representations of computer programs, or, is this FP with types?, III

- **Max Newman Topology**
  - 243 AH
  - 11:00 am
  - Professor Mary-Elizabeth Hamstrom, Strong digraphs and the Zeeman conjecture (Donald and Gillman).

- **Number Theory**
  - 247 AH
  - 1:00 pm
  - Professor Harold Diamond, Estimates of the Selberg-Ankeny-Onishi function $\sigma$.

- **PASCAL I**
  - 102 AH
  - 11:00 am
  - Mr. Cameron Smith, See bulletin board for announcement.

- **Probability & Statistics**
  - 241 AH
  - 11:00 am
  - See Thursday listing.

- **Representation Theory**
  - 243 AH
  - 2:00 pm
  - Dr. Alberto-Raggi-Cardenas, The Green ring of a finite group, VI
Mathematics Timetable

WEDNESDAY, OCTOBER 17

Triitzinsky Lecture 314 AH 5:00 pm
Professor Idun Reiten, University of Trondheim and Brandeis University;
Manifestations of Dynkin diagrams.
Coffee & Tea 321 AH 4:15 pm

Combinatorial Algorithms 237 DCL 4:00 pm
Mr. Prasoon Tiwari, Lower bounds on communication complexity.

PASCAL II 102 AH 12:00 noon
Ms. Laura Bordeaux, See bulletin board for details

THURSDAY, OCTOBER 18

Triitzinsky Lecture 314 AH 4:00 pm
Professor Idun Reiten, University of Trondheim and Brandeis University;
Manifestations of Dynkin diagrams.
Coffee & Tea 321 AH 3:15 pm

Algebra 243 AH 2:00 pm
Professor Irving Reiner, Functional equations for Hurwitz series and partial
zeta functions of orders, I

Classical Analysis 245 AH 1:00 pm
No meeting this week.

Commutative Algebra 247 AH 3:00 pm
Professor Robert Hart, Leeds University; Title to be announced.

Functional Analysis 241 AH 2:00 pm
Professor Igor Kluvanek, Churila spaces and integration.

Number Theory 247 AH 1:00 pm
Professor Bruce Berndt, Elliptic functions according to Ramanujan, V

PASCAL I 102 AH 11:00 am
Mr. Cameron Smith, See bulletin board for announcement.

Probability & Statistics 238 ADMIN 11:00 am
Professor Donald Geman, University of Massachusetts-Amherst; Stochastic
relaxation method for image processing.

FRIDAY, OCTOBER 19

Integration 347 AH 3:15 pm
Informal discussion = Free for all. I. Kluvanek & J. Uhl, moderators, V

PASCAL II 102 AH 12:00 noon
Ms. Laura Bordeaux, See bulletin board for details.
MATHEMATICAL TIMETABLE

MONDAY, OCTOBER 22

TUESDAY, OCTOBER 23

APPLE Lab 102 AH 4:00 pm
Professor George Francis, FLATLAND 1884-HYPERGRAPHICS 1984: Report on computer graphics meeting at Brown University.

Combinatorics/Discrete Mathematics 245 AH 3:00 pm
Professor Paul Weichsel, Polynomials of graphs. (Note time and room change.)

Commutative Algebra 247 AH 3:00 pm
Professor Robert Fossum, K-theory of quadratic forms.

Differential Geometry 241 AH 3:00 pm
Professor Stephanie Alexander, The Riemannian obstacle problem, II

Geometric Potpourri 241 AH 2:00 pm
Professor Doug West, Decomposition of product graphs into complete bipartite subgraphs, II

Group Theory 341 AH 3:00 pm
Professor Derek Robinson, Rewriting products of group elements, II

Logic 245 AH 2:00 pm
Professor Lee Rubel, Classical analysis in an analog frame of mind, I: a bunch of problems.

Math/CS Seminar 239 DCL 2:00 pm
Professor Sam Kamin, Higher order PP

Max Newman Topology 243 AH 11:00 am
Professor Mary-Elizabeth Bamstrom, Strong digraphs and the Zeeman conjecture (Donald and Gillman), II

Number Theory 247 AH 1:00 pm
Mr. Shek-Tung Wong, Diophantine equations and diophantine approximation: The Thue equation.

PASCAL I 102 AH 11:00 am
Mr. Cameron Smith, See bulletin board for announcement.

Probability & Statistics 241 AH 11:00 am
See Thursday listing.

Representation Theory 243 AH 2:00 pm
Dr. Alberto-Raggi-Cardenas, The Green ring of a finite group, VII
Mathematics Timetable -2- 10/22–26/84

**WEDNESDAY, OCTOBER 24**

**Combinatorial Algorithms**
237 DCL 4:00 pm
No meeting this week.

**PASCAL II**
102 AH 12:00 noon
Ms. Laura Bordeaux, See bulletin board for details

**THURSDAY, OCTOBER 25**

**Mathematics Colloquium**
314 AH 4:00 pm
Professor Jeffrey Vaaler, University of Texas; Finding small solutions to systems of linear equations. (See Abstract on mailroom bulletin board.)

**Coffee & Tea**
321 AH 3:15 pm

**Algebra**
243 AH 2:00 pm
Professor Irving Reiner, Functional equations for Hurwitz series and partial zeta functions of orders, II

**Classical Analysis**
245 AH 1:00 pm
Professor Patricio Aviles, Symmetry theorems related to Pompeiu's problem.

**Commutative Algebra**
247 AH 3:00 pm
To be announced.

**Functional Analysis**
241 AH 2:00 pm
Professor Igor Kluvanek, Churila spaces and integration, II

**Logic**
245 AH 2:00 pm
Professor Lee Rubel, Classical analysis in an analog frame of mind, II: One problem solved (in the calculus of variations).

**Number Theory**
247 AH 1:00 pm
Professor Jeffrey Vaaler, University of Texas; Maximal variations of the large sieve and related inequalities.

**PASCAL I**
102 AH 11:00 am
Mr. Cameron Smith, See bulletin board for announcement.

**Probability & Statistics**  Purdue University 4:30 pm
Professor Dennis Jennings, Goodness-of-fit tests and outliers in logistic regression (Joint with Purdue-Sign up on the mailroom blackboard for transportation to Purdue.)

**FRIDAY, OCTOBER 26**

**Integration**
347 AH 3:15 pm
Informal discussion = Free for all. I. Kluvanek & J. Uhl, moderators, VI

**PASCAL II**
102 AH 12:00 noon
Ms. Laura Bordeaux, See bulletin board for details.
MATHEMATICAL TIMETABLE

October 29-November 2, 1984

MONDAY, OCTOBER 29

Statistics
Professors William Stout, Mathematics Department and Kenneth Traverse, Department of Secondary Education, Statistics: Teaching it at the High School Level. Part I of four parts. This seminar is intended for high school mathematics teachers. Any other interested people are of course welcome.

TUESDAY, OCTOBER 30

APPLE Lab
102 AH 4:00 pm
See Pi Mu Epsilon Seminar.

Combinatorics/Discrete Mathematics
245 AH 3:00 pm
Dr. Thomas Zaslavsky, Perpendicular Divisions of Space.

Commutative Algebra
247 AH 3:00 pm
No meeting.

Differential Geometry
241 AH 3:00 pm
No meeting.

Geometric Potpourri
241 AH 2:00 pm
No meeting.

Group Theory
341 AH 3:00 pm
Professor Graham Higman, Rewriting products of group elements, III.

Logic
245 AH 2:00 pm
Professor Angus Macintyre, Primes in models of open induction, I.

Math/CS Seminar
239 DCL 2:00 pm
Professor Sam Kamin, Higher order FP, II.

Max Newman Topology
243 AH 11:00 am
Professor Mary-Elizabeth Hamstrom, Strong digraphs and the Zeeman conjecture (Donald and Gillman), III.

Number Theory
247 AH 1:00 pm
Professor Kenneth Rogers, An unresolved question related to the Minkowski-Hajos Theorem.

PASCAL I
102 AH 11:00 am
Mr. Cameron Smith, See bulletin board for announcement.

PI MU EPSILON, Public Lecture
314 AH 4:00 p.m.
Professor Kenneth Stolarsky, Department of Mathematics, Complex Numbers, Electrical Charge and Statistics—an unfinished interaction.

Coffee and Tea
321 AH 3:15 p.m.
Mathematics Timetable

Probability & Statistics
See Thursday listing.

Representation Theory
Dr. Alberto-Raggi-Cardenas, The Green ring of a finite group, VIII

WEDNESDAY, OCTOBER 31

Combinatorial Algorithms
To be announced.

PASCAL II
Ms. Laura Bordeaux, See bulletin board for details

THURSDAY, NOVEMBER 1

Mathematics Colloquium
Professor A. Treibergs, Visiting Purdue from U. Chicago, Hyperspheres of Prescribed Mean Curvature. (See Abstract on mailroom bulletin board.)

Algebra
No meeting.

Classical Analysis
Professor Patricio Aviles, Symmetry theorems related to Pompeiu's problem, II.

Commutative Algebra
No meeting.

