
THE 2026 GAINESVILLE NUMBER THEORY
CONFERENCE

ALLADI 70

March 18 – 22, 2016

University of Florida, Gainesville, FL 32611

Organizers: **George Andrews** (The Pennsylvania State University), **Frank Garvan** (University of Florida) and **Andrew Sills** (Georgia Southern University)

PROGRAM

Locations. All lectures will be in Little Hall.

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Wednesday

7:30AM – 8:30AM

WELCOME: REGISTRATION AND BREAKFAST REFRESHMENTS (LIT 225)

8:30AM – 9:35AM

WELCOME AND OPENING TALK (LIT 101)

Dorian Goldfeld, Columbia University

A Generalization of Dedekind's eta function for Hecke groups over a real quadratic field

9:40AM – 10:10AM

George E. Andrews, The Pennsylvania State University

Partition problems in the spirit of MacMahon

10:15AM – 10:45AM

Scott Ahlgren, University of Illinois

Modular forms modulo squares of primes

10:45AM – 11:00AM

BREAK

11:00AM – 11:30AM

Atul Dixit, Indian Institute of Technology Gandhinagar

Non-Rascoe partitions and a rank parity function associated with the Rogers-Ramanujan partitions

11:35AM – 12:05PM

Alexander Berkovich, University of Florida

Finite analogs of partition bias related to hook length two and a variant of Sylvester’s map

12:05PM – 1:20PM

LIT 225: LUNCH

1:20PM – 1:50PM

Jeff Lagarias, University of Michigan

Complex equiangular lines and orders of real quadratic fields

1:55PM – 2:25PM

Melvyn Nathanson, CUNY

Diversity, equity, and inclusion for problems in additive number theory

2:30PM – 3:00PM

Jesse Thorner, University of Illinois Urbana-Champaign

Tatuzawa’s theorem for Rankin–Selberg L -functions

3:00PM – 3:15PM

BREAK

3:15PM – 3:35PM (LIT 101)

Rupam Barman, Indian Institute of Technology Guwahati

Hook length inequalities for t -regular partitions

3:15PM – 3:35PM (LIT 109)

Bibekananda Maji, IIT Indore

Rademacher-type exact formula and higher order Turán inequalities for r -colored l -regular partitions

3:15PM – 3:35PM (LIT 113)

Bryden Cais, University of Arizona

Iwasawa theory of unramified geometric Z_p -extensions of function fields

3:15PM – 3:35PM (LIT 201)

Bernhard Heim, University of Cologne

Reframing the Structure and Zeros of Generalized D’Arcais Polynomials

3:15PM – 3:35PM (LIT 237)

Amod Agashe, Florida State University

The zeros of the Riemann zeta function and its generalization to modular forms

3:45PM – 4:05PM (LIT 101)

William Keith, Michigan Technological University

On a conjecture of Andrews and Bachraoui

3:45PM – 4:05PM (LIT 109)

Michael Mossinghoff, Center for Communications Research

Ideal solutions in the Prouhet-Tarry-Escott problem

3:45PM – 4:05PM (LIT 113)

Dongxi Ye, Beijing Normal-Hong Kong Baptist University

Central L -values of congruent number curves

3:45PM – 4:05PM (LIT 201)

Ankush Goswami, University of Texas Rio Grande Valley

Resurgence, Habiro elements and strange identities

3:45PM – 4:05PM (LIT 237)

M.P. Chaudhary, International Scientific Research and Welfare Organization,

New Delhi

On discrete measure and the Riemann hypothesis on functions fields

4:15PM – 4:35PM (LIT 101)

Louis Kolitsch, University of Tennessee Martin

Partition Results Related to a Special Case of Jacobi's Triple Product Identity

4:15PM – 4:35PM (LIT 109)

Philip Cuthbertson, Michigan Technological University

Joint Distributions of Hook Lengths in Integer Partitions

4:15PM – 4:35PM (LIT 113)

