

## Alessandra Pantano

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Mathematics  
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### Professional Preparation

- PhD, Princeton University, 2004.  
Mathematics  
Dissertation Title: Weyl groups representations and signatures of intertwining operators  
Advisor: Vogan, D. A.
- Visiting student, Massachusetts Institute of Technology, (September 2002 - May 2004).  
Emphasis: Mathematics
- MA, Princeton University, 2001.  
Major: Mathematics
- Laurea, *Summa cum laude*, Universita' di Roma Tor Vergata, 1999.  
Major: Mathematics  
Dissertation Title: The unitary dual of  $SL(2, \mathbb{R})$   
Advisor: Picardello, M. A.

### Appointments

- Lecturer PSOE, Department of Mathematics, UC Irvine (2010-Present).
- Lecturer and Assistant Specialist, Department of Mathematics, UC Irvine (2007-2010).
- H.C. Wang Assistant Professor (Postdoctoral Fellow), Department of Mathematics, Cornell University (July 2004 - June 2007).

### Awards and Honors

- Outstanding Contribution to Undergraduate Education Award for the Department of Mathematics, School of Physical Sciences, UCI. (June 2014).
- Teaching Award, Department of Mathematics, UCI. (June 2014).
- Junior Faculty Teaching Award, Cornell University. (June 2006).
- Engineering Council Excellence in Teaching Award, Princeton University. (May 2002).

## RESEARCH

### Publications

#### **Conference/Workshop/Symposium Proceedings**

1. Hoke, K., Pantano, A., Zarrouk, M., Zeleke, A. (2014). Institutional support for undergraduate research. *The Trends in Undergraduate Research in Mathematical Sciences (TURMS) Conference*, Vol. 7, (pp. 355–362). CA, United States.

#### **Journal Articles, Peer-Reviewed**

5. Pantano, A., Paul, A., Salamanca Riba, S. (2014). Unitary principal series of split orthogonal groups. *Pacific Journal of Mathematics*, 271(2), 479-510.
4. Pantano, A., Paul, A., Salamanca Riba, S. (2011). The genuine omega-regular unitary dual of the metaplectic group. *Canadian Journal of Mathematics*, 64, 669-704.
3. Pantano, A., Paul, A., Salamanca Riba, S. (2010). Unitary Genuine Principal Series of the Metaplectic Group. *AMS Representation Theory*, 14 (2010), 201-248.
2. Pantano, A., Paul, A., Salamanca Riba, S. (2008). The Omega-Regular Unitary Dual of the Metaplectic Group of Rank 2. *AMS Contemporary Mathematics*, 467 (2008), 1-48.
1. Pantano, A., Barbasch, D., Ciubotaru, D. (2008). Unitarizable Minimal Principal Series of Reductive Groups. *AMS Contemporary Mathematics*, 472 (2008), 63-136.

### Presentations Given

Pantano, A. (Author), Tseng, L. S. (Presenter & Author), MAA Mathfest, "Increasing Diversity in the Classrooms: A Path towards Inclusion in Mathematics," Washington, DC. (August 2015).

Pantano, A. (Presenter & Author), Forero, A. (Author), Tseng, L.-S. (Author), MAA Mathfest, "Seeding mathematical Interest in inner-city Latino students," Washington, DC. (August 2015).

Pantano, A., Pacific Summer Unsolved Mathematics Seminar (PSUMS), "Classification of Frieze groups," Fullerton College, Fullerton, CA. (June 2015).

Pantano, A., The Legacy of R. L. Moore - IBL conference, "Exploring Frieze Patterns," Austin, TX. (June 2015).

Pantano, A. (Presenter & Author), Sho, S. (Presenter & Author), UCI Anteater Mathematics Club, "A hands-on introduction to identification spaces," Irvine, CA. (February 2015).

Pantano, A. (Presenter & Author), Kelleher, C. (Presenter & Author), Joint Mathematics Meeting, "Conveying group theory concepts to middle schoolers at the UCI Math Circle," San Antonio, TX. (January 2015).

Pantano, A., Joint Mathematics Meeting (MAA Poster Session on Outreach), "Increasing college preparedness for Latino students through mathematical enrichment and parental involvement," San Antonio, TX. (January 2015).

Pantano, A. (Presenter & Author), Zarate, E. (Presenter & Author), ASHE (Association for the Study of Higher Education) Poster Session, "The influence of AP calculus on persistence of math majors," Panel: Poster session, Washington, DC. (November 2014).