Functional Analysis
Professor Igor Kluvanek, Churila spaces and integration, III

Logic
Professor Angus Macintyre, Primes in models of open induction, II.

Number Theory
Professor Paul T. Bateman, Report from the Analytic Number Theory Meeting in Oberwolfach.

PASCAL I
Mr. Cameron Smith, See bulletin board for announcement.

Probability & Statistics
Professor Mahar S Phadke, Quality Assurance Center, AT&T Bell Laboratories, Role of Experimental Design in Engineering Design Optimization.

FRIDAY, NOVEMBER 2

Integration
Informal discussion = Free for all. I. Kluvanek & J. Uhl, moderators, VII

PASCAL II
Ms. Laura Bordeaux, See bulletin board for details.
MATHEMATICAL TIMETABLE

**Monday, November 5**

**Statistics**
345 AH
3:30 pm
Professors William Stout, Mathematics Department and Kenneth Traverse, Department of Secondary Education, Statistics: Teaching it at the High School Level, II.

**Tuesday, November 6**

**APPLE Lab**
102 AH
4:00 pm
No meeting.

**Combinatorics/Discrete Mathematics**
245 AH
4:00 pm
Professor Paul Weichsel, Polynomials of Graphs, II

**Commutative Algebra**
247 AH
3:00 pm
To be announced.

**Differential Geometry**
241 AH
3:00 pm
No meeting.

**Geometric Potpourri**
241 AH
2:00 pm
No meeting.

**Group Theory**
341 AH
3:00 pm
Professor Graham Higman, Rewriting products of group elements, IV

**Logic**
245 AH
2:00 pm
Professor David Marker, UC-Berkeley; 0-minimal ordered structures, I

**Math/CS Seminar**
239 DCL
2:00 pm
Professor Sam Kamin, Typechecking II

**Max Newman Topology**
243 AH
11:00 am
Professor Mary-Elizabeth Hamstrom, Strong digraphs and the Zeeman conjecture (Donald and Gillman), IV.

**Number Theory**
247 AH
1:00 pm
Discussion of Number Theory classes for Fall 1985 (graduate students welcome).

**PASCAL I**
102 AH
11:00 am
Mr. Cameron Smith, See bulletin board for announcement.

**Probability & Statistics**
241 AH
11:00 am
Professor Istvan Berkes, Hungarian Academy of Sciences visiting Texas A & M; Exchangable random variables and the subsequence principle.

**Representation Theory**
243 AH
2:00 pm
Dr. Alberto-Raggi-Cardenas, The Green ring of a finite group, IX
WEDNESDAY, NOVEMBER 6

Combinatorial Algorithms
237 DCL
Mr. Magid Sarrafzadeh, Optimal discrete Fourier transform in VLSI
4:00 pm

PASCAL II
102 AH
Ms. Laura Bordeaux, See bulletin board for details
12:00 noon

THURSDAY, NOVEMBER 7

Mathematics Colloquium
314 AH
Professor Harold Donnelly, Purdue; Heat equation for complete Riemannian manifolds.
4:00 pm

Coffee & Tea
321 AH
3:15 pm

ABSTRACT: See mailroom bulletin board.

Algebra
243 AH
2:00 pm

To be announced.

Classical Analysis
245 AH
1:00 pm

Professor Patricio Aviles, Symmetry theorems related to Pompeiu's problem, III.

Commutative Algebra
247 AH
3:00 pm

To be announced.

Functional Analysis
241 AH
2:00 pm

Dr. Werner Ricker, Scalar-type operators in Grothendieck spaces with the Dunford-Pettis property.

Logic
245 AH
2:00 pm

Professor David Marker, UC-Berkeley; O-minimal ordered structures, II

Number Theory
247 AH
1:00 pm

Mr. Paul Pudaite, On Littlewood's diophantine problem.

PASCAL I
102 AH
11:00 am

Mr. Cameron Smith, See bulletin board for announcement.

FRIDAY, NOVEMBER 9

Integration
347 AH
3:15 pm

Informal discussion = Free for all. I. Kluvanek & J. Uhl, moderators, VIII

PASCAL II
102 AH
12:00 noon

Ms. Laura Bordeaux, See bulletin board for details.

MIDWEST STATISTICS CONFERENCE
Indiana University, Bloomington
The conference will be Friday and Saturday. See Mrs. Turner for information.
Sign up on the blackboard in the mailroom for rides.
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<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Location</th>
<th>Instructor</th>
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<td><strong>MATH WEEKLY</strong></td>
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**MATH WEEKLY**

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<tr>
<th><strong>MONDAY, NOVEMBER 12</strong></th>
<th><strong>TUESDAY, NOVEMBER 13</strong></th>
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<tr>
<td><strong>APPLE Lab</strong></td>
<td>102 AH</td>
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<td>Professor George Francis, Cellular automata, dynamical systems, robot arms and other projects of interest to mathematical computing pedagogy.</td>
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<tr>
<td><strong>Combinatorics/Discrete Mathematics</strong></td>
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<td>Professor Bruce Reznick, Some Monthly problems.</td>
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<td><strong>Commutative Algebra</strong></td>
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<td></td>
<td>Professor Robert Fossum, K-Theory of quadratic forms, II</td>
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<tr>
<td><strong>Differential Geometry</strong></td>
<td>241 AH</td>
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<td>3:00 pm</td>
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<td>Planning of courses in Geometry &amp; Topology for 1985-86. (See also special seminar Friday at 4:00.)</td>
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<tr>
<td><strong>Geometric Potpourri</strong></td>
<td>241 AH</td>
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<td>Professor Richard Bishop, Bilinear inequalities and the straightening of pseudoline configurations.</td>
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<td><strong>Group Theory</strong></td>
<td>341 AH</td>
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<td>No meeting this week.</td>
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<td><strong>Logic</strong></td>
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<td>Professor Nigel Cutland, University of Hull; Nonstandard methods in stochastic analysis and control theory. (See Thursday also)</td>
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<tr>
<td><strong>Math/CSE Seminar</strong></td>
<td>239 DCL</td>
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<td>Professor Frank Young, Representation independence of data types, II</td>
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<td><strong>Max Newman Topology</strong></td>
<td>243 AH</td>
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<td>Professor Mary-Elizabeth Hamstrom, Strong digraphs and the Zeeman conjecture (Donald and Gillman), V.</td>
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<td><strong>Number Theory</strong></td>
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<td>Professor John Selfridge, Math Reviews; Some remarks on primality testing and factorization.</td>
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<td><strong>PASCAL I</strong></td>
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<td>Mr. Cameron Smith, See bulletin board for announcement.</td>
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<td><strong>Probability &amp; Statistics</strong></td>
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<td>Professor Robert Kaufman, Dimensional properties of 1-dimensional Brownian motion.</td>
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<td><strong>Representation Theory</strong></td>
<td>243 AH</td>
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<td>Dr. Alberto-Raggi-Cardenas, The Green ring of a finite group, X</td>
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<tr>
<td><strong>Statistics</strong></td>
<td>241 AH</td>
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<td>Professors William Stout, Mathematics Department and Kenneth Traverse, Department of Secondary Education, Statistics; Teaching it at the High School Level, II.</td>
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**WEDNESDAY, NOVEMBER 14**

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<tr>
<th><strong>Combinatorial Algorithms</strong></th>
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<tr>
<td><strong>PASCAL II</strong></td>
<td>102 AH</td>
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| Ms. Laura Bordeaux, See bulletin board for details
Mathematics Timetable

THURSDAY, NOVEMBER 15

Mathematics Colloquium 314 AH 4:00 pm
Professor Bernt Øksendal, University of Oslo visiting Caltech; Function theory from a stochastic point of view.

Coffee & Tea 321 AH 3:15 pm

ABSTRACT: In 1948 P. Levy stated that analytic functions mapped the paths of Brownian motion into the paths of Brownian motion, i.e. that analytic functions are Brownian path-preserving (BPP). During the last 10 years we have seen many striking examples of how this can be used to obtain new results - and new proofs of old results - in function theory. However, there are several reasons to consider more general stochastic processes than just Brownian motion. We will explain a general result characterizing the functions which map the paths of one Markov process into the paths of another and give some examples to show how this can be applied to function theory.

Algebra 243 AH 2:00 pm
To be announced.

Classical Analysis 245 AH 1:00 pm
Professor Bernt Øksendal, University of Oslo visiting Caltech; Quasi-everywhere boundary convergence of harmonic functions.

Commutative Algebra 247 AH 3:00 pm
No meeting today.

Functional Analysis 241 AH 2:00 pm
No meeting today. Cancelled in favor of Arazy's talk on Tuesday, November 20.

Logic 245 AH 2:00 pm
Professor Thanasis Pheidas, Purdue; Some decidability results for the diophantine problem in polynomial rings.

Number Theory 247 AH 1:00 pm
Mr. Ferrell Wheeler, Approximations associated with certain multidimensional continued fraction algorithms.

PASCAL I 102 AH 11:00 am
Mr. Cameron Smith, See bulletin board for announcement.

