ALESSANDRA PANTANO

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POSITIONS

Lecturer / Assistant Specialist	2007-present	**University of California at Irvine**
H. C. Wang Assistant Professor	2004-2007	**Cornell University**

EDUCATION

Ph.D. in Mathematics	Nov. 2004	**Princeton University** *Advisor:* David A. Vogan, Jr. *Thesis:* Weyl group representations and signatures of intertwining operators
Visiting Student	2002-2004	**Massachusetts Institute of Technology**
Master of Arts	Nov. 2001	**Princeton University**
Laurea (U.S. Equivalent: M.S.) Mathematics *110/110 summa cum laude*	July 1999	**Universita' di Roma Tor Vergata, Italy** *Advisor:* Massimo A. Picardello *Thesis:* The unitary dual of *SL(2,R)*

TEACHING AWARDS

Mathematics Department Junior Faculty Teaching Award	2006	Cornell University
Engineering Council Excellence in Teaching Award	2002	Princeton University

GRANTS

"Atlas of Lie Groups" FRG Grant	2005-2009	NSF through the American Institute of Mathematics *(senior personnel)*

TEACHING EXPERIENCE

University of California at Irvine	W08-S09	**Calculus** (2B) **Introduction to Rings and Fields** (120B) **Boolean Algebra/Logics** (6B)
	S10	**Introduction to Linear Algebra** (3A) **Infinite series/Linear Algebra** (2J)
Cornell University	F04-F06	**Second Semester Calculus for Engineers** (192) **Representation Theory** (739) **Honors Calculus II** (122) **Linear Algebra** (221)
Princeton University	S02	**Linear Algebra** (202)

RESEARCH INTERESTS

Representation Theory AMS Code 22E45 Unitary Dual of Real Reductive Groups

RESEARCH PUBLICATIONS

Unitary Genuine Principal Series of the Metaplectic Group
In: AMS Representation Theory, 14 (2010), 201-248 (with Annegret Paul and Susana Salamanca-Riba)

The Omega-Regular Unitary Dual of the Metaplectic Group of Rank 2
In: AMS Contemporary Mathematics, 467 (2008), 1-48 (with Annegret Paul and Susana Salamanca-Riba)

Unitarizable Minimal Principal Series of Reductive Groups
In: AMS Contemporary Mathematics, 472 (2008), 63-136 (with Dan Barbasch and Dan Ciubotaru)

PROFESSIONAL SERVICE

Member of the "Atlas of Lie Groups", 2004-present
*(The Atlas of Lie groups and Representations is a collaborative research project aimed at understanding representations of semi-simple Lie groups over real and p-adic fields; c.f. **http://www.liegroups.org**)*

Co-organizer of the Special Session on Representations of Real and P-adic Lie Groups, 2008 AMS Fall Central Section Meeting, Kalamazoo, MI, Oct. 17-19, 2008

Member of the Teaching Committee, Cornell University, Academic Year 2006-2007
(The Teaching Committee coordinates issues relative to teaching.)

Member of the Curriculum Committee, Cornell University, Academic Year 2005-2006
(The Curriculum Committee rules on proposals for new courses and curriculum modifications for existing ones.)

Reviewer for the journal *Advances in Mathematics*, 2005-current

GENDER EQUITY ACTIVITIES: *closing the gap between men and women in science*

Presenter for the "2007 AWM Workshop for Women Graduate Students and Recent Ph.D.s", New Orleans, LA, 2007

Panelist for the Women in Science Seminar "Subfield Action", Institute for Advanced Study, Princeton, NJ, 2005

Presenter for the "First Noetherian Ring Meeting", Princeton Univeristy, Princeton, NJ, 2002

CONFERENCE TALKS (invited speaker)

Unitarizable principle series of F4, Structure and Representations of Exceptional Groups, Banff International Research Station for Mathematical Innovation and Discovery (BIRS), July 2010

Complementary series of split real groups, Representation Theory of Real Reductive Groups, University of Utah, Salt Lake City, Utah, July 2009

Unitary genuine principal series of the metaplectic group, Representation Theory XI, Interuniversity Centre, Dubrovnik, Croatia, June 2009

Unitarity of minimal principal series, Lie Theory and Geometry: The Mathematical Legacy of Bertram Kostant, University of British Columbia, Vancouver, BC, Canada, May 2008

A step towards the determination of the unitary dual, Structure, Geometry and Symbolic Computation of Algebraic Groups and Symmetric Spaces, AMS National Meetings, San Diego, CA, January 2008

Methods for studying complementary series of split groups, Representation Theory and Theta Correspondence, AMS National Meetings, New Orleans, LA, January 2007

WORKSHOP TALKS (in connection to the "*Atlas of Lie Groups*")

Subquotients of minimal principal series, "Atlas of Lie Groups" AIM workshop, American Institute of Mathematics (AIM), Palo Alto, CA, July 2008

Multiplicity of K-types in principal series, "Atlas of Lie Groups" winter meeting, MIT, Cambridge, MA, March 2007

On the double cover of split F4 and its petite K-types, "Atlas of Lie Groups" AIM workshop, AIM, Palo Alto, CA, July 2006

Petite and relevant K-types for exceptional groups, "Atlas of Lie Groups" AIM workshop, AIM, Palo Alto, CA, July 2005

Unitarity of non-spherical principal series, "Atlas of Lie Groups" AIM workshop, AIM, Palo Alto, CA, July 2005

On the construction of petite K-types, "Atlas of Lie Groups" AIM workshop, AIM, Palo Alto, CA, July 2004

SELECTED SEMINAR TALKS

On the unitary dual of classical and exceptional real split groups, MIT Lie Group Seminar, MIT, Cambridge, MA, March 2010

Weyl group representations and unitarity of spherical representations, University of Windsor Colloquium Series, University of Windsor, Windsor, ON, Canada, October 2008

Unitary representations of real split groups, Representation Theory Seminar, University of Utah, Salt Lake City, UT, December 2007

Excursions in unitary representation theory, Algebra and Analysis Seminar, New Mexico State University, Las Cruces, NM, November 2007

Complementary series for real reductive groups, Queen's Algebraic Geometry Seminar, Queen's Univeristy, Kingston, ON, Canada, April 2007

On the complementary series of the double cover of F4, Cornell Lie Groups Seminar, Cornell University, Ithaca, NY, March 2006

The geometry of conjugacy classes of nilpotent matrices, Oliver Club Talk, Cornell University, Ithaca, NY, April 2005

The non-spherical unitary dual of real split groups, Cornell Lie Groups Seminar, Cornell University, Ithaca, NY, September 2004

Weyl group representations and signatures of intertwining operators, Representation Theory Seminar, University of Massachusetts at Amherst, May 2004

The classification of nilpotent orbits by means of weighted Dynkin diagrams, MIT Student Seminar in Representation Theory, MIT, Cambridge, MA, October 2003