Jeffrey Yelton, Wesleyan University

Non-archimedean uniformization of superelliptic curves

4:15PM – 4:35PM (LIT 201)

Cruz A. Castillo, University of Illinois Urbana Champaign

Non-vanishing for quartic Hecke L-functions and elliptic curve L-functions

4:15PM – 4:35PM (LIT 237)

Glenn Bruda, University of Florida

Generalized polygonal number representations

4:35PM – 5:00PM

BREAK

5:00PM – 6:00PM

RAMANUJAN COLLOQUIUM

Maksym Radziwill, Courant Institute of Mathematical Sciences, New York

The Fyodorov-Hiary-Keating conjecture

6:30PM – 9:30PM

WELCOME RECEPTION: BULL GATOR DECK

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Thursday

7:45AM – 8:30AM

LIT 225: REGISTRATION AND BREAKFAST REFRESHMENTS

LIT 215 BOOK DISPLAYS

8:30AM – 9:00AM

RAMANUJAN COLLOQUIUM: SECOND LECTURE

Maksym Radziwill, Courant Institute of Mathematical Sciences, New York
Bias in quadratic Gauss sums

9:05AM – 9:35AM

Winnie Li, The Pennsylvania State University
Various aspects of hypergeometric functions

9:40AM – 10:10AM

Alex Dunn, Georgia Tech
Recent developments in non-vanishing for higher order Hecke L-functions

10:10AM – 10:30AM

BREAK

10:30AM – 11:00AM

Michael J Schlosser, University of Vienna
A bilateral extension of the Ramanujan function

11:05AM – 11:35AM

Nicolas Smoot, University of Vienna
Partition Congruences and Topology

11:40AM – 12:10PM

Paul Pollack, University of Georgia
How badly does unique factorization fail, normally?

12:10PM – 1:25PM

LIT 225: LUNCH

1:25PM – 1:55PM

David Zureick-Brown, Amherst College
Angle ranks of Abelian varieties

2:00PM – 2:30PM

Robert Vaughan, The Pennsylvania State University
Some remarks on ternary additive questions

2:30PM – 2:45PM

BREAK

2:55PM – 3:15PM (LIT 101)

Howard Cohl, National Institute of Standards and Technology
Connection formulas for Askey-Wilson polynomials and related expansions

2:55PM – 3:15PM (LIT 109)

Olav Richter, University of North Texas
Weighted recursions for Hurwitz class numbers

2:55PM – 3:15PM (LIT 113)

Prassanna Nand Jha, Indian Institute of Technology, Gandhinagar
Higher Order Dualities over Global Function Fields and Weighted Möbius Sums over $\mathbb{F}_q[T]$

2:55PM – 3:15PM (LIT 237)

Ayla Gafni, University of Mississippi
Rough numbers between consecutive primes

3:25PM – 3:45PM (LIT 101)

Brandt Kronholm, University of Texas Rio Grande Valley
Varieties of Congruences and Cranks for Partitions into Parts from a Finite Set

3:25PM – 3:45PM (LIT 109)

Erick Ross, Clemson University
Boundary CM points and Class Groups of Small Exponent

3:25PM – 3:45PM (LIT 113)

Joe Kramer-Miller, Lehigh University
On the diagonal and Hadamard grades of hypergeometric functions

3:25PM – 3:45PM (LIT 237)

Amita Malik, The Pennsylvania State University
The shifted convolution problem in function fields

3:55PM – 4:15PM (LIT 101)

Jena Gregory, University of Texas Rio Grande Valley
Combinatorial statistics witnessing an infinite family of congruences for a sum of partition functions

3:55PM – 4:15PM (LIT 109)

Hui Xue, Clemson University
Distribution of CM points on geodesics

3:55PM – 4:15PM (LIT 113)

Wissam Ghantous, University of Central Florida
A symmetric p -adic symbol for triples of modular forms

3:55PM – 4:15PM (LIT 237)

Krystian Gajdzica, Jagiellonian University
Rectangle partitions generalizing integer partitions

4:15PM – 4:30PM

BREAK

4:30PM – 5:30PM

ERDŐS MEMORIAL LECTURE

Peter Sarnak, Institute for Advanced Study, Princeton and Princeton University
Columbia University
On indefinite ternary quadratic forms

7:00PM

SMALL GROUP DINNERS

GARVAN PARTY AT GAINESVILLE WOMAN'S CLUB:

Christian Krattenthaler's Piano Performance

Doors open at 7 pm, piano performance (8PM-9PM) in honor of Krishna Alladi's 70th birthday.