Probability & Statistics 238 ADMIN 11:00 am
Professor Dennis Cox, University of Wisconsin; Multiplicative intensity models for neurophysiological spike train data.

FRIDAY, NOVEMBER 16

Integration 347 AH 3:15 pm
Informal discussion - Free for all. I. Klusvank & J. Uhl, moderators, IX

PASCAL II 102 AH 12:00 noon
Ms. Laura Bordeaux, See bulletin board for details.

Special Seminar 343 AH 4:00 pm
Professor Mario Micallef, University of Michigan; Constant mean curvature hypersurfaces in hyperbolic spaces.
MATHEMATICAL TIMETABLE

MONDAY, NOVEMBER 26

TUESDAY, NOVEMBER 27

APPLE Lab 102 AH 4:00 pm
No meeting today—see Pi Mu Epsilon talk.

Combinatorics/Discrete Mathematics 245 AH 4:00 pm
Mr. David Craft, The number of complete subgraphs of a graph, II

Commutative Algebra 247 AH 3:00 pm
To be announced.

Differential Geometry 241 AH 3:00 pm
No meeting today.

Geometric Potpourri 241 AH 2:00 pm
Professor Ralph Alexander, Problems in geometric probability.

Group Theory 341 AH 3:00 pm
Professor Joe Rotman, Finite projective planes and graphs, II

Logic 245 AH 2:00 pm
Professor Ward Henson, A logic for models which are based on metric spaces.
(See Thursday listing also.)

Math/CS Seminar 239 DCL 2:00 pm
To be announced.

Max Newman Topology 243 AH 11:00 am
Professor Mary-Elizabeth Hamstrom, Strong digraphs and the Zeeman conjecture
(Donald and Gillman), VII

Number Theory 247 AH 1:00 pm
Mr. Shek-Tung Wong, Reduction of hyperelliptic diophantine equations to Thue equations.

PASCAL I 102 AH 11:00 am
Mr. Cameron Smith, See bulletin board for announcement.

Pi Mu Epsilon 314 AH 4:00 pm
Professor Igor Kluvanek, Flinders University; Archimedes was right.
Coffee & Tea 321 AH 3:15 pm

Probability & Statistics 241 AH 11:00 am
Professor William Stout, Invariance principles for martingales and sums of
independent random variables with infinite variance.

Representation Theory 243 AH 2:00 pm
Dr. Alberto-Raggi-Cardenas, The Green ring of a finite group, XII
Mathematics Timetable

Wednesday, November 28

Combinatorial Algorithms   237 DCL   4:00 pm
To be announced.

PASCAL II                    102 AH   12:00 noon
Ms. Laura Bordeaux, See bulletin board for details

Thursday, November 29

Mathematics Colloquium       314 AH   4:00 pm
Professor Carl FitzGerald, UC-San Diego; An analysis of the proof of the
Bieberbach conjecture.

Coffee & Tea                321 AH   3:15 pm
ABSTRACT: Louis de Branges proved the Milin conjecture and consequently the
Bieberbach conjecture. A short version of this proof will be presented. The
choice of certain weight functions will be motivated and shown to be unique.
The question will be examined as to whether this method yields a direct proof of
the Bieberbach conjecture.

Algebra                     243 AH   2:00 pm
To be announced.

Classical Analysis          245 AH   1:00 pm
Professor Carl FitzGerald, UC-San Diego; The boundary geometry of domains that
satisfy a wedge condition.

Commutative Algebra         247 AH   3:00 pm
To be announced.

Functional Analysis         241 AH   2:00 pm
To be announced.

Logic                      245 AH   2:00 pm
Professor Michael Richter (Aachen and Texas) Computer experiments and decision
problems in group theory.

Number Theory               247 AH   1:00 pm
Dr. A. Hildebrand, On the distribution of the divisors of an integer.

PASCAL I                    102 AH   11:00 am
Mr. Cameron Smith, See bulletin board for announcement.

Friday, November 30

Integration                 347 AH   3:15 pm
Informal discussion = Free for all. I. Kluvanek & J. Uhl, moderators, X

PASCAL II                   102 AH   12:00 noon
Ms. Laura Bordeaux, See bulletin board for details.

Probability & Statistics    147 AH   4:00 pm
Professor Ping Cheng, Dir. of the Institute of Statistics, Academia Sinica,
Beijing; To be announced.
TUESDAY, DECEMBER 4

Mathematics Colloquium 314 AH 4:00 pm
Professor A. Good, Institute for Advanced Study; Eigenvalue and lattice point problems on $SL_2$. Coffee & Tea 321 AH 3:15 pm

ABSTRACT: See mailroom bulletin board.

Analysis-Special Seminar 151 EKB 2:00 pm
Professor Jean Bourgain, Vrije Universiteit Brussel and I.H.E.S., Paris; Arithmetic diameter and Sidon sets.

APPLE Lab 102 AH 4:00 pm
No meeting today—see Colloquium.

Combinatorics/Discrete Mathematics 245 AH 4:00 pm
Professor C.L. Liu; McMahan’s “Master Theorem”

Commutative Algebra 247 AH 3:00 pm
Professor H. Gillet, UICC; Serre’s conjecture on vanishing of intersection multiplicities.

Differential Geometry 241 AH 3:00 pm
No meeting today.

Geometric Potpourri 241 AH 2:00 pm
Professor Jack Wetzel; A new simplicial 3-arrangement.

Group Theory 341 AH 3:00 pm
Professor Joe Rotman, Finite projective planes and graphs, III.

Logic 245 AH 2:00 pm
Professor Carl Jockusch; Martin’s new proof that all Borel games are determined. (No special background is required for this proof. Nonlogicians are welcome.)

Math/CS Seminar 239 DCL 2:00 pm
Professor S. Kamin, To be announced.

Max Newman Topology 243 AH 11:00 am
No meeting today.

Number Theory 247 AH 1:00 pm
Mr. Professor Anton Good, Mean value theorems by the convolution method.

PASCAL I 102 AH 11:00 am
Mr. Cameron Smith, See bulletin board for announcement.

Probability & Statistics 241 AH 11:00 am
No meeting today.

Representation Theory 243 AH 2:00 pm
Mr. K. Uno, The Green ring of a finite group, XIII
| **WEDNESDAY, DECEMBER 5** |  |
|--------------------------|--|---|
| **Combinatorial Algorithms** | 237 DCL | 4:00 pm |
| Mr. Prasoon Tiwari, Lower bounds on communication complexity, II |

| **THURSDAY, DECEMBER 6** |
|--------------------------|--|---|
| **Mathematics Colloquium** | 314 AH | 4:00 pm |
| Professor Carl Cowen, Purdue University; Fixed points of analytic functions on the unit disk. |
| **Coffee & Tea** | 321 AH | 3:15 pm |
| **Functional Analysis** | 241 AH | 2:00 pm |
| Professor Carl Cowen, Purdue University; The Cesaro operator on Hilbert space. |

| **FRIDAY, DECEMBER 7** |  |
|------------------------|--|---|
| **Integration** | 347 AH | 3:15 pm |
| Informal discussion = Free for all. I. Kluvanek & J. Uhl, moderators, XI |

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<th><strong>PASCAL II</strong></th>
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<td>Ms. Laura Bordeaux, See bulletin board for details.</td>
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<th><strong>Number Theory-Special Seminar</strong></th>
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<tr>
<td>Dr. Laurent Closel, Princeton University; Base change for automorphic forms on GL(N)</td>
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MATHMATICAL TIMETABLE

MONDAY, JANUARY 21

TUESDAY, JANUARY 22

Commutative Algebra
Organizational meeting.

Curriculum Committee
Organizational meeting.

Logic
No meeting today. LOGIC LUNCH: will occur each Tuesday. Meet at 11:20 in the Math Department mailroom.

Max Newman Topology
Organizational meeting.

Number Theory
Professor Lee Rubel, A gap theorem for power series solutions of algebraic differential equations.

Probability & Statistics
Professor Paul Holland, Senior Scientist-Educational Testing Service; Mathematical modelling issues for item response theory of mental tests.

WEDNESDAY, JANUARY 23
THURSDAY, JANUARY 24

Mathematics Colloquium 314 AH 4:00 pm
Professor Stephen Smith, UIC; Simple groups and finite geometries.

Coffee & Tea 321 AH 3:15 pm

ABSTRACT: Finite simple groups are now known—but not necessarily well understood. One goal of recent work is to describe the exceptional ("sporadic") simple groups in a way unified with the description of the better known infinite families of groups. A way of doing this now attracting attention is the study of group actions on suitable geometries—especially on the analogues of the "building" geometries for the Lie-type groups. The talk will be a survey of the recent discoveries in this area. Some small examples will be discussed.

Commutative Algebra 247 AH 3:00 pm
To be announced.

Functional Analysis 245 AH 2:00 pm
Organizational meeting.

Logic 243 AH 2:00 pm
Mr. Mohan Ramachandran, On a new proof of a theorem of Sacks.

