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# QUADRATIC FORMS, SUMS OF SQUARES, THETA FUNCTIONS AND INTEGRAL LATTICES CONFERENCE

#### March 11 - 14, 2009

University of Florida, Gainesville, FL 32611

#### SCHEDULE

**Location**. All lectures are in Little Hall Room 101. Refreshments will be in Little Hall Room 339, which is also known as the Atrium.

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#### Wednesday, March 11, 2009

9:00AM - 9:50AM **Noam Elkies**, Harvard University Weighted theta functions, and a coding analog

10:00AM - 10:20AM **Ryan Skip Garibaldi**, Emory University Vanishing of trace forms on Lie algebras

10:30ам - 11:00ам **BREAK** 

11:00AM - 11:50AM Jonathan Hanke, University of Georgia at Athens The 290-Theorem and representing numbers by quadratic forms

12:00рм - 2:00рм **LUNCH** 

2:00PM - 2:20PM Guillermo Mantilla, University of Wisconsin Integral trace forms associated to cubic extensions

2:30PM - 2:50PM John Voight, University of Vermont Characterizing quaternion rings

3:00PM - 3:20PM Gabriele Nebe, RWTH Aachen, Germany Automorphism groups of Type II codes 3:30рм - 4:00рм **BREAK** 

4:00PM - 4:20PM Byungchan Kim, University of Illinois, Urbana Combinatorics of partial theta functions

4:30PM - 4:50PM Jaebum Sohn, Yonsei University, Korea / University of Illinois Character analogues of theorems of Ramanujan, Koshliakov and Guinand

5:10PM - 6:00PM Akshay Venkatesh, Stanford University Geometry of Numbers, Old and New

7:00PM - 9:00PM BANQUET at the Friends of the Music Room

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## Thursday, March 12, 2009

9:00AM - 9:50AM Raman Parimala, Emory University Isotropy of quadratic forms over function fields of p-adic curves

10:00AM - 10:20AM Hershel Farkas, Hebrew University, Jerusalem Theta Constant Identities and Number Theory

10:30ам - 11:00ам **BREAK** 

11:00AM - 11:50AM George Andrews, Pennsylvania State University Parity in Partition Identities

2:00PM - 2:50PM **Robert Griess**, University of Michigan *Barnes-Wall Lattices and their Cousins* 

3:00PM - 3:20PM Hideyo Sasaki, Otemae College, Itami, Japan Quaternary universal forms over  $\mathbf{Q}(\sqrt{13})$ 

3:30рм - 4:00рм **BREAK** 

4:00PM - 4:20PM Jeremy Rouse, University of Illinois, Urbana Bounds for the coefficients of powers of the  $\Delta$ -function 4:30PM - 4:50PM **Ae Ja Yee,** Pennsylvania State University Parity Problems in Partitions

5:00PM - 5:30PM Kagan Kursungoz, Pennsylvania State University Parity Considerations in Andrews-Gordon Identities

7:30PM - 10:00PM **PARTY** at the home of Krishna and Mathura Alladi

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### Friday, March 13, 2009

9:00AM - 9:50AM Rainer Schulze-Pillot, Saarland University, Saarbruecken Representation of quadratic forms

10:00AM - 10:20AM Roger Baker, Brigham Young University The values of quadratic forms at squarefree points

10:30ам - 11:00ам **BREAK** 

11:00AM - 11:50AM Ken Ono, University of Wisconsin Heegner divisors, L-functions and Maass forms

12:00рм - 2:00рм **LUNCH** 

 $2{:}00{\rm PM}$  -  $2{:}50{\rm PM}$  John Thompson , University of Florida and Cambdridge Dirichlet Series and SL(2,Z)

3:00PM - 3:20PM Amanda Folsom, University of Wisconsin q-series and weight 3/2 Maass forms

3:30рм - 4:00рм **ВREAK** 

4:00PM - 4:20PM **Riad Masri**, University of Wisconsin Equidistribution of Heegner points and the partition function

4:30PM - 4:50PM Atul Dixit, University of Illinois at Urbana-Champaign Analogues of a transformation formula of Ramanujan 5:00PM - 5:30PM Heiko Todt, Pennsylvania State University Asymptotic formulas for partitions into (distinct) k-th powers

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#### Saturday, March 14, 2009

9:00AM - 9:50AM Bruce Berndt, University of Illinois, Urbana Ramanujan's Contributions to Theta Functions

10:00AM - 10:20AM Karl Mahlburg, MIT Asymptotics for crank and rank moments

10:30ам - 11:00ам **BREAK** 

11:00AM - 11:50AM **Stephen C. Milne,** The Ohio State University Sums of squares, the Leech lattice, and new formulas for Ramanujan's tau function and other classical cusp forms

12:00рм - 2:00рм LUNCH

2:00PM - 2:20PM Sander Zwegers, University College Dublin Multivariable Appell functions and non-holomorphic modular forms

2:30PM - 2:50PM **Richard McIntosh**, University of Regina, Canada Divisor sums and theta functions

3:00PM - 3:20PM James Sellers, Pennsylvania State University Elementary proofs of parity results for 5-regular partitions

3:30рм - 4:00рм **BREAK** 

4:00PM - 4:20PM Andrew Sills, Georgia Southern University A new look at some partition identities of Goellnitz

4:30PM - 4:50PM **Michael Rowell,** Pacific University *Obtaining New Indefinite Quadratic Forms*