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Friday

7:45AM – 8:30AM

LIT 225: REGISTRATION AND BREAKFAST REFRESHMENTS

LIT 215 BOOK DISPLAYS

8:30AM – 9:00AM

RAMANUJAN COLLOQUIUM: THIRD LECTURE

Maksym Radziwill, Courant Institute of Mathematical Sciences, New York
Automorphic approaches to the mixing conjecture of Michel-Venkatesh

9:05AM – 9:35AM

Jack Thorne, (zoom) University of Cambridge
Arithmetic statistics and the heights of rational points

9:40AM – 10:10AM

Richard Stanley, University of Miami
Sprout symmetric functions

10:10AM – 10:30AM

BREAK

10:30AM – 11:00AM

Frank Calegari, University of Chicago
A new proof that π is transcendental

11:05AM – 11:35AM

Rachel Pries, Colorado State University
Supersingular curves that are cyclic covers of the projective line

11:40AM – 12:10PM

Elena Mantovan, California Institute of Technology
Infinitely many primes of basic reduction for some abelian fourfolds

12:10PM – 1:25PM

LIT 225: LUNCH

1:25PM – 1:55PM

Amanda Folsom, Amherst College
q-series and quantum modularity

2:00PM – 2:30PM

Larry Rolin, Vanderbilt University
Inequalities for the partition function and other combinatorial sequences

2:35PM – 2:55PM

BREAK

2:55PM – 3:15PM (LIT 101)

Jimmy McLaughlin, West Chester University PA

q-extensions of formulae for π with free parameters

2:55PM – 3:15PM (LIT 109)

Rishabh Sarma, The Pennsylvania State University

Overpartition rank and crank differences in terms of Dedekind eta-quotients

2:55PM – 3:15PM (LIT 113)

Paul Schwartz, Stevens Institute of Technology

Constructing Totally Ramified Extra-Special p -Extensions of Local Fields and Resulting Galois Module Structure

3:25PM – 3:45PM (LIT 101)

Victor Moll, Tulane University

Integration can be reduced to solving small linear systems (thanks to Ramanujan)

3:25PM – 3:45PM (LIT 109)

Dandan Chen, Shanghai University

On the total number of ones associated with cranks of partitions modulo 11

3:25PM – 3:45PM (LIT 113)

Chadaphorn Kodsueb, Suranaree University of Technology, Thailand

Multiplication table with diagonal condition on the Gaussian integers

3:55PM – 4:15PM (LIT 101)

Hamza Yesilyurt, Bilkent University

Shifted Partition Identities with Distinct Parts

3:55PM – 4:15PM (LIT 109)

Amy Woodall, University of Illinois Urbana-Champaign

The Weil bound for generalized Kloosterman sums of half-integral weight

4:25PM – 4:45PM (LIT 101)

Larry Ericksen, NJ

Multicolor overpartitions in arbitrary bases - Number sequences and polynomial analogues

4:25PM – 4:45PM (LIT 109)

Walter Bridges, University of North Texas

Integer partitions and statistics for random representations of Lie algebras

4:45PM – 5:00PM

BREAK

5:00PM – 6:00PM

STRAUS MEMORIAL LECTURE

Carl Pomerance, Dartmouth College

The Erdős–Straus conjecture

6:30PM – 9:30PM
BANQUET – TOUCHDOWN TERRACE

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Saturday

7:45AM – 8:30AM
LIT 225: BREAKFAST REFRESHMENTS
LIT 215 BOOK DISPLAYS

8:30AM – 9:00AM
Ling Long, Louisiana State University
Atkin and Swinnerton-Dyer Congruences for meromorphic modular forms