Number Theory 247 AH 1:00 pm
Professor Harold Diamond, Estimations of the greatest root of the sieve adjoint function q(x).

FRIDAY, JANUARY 25

Integration 447 AH 3:00 pm
Organizational meeting.

Special Seminar 443 AH 1:00 pm
Dr. Bernard Whiting, Paris Observatory, Maudon; Some differential equations in the theory of black holes.
MATHEMATICAL TIMETABLE

MONDAY, JANUARY 28

TUESDAY, JANUARY 29

Mathematics Colloquium 314 AH
Professor James Burke, University of Kentucky; N. Karmarkar's linear programming algorithm.
Coffee & Tea 321 AH
ABSTRACT: See abstract posted in mailroom.

Commutative Algebra 247 AH
Professor Robert Possum, K-theory of spheres (apres Swan).

Geometric Potpourri 241 AH
Organizational meeting.

Group Theory 245 AH
Organizational meeting.

Logic 243 AH
No meeting today. LOGIC LUNCH: Meet at 11:20 in the Math Department mailroom.

Max Newman Topology 243 AH
Professor Robert Craggs, Stallings-Gersten work on graphs, I.

Number Theory 247 AH
Mr. W.-B. Zhang, On a number-theoretic series of Kasara.

Probability & Statistics 241 AH
Professor Adam Martinsek, Combining Stein estimation problems: an adaptive procedure under classical criteria.

WEDNESDAY, JANUARY 30
THURSDAY, JANUARY 31

Mathematics Colloquium 314 AH 4:00 pm
Professor Carl Pomerance, University of Georgia; How to factor a number.

Coffee & Tea 321 AH 3:15 pm

ABSTRACT: See mailroom bulletin board.

Classical Analysis 245 AH 1:00 pm
Professor Lo Yang, Academia Sinica, Beijing, visiting the Institute for Advanced Study; Some recent results in value distribution theory.

Commutative Algebra 247 AH 3:00 pm
Professor William Haboush, Luna's Etale slice theorem.

Computation Theory 4-122 CSL 2:00 pm
Professor F. Preparata will present a paper "On the Complexity of a Concentrator" by M.S. Pinsker.

Functional Analysis 245 AH 2:00 pm
Mr. John McGowan, A better ordering for the Banach spaces.

Logic 243 AH 2:00 pm
Mr. Luc Belair, MacIntyre's elimination theorem for the field of p-adic numbers, revisited.

Number Theory 247 AH 1:00 pm
Professor Carl Pomerance, To be announced.

PASCAL 108 AH 11:00 am
Ms. Laura Bordeaux, Introduction to the Pascal language.

PROBABILITY & STATISTICS 241 AH 11:00 am
Mr. Andrew Barron, Stanford University; The fundamental role of relative entropy.

FRIDAY, FEBRUARY 1

Integration 447 AH 3:00 pm
Mr. Russ Gordon, Vector versions of Perron integration.
MATHEMATICAL TIMETABLE

MONDAY, FEBRUARY 4

TUESDAY, FEBRUARY 5

Commutative Algebra 247 AH 3:00 pm
To be announced.

Computation Theory 4-122 CSL 4:00 pm
Professor V. Ramachandran will present a paper "Graph-Theoretical Properties in Computational Complexity" by L.G. Valiant. NOTE TIME CHANGE.

Geometric Potpourri 241 AH 2:00 pm
Professor Mahlon Day, Borweins' characterization of inner products.

Group Theory 245 AH 3:00 pm
Professor Graham Higman, First order theory of polycyclic groups.

Logic 243 AH 2:00 pm
Mr. Luc Belair, Macintyre's elimination theorem for the field of p-adic numbers, revisited, II

Max Newman Topology 243 AH 11:00 am
Professor Robert Craggs, Stallings-Gersten work on graphs, II

Number Theory 247 AH 1:00 pm
Mr. W.-B. Zhang, On a number-theoretic series of Kasara, II

Pascal 108 AH 3:00 pm
Ms. Laura Bordeaux, See the mailroom bulletin board for further information. NOTE TIME CHANGE.

Probability & Statistics 241 AH 11:00 am
Mr. George Easton, Princeton University; General saddlepoint approximations with applications to L-statistics.

WEDNESDAY, FEBRUARY 6

Combinatorial Algorithms 237 DCL 4:00 pm
Mr. Pravin M. Vaidya, Space-time trade offs for orthogonal range queries.
Mathematical Timetable

THURSDAY, FEBRUARY 7

Mathematics Colloquium 314 AH 4:00 pm
Professor Dorian Goldfeld, Harvard University; The arithmetic theory of Poincaré series.

Coffee & Tea 321 AH 3:15 pm

Classical Analysis 245 AH 1:00 pm
To be announced.

Commutative Algebra 247 AH 3:00 pm
Professor William Haboush, Luna's Etale slice theorem, II

Functional Analysis 245 AH 2:00 pm
Professor Horacio Porta, Averages associated to relative errors.

Hyperbolic Geometry 243 AH 3:00 pm
Professor John Ratcliffe, Hyperbolic Dehn surgery, I

Logic 243 AH 2:00 pm
Professor Alain Lewis, Hyperfinite sets and infinitary logics, I

Number Theory 247 AH 1:00 pm
Professor Dorian Goldfeld, Harvard; To be announced.

PASCAL 108 AH 3:00 pm
Ms. Laura Bordeaux, See mailroom bulletin board. NOTE TIME CHANGE.

PROBABILITY & STATISTICS 241 AH 11:00 am
Mr. Douglas Simpson, UNC-Chapel Hill; Robust inference and discrete probability models.

FRIDAY, FEBRUARY 8

Integration 447 AH 3:00 pm
"Free for all"
Mathematical Timetable February 11-15, 1985

Monday, February 11

Tuesday, February 12

Departmental Meeting 314 AH 4:00 pm
Faculty meeting, Heini Halberstam presiding
Coffee & Tea 321 AH 3:15 pm

Classical Analysis 245 AH 2:00 pm
Professor Jose L. Torrea, Universidad Autonoma de Madrid; Vector-valued inequalities for the Poisson integral via singular integrals.

Commutative Algebra 247 AH 3:00 pm
Professor Robert Fossum, K-theory of quadratic forms, I

Computation Theory 4-122 CSL 4:00 pm
Mr. P. Tiwari will present a paper "Space bounds for a game on graphs" by W. J. Paul, R. E. Tarjan, and J. R. Celoni.

Geometric Potpourri 241 AH 2:00 pm

Group Theory 245 AH 3:00 pm
To be announced.

Logic 243 AH 2:00 pm
Professor Alain Lewis, Hyperfinite sets and infinitary logics, II

Math/CS Seminar 238 DCL 2:00 pm
Ms. Myla Archer, Universal realization, persistent interconnection and implementation of abstract modules.

Max Newman Topology 243 AH 11:00 am
Professor Robert Craggs, Stallings-Gersten work on graphs, III

Number Theory 247 AH 1:00 pm
Professor Kenneth Stolarsky, An exotic algorithm for continued fractions, and special relativity.

Pascal 108 AH 3:00 pm
Ms. Laura Bordeaux, See the mailroom bulletin board for further information.

Probability & Statistics 241 AH 11:00 am
Professor Robert Kaufman, Local time and dimension.

Wednesday, February 13

Combinatorial Algorithms 237 DCL 4:00 pm
Professor Michael Loui, Shared memory requirements for agreement among unreliable asynchronous processes.
THURSDAY, FEBRUARY 14

Mathematics Colloquium 314 AH 4:00 pm
Professor Dinakar Ramakrishnan, Johns Hopkins University; Regulators and special values of L-functions.

Coffee & Tea 321 AH 3:15 pm

ABSTRACT: There are deep conjectures now—due to Beilinson, Deligne, Bloch, . . . . , which say that in general the special values of zeta and L-functions of algebraic varieties should be intimately related to periods of algebraic differential forms, K-theory, algebraic cycles, etc. This talk will be a general introduction to the area.

Classical Analysis 245 AH 1:00 pm
See Tuesday—2:00 pm listing.

Commutative Algebra 247 AH 3:00 pm
Professor William Haboush, Luna’s Etale slice theorem, III

Functional Analysis 245 AH 2:00 pm
Cancelled in favor of Tuesday Classical Analysis lecture.

Hyperbolic Geometry 243 AH 3:00 pm
No meeting this week.

Logic 243 AH 2:00 pm
To be announced.

Number Theory 247 AH 1:00 pm
To be announced.

PASCAL 108 AH 3:00 pm
Ms. Laura Bordeaux, See mailroom bulletin board.

FRIDAY, FEBRUARY 15

Algebra-Special Seminar 441 AH 4:00 pm
Dr. Dinakar Ramakrishnan, Johns Hopkins University; Hilbert modular surfaces.

Integration 447 AH 3:00 pm
"Free for all"
MONDAY, FEBRUARY 18

TUESDAY, FEBRUARY 19

Commutative Algebra 247 AH 3:00 pm
Professor Michael Stillman, University of Chicago; To be announced.

Computation Theory 4-122 CSL 4:00 pm
Professor Charles Blair will present a paper "Explicit construction of concentrators" by G. A. Margulis

Functional Analysis 345 AH 2:00 pm
Professor János Bognár (Hungary); Hilbert spaces with indefinite inner products.

Geometric Potpourri 241 AH 2:00 pm
Professor Ralph Alexander, Derivative formulas in integral geometry.

Group Theory 245 AH 3:00 pm
Professor J. Ratcliffe, To be announced.

Logic 243 AH 2:00 pm
Professor Julia Knight, $\mathbb{N}$-like models of Presburger arithmetic, II

Math/CS Seminar 238 DCL 2:00 pm
Ms. Myla Archer, Universal realization, persistent interconnection and implementation of abstract modules, II

Max Newman Topology 243 AH 11:00 am
Professor Robert Craggs, Stallings-Gersten work on graphs, IV

Number Theory 247 AH 1:00 pm
Professor Gregory Freiman, R. L. Graham's problem - an inverse additive problem.

Pascal 108 AH 3:00 pm
Ms. Laura Bordeaux, See the mailroom bulletin board for further information.

Pi Mu Epsilon 314 AH 4:00 pm
Professor Bruce Berndt; Gauss, Landen, Ramanujan, The Arithmetic-geometric mean, Ellipses, The Ladies Diary, $\pi$, and the American Revolution
Coffee & Tea 321 AH 3:15 pm

Probability & Statistics 241 AH 11:00 am
Dr. Timothy Green, U.S. Army Material Command (Alexandria, VA); Asymptotic enumeration of Latin rectangles.
<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
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<tbody>
<tr>
<td>3:00 pm</td>
<td>314 AH</td>
<td>Mathematics Colloquium</td>
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<tr>
<td>3:15 pm</td>
<td>321 AH</td>
<td>Coffee &amp; Tea</td>
</tr>
<tr>
<td>4:00 pm</td>
<td>314 AH</td>
<td>Professor Peter Hilton, SUNY at Binghampton; Self-covering maps of manifolds.</td>
</tr>
<tr>
<td>3:00 pm</td>
<td>245 AH</td>
<td>Classical Analysis</td>
</tr>
<tr>
<td>4:00 pm</td>
<td>115 DCL</td>
<td>Computer Science Colloquium</td>
</tr>
<tr>
<td>4:00 pm</td>
<td>247 AH</td>
<td>Professor William Haboush, Luna's Etale slice theorem, IV</td>
</tr>
<tr>
<td>3:00 pm</td>
<td>245 AH</td>
<td>Functional Analysis</td>
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<tr>
<td>3:00 pm</td>
<td>243 AH</td>
<td>Hyperbolic Geometry</td>
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<tr>
<td>2:00 pm</td>
<td>243 AH</td>
<td>Logic</td>
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<tr>
<td>2:00 pm</td>
<td>345 AH</td>
<td>Math Education-Special Seminar</td>
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<tr>
<td>1:00 pm</td>
<td>247 AH</td>
<td>Number Theory</td>
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<tr>
<td>3:00 pm</td>
<td>247 AH</td>
<td>Integration</td>
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**FRIDAY, FEBRUARY 22**

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<tr>
<th>Time</th>
<th>Location</th>
<th>Event</th>
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<tbody>
<tr>
<td>3:00 pm</td>
<td>314 AH</td>
<td>Colloquium**</td>
</tr>
<tr>
<td>3:00 pm</td>
<td>321 AH</td>
<td>Coffee &amp; Tea</td>
</tr>
<tr>
<td>3:00 pm</td>
<td>447 AH</td>
<td>Integration</td>
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</tbody>
</table>

**Search Committee Invitee**
### MATHEMATICAL TIMETABLE

February 18-21, 1985

#### MONDAY, FEBRUARY 18

<table>
<thead>
<tr>
<th>Event</th>
<th>Location</th>
<th>Time</th>
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<tbody>
<tr>
<td>Mathematics Colloquium***</td>
<td>314 AH</td>
<td>4:00 pm</td>
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<tr>
<td>Dr. Isaac Efrat, M.I.T.; Eisenstein series</td>
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<tr>
<td>Coffee &amp; Tea</td>
<td>321 AH</td>
<td>3:15 pm</td>
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#### TUESDAY, FEBRUARY 19

<table>
<thead>
<tr>
<th>Event</th>
<th>Location</th>
<th>Time</th>
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<tbody>
<tr>
<td>Commutative Algebra***</td>
<td>247 AH</td>
<td>3:00 pm</td>
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<tr>
<td>Professor Michael Stillman, University of Chicago; To be announced.</td>
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<td></td>
</tr>
<tr>
<td>Group Theory***</td>
<td>245 AH</td>
<td>3:00 pm</td>
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<tr>
<td>Professor J. Ratcliffe, Finitely generated groups &amp; knots.</td>
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#### WEDNESDAY, FEBRUARY 20

<table>
<thead>
<tr>
<th>Event</th>
<th>Location</th>
<th>Time</th>
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<tbody>
<tr>
<td>Pi Mu Epsilon--Note Day Change</td>
<td>314 AH</td>
<td>4:00 pm</td>
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<tr>
<td>Professor Bruce Berndt; Gauss, Landen, Ramanujan, The Arithmetic-geometric mean, Ellipses, The Ladies Diary, q, and the American Revolution</td>
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<tr>
<td>Coffee &amp; Tea</td>
<td>321 AH</td>
<td>3:15 pm</td>
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#### THURSDAY, FEBRUARY 21

<table>
<thead>
<tr>
<th>Event</th>
<th>Location</th>
<th>Time</th>
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<tbody>
<tr>
<td>Classical Analysis***</td>
<td>245 AH</td>
<td>1:00 pm</td>
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<tr>
<td>Dr. Russell Lyons, To be announced.</td>
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<tr>
<td>Hyperbolic Geometry***</td>
<td>243 AH</td>
<td>3:00 pm</td>
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<tr>
<td>Professor John Ratcliffe, Hyperbolic Dehn surgery, II</td>
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#### FRIDAY, FEBRUARY 22

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<thead>
<tr>
<th>Event</th>
<th>Location</th>
<th>Time</th>
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<tbody>
<tr>
<td>Colloquium***</td>
<td>314 AH</td>
<td>3:00 pm</td>
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<tr>
<td>Professor Jack Conn, Caltech; Poisson structures</td>
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<tr>
<td>Coffee &amp; Tea</td>
<td>321 AH</td>
<td>2:15 pm</td>
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</table>

***Search Committee Invitee
MATHEMATICAL TIMETABLE
February 25–March 1, 1985

MONDAY, FEBRUARY 25

Mathematics Colloquium** 314 AH 4:00 pm
Professor Michel Lapidus, USC; Feynman-Kac Formula.
Coffee & Tea 321 AH 3:15 pm

TUESDAY, FEBRUARY 26

MILLERCOMM—Robert Ferber Memorial Lecture in Statistics
& Mathematics Colloquium 141 LOOMIS 8:00 pm
Professor Frederick Mosteller, Harvard University; Contributions of Meta-
analysis to statistics, health, and medicine.
Coffee & Tea 321 AH 3:30 pm

Commutative Algebra 247 AH 3:00 pm
Professor Robert Fossum, K-theory of quadratic forms, II

Computation Theory 4-122 CSL 4:00 pm
Professor C. P. Kruskal will present a paper "How to share memory in a
distributed system" by E. Upfal and A. Wigderson.

Differential Geometry 241 AH 3:00 pm
Mr. Michael Hvidsten, Stable minimal surfaces, I

Functional Analysis 245 AH 2:00 pm
Professor Vladimir Mlak, Cracow, Poland visiting the University of Georgia;
Tensor products of contractive operators.

Geometric Potpourri 241 AH 2:00 pm
No meeting this week.

Group Theory 245 AH 3:00 pm
Dr. Francesco de Giovanni, Some problems on groups with nilpotent automorphism
groups.

Logic 243 AH 2:00 pm
Professor Angus Macintyre, Adamowicz's work on open induction.

Math/CS Seminar 238 DCL 2:00 pm
Professor S. Kamin, Strictness, I

Max Newman Topology 243 AH 11:00 am
Professor Robert Craggs, Stallings-Gersten work on graphs, V

Number Theory 247 AH 1:00 pm
Professor Gregory Freiman, R.L. Graham's problem—an inverse additive problem, II

Pascal 108 AH 3:00 pm
Ms. Laura Bordeaux, See the mailroom bulletin board for further information.

Probability & Statistics 319 GH 11:00 am
Professor Frederick Mostellar, Harvard University; Searching for outliers in
large contingency tables. NOTE ROOM CHANGE.
**MATHEMATICS COLLOQUIUM**

WEDNESDAY, FEBRUARY 27

**Elimination theory for Pfaffian functions.**

**Combinatorial Algorithms**

THURSDAY, FEBRUARY 28

**Classical Analysis**

**Commutative Algebra**

**Decision and Information Sciences**

**Functional Analysis**

**Hyperbolic Geometry**

**Logic**

**Number Theory**

FRIDAY, MARCH 1

**Integration**

**Pascal**

**Search Committee Invitee**
TUESDAY, MARCH 5

Mathematics Colloquium 314 AH 4:00 pm
Professor Michael Singer, visiting the Institute for Advanced Study; Why csc x satisfies no linear differential equation with polynomial coefficients.