9:05AM – 9:35AM
Ali K. Uncu, University of Bath, Department of Computer Science
A Weighted words study of MacMahon's and Russell's modulo 6 identities

9:40AM – 10:10AM
Ae Ja Yee, The Pennsylvania State University
On the number of t -hooks in self-conjugate and doubled distinct partitions

10:15AM – 10:45AM
Christian Krattenthaler, Universität Wien
Uvarov's formula — a thorough discussion

10:45AM – 11:00AM
BREAK

11:00AM – 11:30AM
Ruixiang Zhang, UC Berkeley
The Mizohata-Takeuchi Conjecture for convex hypersurfaces

11:35AM – 12:05PM
Madeline Dawsey, University of Texas at Tyler
Densities of Subsets of Primes in the Spirit of Alladi

12:05PM – 1:30PM
LIT 225: LUNCH

1:30PM – 1:50PM (LIT 101)
Rajat Gupta, Indian Institute of Technology Jodhpur, India
On the k th smallest part of a partition into distinct parts

1:30PM – 1:50PM (LIT 109)
Rong Chen, Shanghai Normal University
Congruence families for generalized Frobenius partitions

1:30PM – 1:50PM (LIT 113)
Lea Beneish, University of North Texas
Towards Artin's conjecture on p -adic forms in low degree

1:30PM – 1:50PM (LIT 237)

Kritika Aggarwal, Indraprastha Institute of Information Technology
Periodicity associated with a certain class of Arithmetical function of Chandrasekharan and Narasimhan type

2:00PM – 2:20PM (LIT 101)

Runqiao Li, University of Texas Rio Grande Valley
DSPP and polynomial identities implying Göllnitz and Gordon identities

2:00PM – 2:20PM (LIT 109)

Clayton Williams, University of Illinois at Urbana-Champaign
The Kohnen-Zagier Formula in Level 1 for Eta Multipliers

2:00PM – 2:20PM (LIT 113)

Wanlin Li, Vanderbilt University
Algebraic cycles associated to curves

2:00PM – 2:20PM (LIT 237)

Abhishek Jha, University of Illinois Urbana-Champaign
Linnik's problem for Euler's totient function

2:30PM – 2:50PM (LIT 101)

Jaebum Sohn, Yonsei University
Corners of $(t, tk \pm 1)$ -Core Partitions and Their Self-Conjugate Analogues

2:30PM – 2:50PM (LIT 113)

Iris Shi, University of Florida
A T -adic computation of the Cartier operator

2:30PM – 2:50PM (LIT 237)

Akshaa Vatwani, IIT Gandhinagar
Divisor-bounded multiplicative functions in arithmetic progressions

3:00PM – 3:20PM (LIT 101)

Yazan Alamoudi, University of Florida
A resolution of a conjecture related to the Alladi-Schur polynomials

3:00PM – 3:20PM (LIT 109)

Richard McIntosh, University of Regina
Mock theta conjectures for the sixth order mock theta functions

3:00PM – 3:20PM (LIT 113)

Darren Schmidt, University of Florida
Ekedahl-Oort Types and Newton Polygons of Abelian Covers of \mathbf{P}^1 Branched at Three Points

3:00PM – 3:20PM (LIT 237)

Zhiyu Zhang, Stanford University
Modularity of arithmetic theta series over finite fields

3:30PM – 3:50PM (LIT 101)

Rahul Kumar, Indian Institute of Technology Roorkee
Euler's theorem, and partition classes arising from parity, differences, and repeated smallest parts

3:30PM – 3:50PM (LIT 109)

Soon-Yi Kang, Kangwon National University

Quasi-Modularity and Prime Detection in MacMahon-Type Partition Variants

3:30PM – 3:50PM (LIT 113)