Coffee & Tea 321 AH 3:15 pm

ABSTRACT: I will discuss two recent proofs of this fact – the first (due to Harris-Sibuya and generalized by Sperber) using power series techniques and the second (due to myself) using group theoretic techniques. I will also discuss the general problem of understanding the algebraic behavior of solutions of linear differential equations.

Commutative Algebra 247 AH 3:00 pm
Professor Robert Fossum, K-theory of quadratic forms, III

Computation Theory 4-122 CSL 4:00 pm
Professor Michael Loui will present a paper "On determinism versus nondeterminism and related problems" by W.J. Paul, N. Pippenger, E. Szemeredi, and W.T. Trotter.

Differential Equations-Special 245 AH 1:00 pm
Professor Joe McKenna, University of Florida; Multiplicity of solutions of nonlinear boundary value problems.

Differential Geometry 241 AH 3:00 pm
Mr. Michael Widsten, Stable minimal surfaces, II

Geometric Potpourri 241 AH 2:00 pm
Professor Michael Bishop, Sinuoids as geodesics and the solutions of a differential inequality.

Group Theory 245 AH 3:00 pm
Professor Derek Robinson, A finitely generated infinite p-group with a recursive presentation – work of N.D. Gupta.

Logic 243 AH 2:00 pm
Professor Carl Jockusch, Weak fixed points and index sets

Math/CS Seminar 238 DCL 2:00 pm
Professor S. Kamin, Strictness, II

Max Newman Topology 243 AH 11:00 am
Professor Robert Craggs, Stallings-Gersten work on graphs, VI

Number Theory 247 AH 1:00 pm
Professor Gregory Freiman, R.L.Graham’s problem—an inverse additive problem, III

Pascal 106 AH 3:00 pm
Ms. Laura Bordeaux, See the mailroom bulletin board for further information.

Probability & Statistics 243 GH 9:00 am
Professor Bimal Kumar Sinha, University of Pittsburgh; Robustness of multivariate tests. NOTE TIME & ROOM CHANGE.
Mathematical Timetable

WEDNESDAY, MARCH 6

Combinatorial Algorithms
To be announced.

THURSDAY, MARCH 7

Mathematics Colloquium
Professor Steve Rallis, Ohio State University; Theta functions and L-functions.

Coffee & Tea

Automorphic Forms-Special
Professor Steve Rallis, Ohio State University; Automorphic representations.

Classical Analysis
To be announced.

Commutative Algebra
Professor William Haboush, Luna's Etale slice theorem, V

Functional Analysis
To be announced

Hyperbolic Geometry
Professor John Ratcliffe, Hyperbolic Dehn surgery, III

Logic
See Tuesday listing.

Number Theory
A collection of ten minute talks by participants.

PASCAL
Ms. Laura Bordeaux, See mailroom bulletin board.

Probability & Statistics
Mr. Kihn N. Truong, UC-Berkeley; Asymptotic properties of non-parametric prediction.

Special Lecture**
Dr. James Sethian, Courant Institute of NYU; Topic to be announced.

FRIDAY, MARCH 8

Integration
"Free for all"

**Search Committee Invitee
MONDAY, MARCH 11

Engineering Seminar 341 AH 4:00 pm
Professor Bruce Hajek, EE Dept; Cooling schedules for optimal annealing - a review and emphasis on proofs.

TUESDAY, MARCH 12

Commutative Algebra 247 AH 3:00 pm
Professor Robert Fossum, K-theory of quadratic forms, IV

Computation Theory 4-122 CSL 4:00 pm
Professor C. L. Liu will present a paper "Explicit construction of linear sized super-concentrators" by O. Gabber and Z. Galil.

Differential Geometry 241 AH 3:00 pm
Professor P. Papadopol, University of Alabama; Results and open problems in the theory of Nash spaces.

Geometric Potpourri 241 AH 2:00 pm
No meeting this week.

Group Theory 245 AH 3:00 pm
Professor Robert Craggs, To be announced.

Logic 243 AH 2:00 pm
Professor David Muller, Extended NP completeness.

Math/CS Seminar 238 DCL 2:00 pm
To be announced.

Max Newman Topology 243 AH 11:00 am
Professor Robert Craggs, Stallings-Gersten work on graphs, VII

Number Theory 247 AH 1:00 pm
Professor Paul Bateman, Representation of integers as sums of polynomial numbers.

Pascal 108 AH 3:00 pm
Ms. Laura Bordeaux, See the mailroom bulletin board for further information.

Probability & Statistics 241 AH 11:00 am
Professor Kim-hung Li, University of Chicago; Iterative improvement for missing-data information.
Mathematical Timetable

WEDNESDAY, MARCH 13

Combinatorial Algorithms
To be announced.

THURSDAY, MARCH 14

Classical Analysis
To be announced.

Commutative Algebra
Professor William Haboush, Luna's Etale slice theorem, VI

Functional Analysis
Professor Igor Kluvanek, Spectral properties of translations in $L_p$

Hyperbolic Geometry
Professor John Ratcliffe, Hyperbolic Dehn surgery, IV

Logic
Dr. Francoise Point, University of Mons; Linear elimination in division rings.

Number Theory
"Free for all"

Optimization
Professor Dimitri Bertsekas, MIT; Relaxation methods: solving network flow problems faster than simplex.

PASCAL
Ms. Laura Bordeaux, See mailroom bulletin board.

FRIDAY, MARCH 15

Integration
"Free for all"
# MATHEMATICAL TIMETABLE

**March 15-28, 1985**

## MONDAY, MARCH 25

**Cairns Memorial Lecture**
- **314 AH**
- **5:00 pm**
- Sr. Michael Atiyah, FRS, Oxford University; Ideas from theoretical physics.

**Functional Analysis**
- **159 AH**
- **3:00 pm**
- Professor Susumu Okada, Oscillatory integrals.

## TUESDAY, MARCH 26

**Cairns Memorial Lecture**
- **314 AH**
- **4:00 pm**
- Sir Michael Atiyah, FRS, Oxford University; Riemannian four-dimensional manifolds.

**Algebraic Number Theory**
- **245 AH**
- **2:00 pm**
- Professor Steve Ullom, Generators and relations for certain class two Galois groups.

**Commutative Algebra**
- **247 AH**
- **3:00 pm**
- Professor Tadeusz Jozefiak, Polish Academy of Sciences; Conjugacy classes of nilpotent matrices and Kostka-Foulkes polynomials.

**Computation Theory**
- **4-122 CSL**
- **4:00 pm**
- Professor D. E. Muller, Topic to be announced.

**Differential Geometry**
- **241 AH**
- **3:00 pm**
- No meeting this week.

**Geometric Potpourri**
- **241 AH**
- **3:00 pm**
- No meeting this week.

**Group Theory**
- **245 AH**
- **3:00 pm**
- Professor Robert Craggs, Groups of order 1, II

**Logic**
- **243 AH**
- **3:00 pm**
- Informal discussions with Professor Saul Kripke of Princeton University.

**Math/CS Seminar**
- **238 DCL**
- **2:00 pm**
- Mr. Stanley Jefferson, Execution of final algebra specifications.

**Mathematics Education-Special**
- **247 AH**
- **2:00 pm**
- Carole B. Lacampagne, Northern Illinois University; Sex and mathematics.

**Max Newman Topology**
- **243 AH**
- **11:00 am**
- Professor Robert Craggs, Stallings-Gersten work on graphs, IX

**Number Theory**
- **247 AH**
- **1:00 pm**
- Professor John L. Selfridge, Northern Illinois University; Some remarks on prime testing, factorization, and binomial coefficients.

**Pascal**
- **108 AH**
- **3:00 pm**
- Ms. Laura Bordeaux, See the mailroom bulletin board for further information.

**Probability & Statistics**
- **241 AH**
- **11:00 am**
- See Thursday listing.
Mathematical Timetable 3/25-29/85

WEDNESDAY, MARCH 27

Cairns Memorial Lecture 314 AH 4:00 pm
Sir Michael Atiyah, FRS, Oxford University; Algebraic surfaces.
Coffee & Tea 321 AH 3:15 pm

Combinatorial Algorithms 237 DCL 4:00 pm
Mr. Scott Hornick, A unified approach to the analysis and synthesis of systolic arrays.

THURSDAY, MARCH 28

Classical Analysis 245 AH 1:00 pm
To be announced.

Combinatorics-Special 241 AH 1:00 pm
Professor Dan Hughes, University of London; Partitions and schemes in graphs.

Commutative Algebra 247 AH 3:00 pm
Professor Tadeusz Jozefiak, Polish Academy of Sciences; Representations of Weyl groups induced from subgroups of Coxeter elements.

Functional Analysis 245 AH 2:00 pm
Dr. Werner Ricker, visiting from Flinders; Remarks on spectral theory.

Hyperbolic Geometry 243 AH 3:00 pm
Professor John Ratcliffe, Hyperbolic Dehn surgery, VI

Logic 243 AH 2:00 pm
To be announced.

Number Theory 247 AH 1:00 pm
Professor Kenneth Stolarsky, The smallest strip about the $\sigma = 1/2$ line that contains all zeros of the Maxwell polynomials.

PASCAL 108 AH 3:00 pm
Ms. Laura Bordeaux, See mailroom bulletin board.

Probability & Statistics 314 AH 4:00 pm
Professor Victor Solo, Harvard; Modelling a stationary random field by parametric cepstrum (JOINT WITH PURDUE)
Coffee & Tea 321 AH 3:15 pm

FRIDAY, MARCH 29

Integration 447 AH 3:00 pm
"Free for all"
MONDAY, APRIL 8

TUESDAY, APRIL 9

Coble Memorial Lecture 314 AH 4:00 pm
Professor Jerome Keisler, University of Wisconsin, When are two stochastic processes alike?
Coffee & Tea 321 AH 3:15 pm

Algebraic Number Theory 245 AH 2:00 pm
To be announced.

Commutative Algebra 247 AH 3:00 pm
Dr. S. K. Bamba, On Clifford algebras.

Computation Theory 4-122 CSL 4:00 pm
Professor T. Madej, will discuss "Asymptotically tight bounds on time space tradeoffs in a pebble game" by T. Lengauer and R.E. Tarjan.

Differential Geometry 241 AH 3:00 pm
Professor I.D. Berg, Recent progress on geodesics on manifolds with boundary.

Geometric Potpourri 241 AH 2:00 pm
To be announced.

Group Theory 245 AH 3:00 pm
Professor Robert Craggs, Groups of order 1, III

Logic 243 AH 2:00 pm
Professor Michael Morley, Cornell University; To be announced.

Math/CS Seminar 238 DCL 2:00 pm
To be announced.

Max Newman Topology 243 AH 11:00 am
Professor Robert Craggs, Stallings-Gersten work on graphs, X

Number Theory 247 AH 1:00 pm
Mr. Wen-Bin Zhang, The Chebyshev estimate for Beurling's generalized prime numbers.

Pascal 108 AH 3:00 pm
Ms. Laura Bordeaux, See the mailroom bulletin board for further information.

Probability & Statistics 241 AH 11:00 am
Professor Donald Burkholder, New light on the unconditionality and optimal control of martingales.
Mathematical Timetable

WEDNESDAY, APRIL 10

Coble Memorial Lecture 314 AH 5:00 pm
Professor Jerome Keisler, University of Wisconsin; Loeb spaces.
Coffee & Tea 321 AH 4:15 pm

Combinatorial Algorithms 237 DCL 4:00 pm
To be announced.

Mathematics Education-Special** 241 AH 4:00 pm
Ms. Mary Schatz Koehler, University of Wisconsin, Current problems in Mathematics education.

THURSDAY, APRIL 11

Coble Memorial Lecture 314 AH 4:00 pm
Professor Jerome Keisler, University of Wisconsin; The logic of stochastic processes.
Coffee & Tea 321 AH 3:15 pm

Classical Analysis 245 AH 1:00 pm
To be announced.

Commutative Algebra 247 AH 3:00 pm
To be announced.

Functional Analysis 245 AH 2:00 pm
Dr. Werner Ricker, visiting from Flinders; Remarks on spectral theory.

Hyperbolic Geometry 243 AH 3:00 pm
Professor John Ratcliffe, Hyperbolic Dehn surgery, VII

Logic 243 AH 2:00 pm
To be announced.

Mathematics Education-Special** 241 AH 3:00 pm
Professor Kenneth Goldberg, New York University; Current problems in Mathematics education.

Number Theory 247 AH 1:00 pm
Professor Carl Pomerance, University of Georgia; Long paths in the divisor graph; solution of a problem of Erdős and Hegyvari.

PASCAL 108 AH 3:00 pm
Ms. Laura Bordeaux, See mailroom bulletin board.

FRIDAY, APRIL 12

Integration 447 AH 3:00 pm
"Free for all"

**Invited candidates for Mathematics Education position.
MATHMATICAL TIMETABLE

MONDAY, APRIL 15

TUESDAY, APRIL 16

Mathematics Colloquium
314 AH
Dr. Martin Taylor, Trinity College-Cambridge; Rings of integers and elliptic functions.

Coffee & Tea
321 AH
3:35 pm

Algebraic Number Theory
245 AH
12:00 pm
Dr. Martin Taylor, Trinity College-Cambridge; Rings of integers as algebras.

Commutative Algebra
247 AH
3:00 pm
To be announced.

Computation Theory
4-122 CSL
4:00 pm
P. Vaidya, will discuss "Superconcentrators, generalizers and generalized connectors with limited depth" by D. Dolev, C. Dwork, N. Pippenger and A. Widgerson.

Differential Geometry
241 AH
3:00 pm
Professor I.D. Berg, Recent progress on geodesics on manifolds with boundary, I

Geometric Potpourri
241 AH
2:00 pm
Professor George Francis, Computer geometry. Outline for a new course of study.

Group Theory
245 AH
3:00 pm
To be announced.

Logic
243 AH
2:00 pm
Professor Manuel Lerman, University of Connecticut; Invariant classes of high/low hierarchies.

Math/CS Seminar
238 DCL
2:00 pm
To be announced.

Max Newman Topology
243 AH
11:00 am
Professor Robert Craggs, Stallings-Gersten work on graphs, XI

Number Theory
247 AH
1:00 pm
Mr. Wen-Bin Zhang, The Chebyshev estimate for Beurling's generalized prime numbers, II

Pascal
108 AH
3:00 pm
See the mailroom bulletin board for further information.

Probability & Statistics
241 AH
11:00 am
To be announced.
WEDNESDAY, APRIL 17

Combinatorial Algorithms 237 DCL 4:00 pm
Alberto Apostolico, Purdue University, Longest common subsequence problems revisited.

Pi Mu Epsilon 314 AH 4:00 pm
Professor Lee Rubel, Universal functions, formulas, and equations.

Coffee & Tea 321 AH 3:30 pm

THURSDAY, APRIL 18

Mathematics Colloquium 314 AH 4:00 pm
Professor Yitzhak Katznelson, Institute of Mathematics, Hebrew University of Jerusalem visiting Stanford; Differentiable conjugation of circle diffeomorphisms.

Coffee & Tea 321 AH 3:15 pm

ABSTRACT: Review of ideas and results, starting with the notion of rotation number (Poincare, 1885) and Denjoy's conjugation theorem of 1934, and ending with recent results of Ornstein and the speaker which simplify and improve upon Herman's solution of the differentiable conjugation problem.

Classical Analysis 245 AH 1:00 pm
To be announced.

Commutative Algebra 247 AH 3:00 pm
To be announced.

Functional Analysis 245 AH 2:00 pm
No meeting this week.

Hyperbolic Geometry 243 AH 3:00 pm
Seminar cancelled until May 9.

Logic 243 AH 2:00 pm
To be announced.

Number Theory 247 AH 1:00 pm
Mr. Jeffrey Shallit, University of Chicago; New explicit formulae for certain infinite products.

PASCAL 108 AH 3:00 pm
See mailroom bulletin board.

FRIDAY, APRIL 19

Integration 447 AH 3:00 pm
"Free for all"
### MONDAY, APRIL 22

**Linear Programming Algorithms**
220 COM W
10:30 am
Professor Ken Kortanek, Carnegie Mellon University; Design of telecommunications queuing networks: scaling linear programming methods a la Karmarkar.

### TUESDAY, APRIL 23

**Mathematics Colloquium**
314 AH
4:00 pm
Professor Walter Hayman, University of London-Imperial College visiting UIUC; A property of the modular group.
Coffee & Tea
321 AH
3:15 pm

**Algebraic Number Theory**
245 AH
12:00 pm
To be announced.

**Commutative Algebra**
247 AH
3:00 pm
To be announced.

**Computation Theory**
4-122 CSL
4:00 pm
M. Sarrafzadeh and S. Madilla will present "Time space tradeoffs for computing functions using connectivity properties of their circuits" by M. Tompa.

**Differential Geometry**
241 AH
3:00 pm
Professor Paul Ehrlich, Lorentzian geodesibility.

**Geometric Potpourri**
241 AH
2:00 pm
No meeting this week.

**Functional Analysis**
247 AH
2:00 pm
Professor A.P. Robertson visiting from Murdoch University, Australia; Translation-bounded measures.

**Group Theory**
245 AH
3:00 pm
Professor John Walter, Why are there only a finite number of sporadic groups.

**Logic**
243 AH
2:00 pm
To be announced.

**Math/CS Seminar**
238 DCL
2:00 pm
To be announced.

**Max Newman Topology**
243 AH
11:00 am
Professor Robert Craggs, Stallings-Gersten work on graphs, XII

**Number Theory**
247 AH
1:00 pm
Professor Lee Rubel, Coherent families of polynomials. Note: This is also of interest to students of complex variables, and of differential equations.