Shunsuke Tsuchioka, Institute of Science Tokyo

Schur partition theorems from the viewpoint of spin representations of the symmetric groups

3:30PM – 3:50PM (LIT 237)

Todd Molnar, University of Florida

Some Analytic Proofs of Alladi Density

4:00PM – 4:20PM (LIT 101)

James Sellers, University of Minnesota Duluth

Arithmetic properties of MacMahon-type sums of divisors: the odd case

4:00PM – 4:20PM (LIT 109)

Jonathan Bradley-Thrush, Universidade de Lisboa

A classical method with applications to q -series

4:20PM – 4:30PM

BREAK

4:30PM – 5:30PM

ALLADI RAMAKRISHNAN MEMORIAL LECTURE

Sergei Suslov, Arizona State University

One century of the wave mechanics discovery by Louis de Broglie, Werner Heisenberg, Erwin Schrödinger, and Paul A.M. Dirac

5:45PM AND 6:15PM

BUS PICK UP

6:30PM – 9:00PM

ALLADI DINNER: GAINESVILLE WOMAN'S CLUB

Sunday

7:45AM – 8:30AM

LIT 225: BREAKFAST REFRESHMENTS

LIT 215 BOOK DISPLAYS

8:30AM – 8:50AM (LIT 101)

Avi Mukhopadhyay, University of Florida

Identities for Mock Modular Forms

8:30AM – 8:50AM (LIT 109)

Timothy Huber, University of Texas Rio Grande Valley

Counting holomorphic modular forms generated by quotients of Klein forms

8:30AM – 8:50AM (LIT 113)

Sroyon Sengupta, (zoom) University of Florida

Higher order dualities between prime ideals

9:00AM – 9:20AM (LIT 101)

Jayashree Kalita, Vanderbilt University

From a Conjecture of Andrews to Almost Alternating Sign Patterns

9:00AM – 9:20AM (LIT 109)

Gaurav Bhatnagar, RamanujanExplained.org

Ramanujan and log derivatives

9:00AM – 9:20AM (LIT 113)

Badri Vishal Pandey, (zoom) University of Cologne

Quasimodularity and Limiting Behavior for Variations of MacMahon Series

9:30AM – 9:50AM (LIT 101)

Olivia Beckwith, Tulane University

A modular framework for generalized Hurwitz class numbers

9:30AM – 9:50AM (LIT 109)

Kagan Kursungoz, Sabanci University

A combinatorial construction of Russell's series for CMPP partitions

9:30AM – 9:50AM (LIT 113)

Andrew Sills, (zoom) Georgia Southern University

The Rogers–Ramanujan–Slater Database

10:00AM – 10:20AM (LIT 101)

David Metacarpa, Amherst College

Antiquantum q -series identities and mock theta functions

10:00AM – 10:20AM (LIT 109)

Aritram Dhar, University of Florida

On Glaisher's Partition Theorem

10:00AM – 10:20AM (LIT 113)

Robert Schneider, (zoom) Michigan Technological University

Partition-theoretic model of prime distribution

10:30AM – 10:50AM (LIT 101)

Koustav Banerjee, University of Cologne, Germany

Inequalities for arithmetic sequences via hyperbolicity of Jensen polynomials

10:30AM – 10:50AM (LIT 109)

Dennis Eichhorn, University of California, Irvine

Infinite Products that Enjoy a Curious Self-Convolution Property

10:50AM – 11:05AM

BREAK

11:05AM – 11:35AM

Frank Thorne, University of South Carolina

6-torsion in class groups of quadratic fields

11:40AM – 12:10PM

Yunqing Tang, UC Berkeley

The arithmetic of power series and applications to irrationality

12:15PM – 12:45PM

Carsten Schneider, RISC, Johannes Kepler University Linz

Symbolic summation and asymptotics for the partition function

12:45PM

LIT 225: LUNCH AND CONFERENCE END

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