**Probability & Statistics**
241 AH
11:00 am
Professor Thomas Salisbury, Purdue University; On increasing diffusion.
Mathematical Timetable

WEDNESDAY, APRIL 24

Combinatorial Algorithms 237 DCL 4:00 pm
Mr. Xiao Jun Shen, A new sufficient condition on the existence of Hamiltonian cycles in a graph.

THURSDAY, APRIL 25

Mathematics Colloquium 314 AH 4:00 pm
Professor Steve Fisher, Northwestern University; Quantitative Approximation Theory.

Coffee & Tea 321 AH 3:15 pm
ABSTRACT: This is a survey talk touching on high points in the history of quantitative approximation theory. Beginning with the work of Jackson, I shall trace the development of the topic up to some current results. This will be an expository talk.

Classical Analysis 245 AH 1:00 pm
To be announced.

Commutative Algebra 247 AH 3:00 pm
Dr. S.K. Bamba, On Clifford algebras, II

Functional Analysis 245 AH 2:00 pm
See Tuesday listing.

Hyperbolic Geometry 243 AH 3:00 pm
Seminar cancelled until May 9.

Logic 243 AH 2:00 pm
To be announced.

Number Theory 247 AH 1:00 pm
Discussion of number theory courses for Spring 1986. Persons interested in offering a course or attending one, please attend.

FRIDAY, APRIL 26

Integration 447 AH 3:00 pm
"Free for all"
### MATHEMATICAL TIMETABLE  
April 29-May 3, 1985

**MONDAY, APRIL 29**

**TUESDAY, APRIL 30**

<table>
<thead>
<tr>
<th>Event</th>
<th>Location</th>
<th>Time</th>
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<tbody>
<tr>
<td><strong>Mathematics Colloquium</strong></td>
<td>314 AH</td>
<td>4:00 pm</td>
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<tr>
<td>Professor Larry Smarr, Director, Nat'l Center for Supercomputing Applications; The supercomputer revolution.</td>
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<tr>
<td><strong>Coffee &amp; Tea</strong></td>
<td>321 AH</td>
<td>3:15 pm</td>
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<tr>
<td><strong>Algebraists Meeting</strong></td>
<td>245 AH</td>
<td>2:00 pm</td>
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<td>Meeting to decide on classes for the Spring '86 timetable.</td>
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<tr>
<td><strong>Commutative Algebra</strong></td>
<td>247 AH</td>
<td>3:00 pm</td>
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<tr>
<td>Professor M. Miyanishi, Purdue University; An algebra-topological characterization of affine space.</td>
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<tr>
<td><strong>Computation Theory</strong></td>
<td>4-122 CSL</td>
<td>4:00 pm</td>
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<tr>
<td>P. Czerwinski and G. G. Tscharner will present &quot;From expanders to better superconcentrators without cascading,&quot; by E. Shamir.</td>
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<tr>
<td><strong>Differential Geometry</strong></td>
<td>241 AH</td>
<td>3:00 pm</td>
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<tr>
<td>Professor Lazaro Recht, Simon Bolivar University; Connections with special curvatures.</td>
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<tr>
<td><strong>Geometric Potpourri</strong></td>
<td>241 AH</td>
<td>2:00 pm</td>
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<td>No meeting this week.</td>
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<tr>
<td><strong>Group Theory</strong></td>
<td>245 AH</td>
<td>3:00 pm</td>
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<tr>
<td>Professor John Walter, Why are there only a finite number of sporadic groups,II</td>
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<tr>
<td><strong>Logic</strong></td>
<td>243 AH</td>
<td>2:00 pm</td>
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<tr>
<td>Professor Jeanleah Mohrherr, NIU; The Sperschneider length problem.</td>
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<tr>
<td><strong>Math/CS Seminar</strong></td>
<td>238 DCL</td>
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<tr>
<td>To be announced.</td>
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<tr>
<td><strong>Max Newman Topology</strong></td>
<td>243 AH</td>
<td>11:00 am</td>
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<tr>
<td>Professor Robert Craggs, Stallings-Gersten work on graphs, XIII</td>
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<tr>
<td><strong>Number Theory</strong></td>
<td>247 AH</td>
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<tr>
<td>&quot;Free for all&quot;</td>
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<tr>
<td><strong>Probability &amp; Statistics</strong></td>
<td>241 AH</td>
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<tr>
<td>Professor Ditlev Monrad, Local times of random fields.</td>
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</tbody>
</table>
Mathematical Timetable

WEDNESDAY, MAY 1

Combinatorial Algorithms
To be announced.

THURSDAY, MAY 2

Mathematics Colloquium
Professor N. Jacobson, Yale; Some projective varieties defined by Jordan algebras.
ABSTRACT: An associative algebra $A$ with the new product $a \cdot b = (1/2)(ab+ba)$ is an example of a "Jordan algebra". For any Jordan algebra, the elements of rank one define an algebraic variety; so do the elements of norm zero. When $A$ is a central simple algebra we relate these varieties to the Brauer-Severi variety of $A$.

Classical Analysis
Professor W.K. Hayman, Imperial College; On Waring’s problem for analytic functions.

Commutative Algebra
Professor W. Haboush, A report on Oberwolfach.

Functional Analysis
No meeting this week.

Hyperbolic Geometry
Seminar cancelled until May 9.

Logic
To be announced.

Number Theory
Professor Dan Grayson, Lenstra’s method of factorization.

FRIDAY, MAY 3

Integration
"Free for all"
MATHMATICAL TIMETABLE

MONDAY, MAY 6

TUESDAY, MAY 7

Classical Analysis 241 AH 1:00 pm
Professor Joe Miles, On the growth of entire functions with radially distributed zeros.

Commutative Algebra 247 AH 3:00 pm
Professor W. Haboush, Etale slice.

Differential Geometry 241 AH 3:00 pm
No meeting this week.

Functional Analysis 247 AH 2:00 pm
Professor Haskell Rosenthal, University of Texas; Functional Hilbert sums.

Geometric Potpourri 241 AH 2:00 pm
No meeting this week.

Group Theory 245 AH 3:00 pm
Professor Graham Higman, Multilinear identities in Lie rings of Burnside groups, I

Logic 243 AH 2:00 pm
Professor Terry Millar, University of Wisconsin; Ehrenfeucht theories with hyperarithmetic models.

Math/CS Seminar 238 DCL 2:00 pm
To be announced.

Max Newman Topology 243 AH 11:00 am
Professor Robert Craggs, Stallings-Gersten work on graphs, XIV

Number Theory 247 AH 1:00 pm
Professor Dan Gryson, Lenstra's method of factorization.

Probability & Statistics 241 AH 11:00 am
No meeting this week.

WEDNESDAY, MAY 8

Combinatorial Algorithms 237 DCL 4:00 pm
No meeting this week.
THURSDAY, MAY 9

**Classical Analysis**
245 AH 2:00 pm
Professor Jill Pipher, ISU; A sharp inequality for double index square functions
(NOTE TIME CHANGE)

**Commutative Algebra**
245 AH 3:00 pm
To be announced. (NOTE ROOM CHANGE)

**Functional Analysis**
245 AH 2:00 pm
No meeting today, see Tuesday listing.

**Hyperbolic Geometry**
243 AH 3:00 pm
Professor John Ratcliffe, Hyperbolic Dehn surgery, VIII

**Logic**
243 AH 2:00 pm
Professor Terry Millar, University of Wisconsin; Coding undecidability in the structure of theories.

**Number Theory**
247 AH 1:00 pm
No meeting today.

FRIDAY, MAY 10

**Integration**
447 AH 3:00 pm
No meeting today.

**Topology Special Seminar**
243 AH 11:15 am
Dr. Richard Skora, Indiana University; The degree of a map between surfaces.
MATHWICAL TIMETABLE

MONDAY, MAY 6

TUESDAY, MAY 7

Classical Analysis
Professor Joe Miles, On the growth of entire functions with radially distributed zeros.

Commutative Algebra
Professor W. Haboush, Etale slice.

Differential Geometry
No meeting this week.

Functional Analysis
Professor Haskell Rosenthal, University of Texas; Functional Hilbert sums.

Geometric Potpourri
No meeting this week.

Group Theory
Professor Graham Higman, Multilinear identities in Lie rings of Burnside groups, I

Logic
Professor Terry Millar, University of Wisconsin; Ehrenfeucht theories with hyperarithmetic models.

Math/CS Seminar
To be announced.

Max Newman Topology
Professor Robert Craggs, Stallings-Gersten work on graphs, XIV

Number Theory
Professor Dan Gryson, Lenstra's method of factorization.

Probability & Statistics
No meeting this week.

WEDNESDAY, MAY 8

Combinatorial Algorithms
No meeting this week.
THURSDAY, MAY 9

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FRIDAY, MAY 10

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Dr. Richard Skora, Indiana University; The degree of a map between surfaces.