- Pantano, A. (Presenter & Author), Anzaldo, L. (Presenter & Author), Thomas, A. (Presenter & Author), UCI Graduate Students Seminar, "Assessment in mathematics courses," Irvine, CA. (November 2014).
- Pantano, A., UCI Graduate Students Seminar, "Engaging students in the classroom," Irvine, CA. (October 2014).
- Pantano, A., UCI Graduate Students Seminar, "How students learn," Irvine, CA. (October 2014).
- Pantano, A. (Presenter & Author), Fider, N. (Presenter & Author), Kelleher, C. (Presenter & Author), Sullivan, R. (Presenter & Author), MAA Mathfest, "Hands-on exploration of topological invariants," Portland, OR. (August 2014).
- Pantano, A., MAA Mathfest, "Research communities as a vehicle to boost student's interest in mathematical research," Portland, OR. (August 2014).
- Pantano, A., MAA Mathfest, "Strategies to progressively increase students' intellectual engagement in the learning of abstract algebra," Portland, OR. (August 2014).
- Pantano, A. (Presenter & Author), Ma, T. (Presenter & Author), MAA Mathfest, "The UCI Math Circle: Afternoons of Mathematical Investigations for Middle School and High School Students," Portland, OR. (August 2014).
- Pantano, A., Pacific Summer Unsolved Mathematics Seminar (PSUMS), "A hands-on introduction to topological invariants," Fullerton College, Fullerton, CA. (July 2014).
- Pantano, A. (Presenter & Author), Fider, N. (Presenter & Author), Kelleher, C. (Presenter & Author), The Legacy of R. L. Moore - IBL conference, "Embracing beauty: Learning symmetry through art in grade school and beyond," Denver, CO. (July 2014).
- Pantano, A., Joint Mathematics Meeting (MAA Poster Session on Outreach), "The UCI Math Circle: Afternoons of mathematical investigations," Baltimore, MD. (January 2014).
- Pantano, A., UCI Anteater Mathematics Club, "A hands-on introduction to symmetry," Irvine, CA. (January 2014).
- Pantano, A., Pacific Summer Unsolved Mathematics Seminar (PSUMS), "Groups of isometries," Fullerton College, Fullerton, CA. (June 2013).
- Pantano, A., Joint Mathematics Meeting, "Exploring Escher's periodic drawings: A tour of mathematical ideas," San Diego, CA. (January 2013).
- Pantano, A., MAA Mathfest, "Engaging students in mathematical conversations: From book clubs to freshman seminars," Lexington, OH. (August 2011).
- Pantano, A., One-week long advanced course on "Nilpotent orbits in complex classical semisimple Lie algebras", XV Latin American School of Mathematics, Córdoba, Argentina. (May 2011).
- Pantano, A., "Symmetries of Finite Planar Figures," UCI Anteaters Math Club, Irvine, CA. (January 2011).
- Pantano, A., MIT Lie Group Seminar, "On the unitary dual of classical and exceptional real split groups," MIT, Cambridge, MA. (March 2010).

- Pantano, A., Representation Theory of Real Reductive Groups, "Complementary series of split real groups," University of Utah, Salt Lake City, Utah. (July 2009).
- Pantano, A., Representation Theory XI, "Unitary genuine principal series of the metaplectic group," Interuniversity Centre, Dubrovnik, Croatia. (June 2009).
- Pantano, A., University of Windsor Colloquium Series, "Weyl group representations and unitarity of spherical representations," University of Windsor, Windsor, ON, Canada. (October 2008).
- Pantano, A., "Atlas of Lie Groups" AIM workshop, "Subquotients of minimal principal series," American Institute of Mathematics (AIM), Palo Alto, CA. (July 2008).
- Pantano, A., Lie Theory and Geometry: The Mathematical Legacy of Bertram Kostant, "Unitary genuine principal series of the metaplectic group," University of British Columbia, Vancouver, BC, Canada. (May 2008).
- Pantano, A., Structure, Geometry and Symbolic Computation of Algebraic Groups and Symmetric Spaces, "A step towards the determination of the unitary dual," AMS National Meetings, San Diego, CA. (January 2008).
- Pantano, A., Representation Theory Seminar, "Unitary representations of real split groups," University of Utah, Salt Lake City, Salt Lake City, UT. (December 2007).
- Pantano, A., Algebra and Analysis Seminar, "Excursions in unitary representation theory," New Mexico State University, Las Cruces, NM. (November 2007).
- Pantano, A., Queen's Algebraic Geometry Seminar, "Complementary series for real reductive groups," Queen's University, Panel: Kingston, ON, Canada. (April 2007).
- Pantano, A., "Atlas of Lie Groups" winter meeting, "Multiplicity of K-types in principal series," MIT, Cambridge, Ma. (March 2007).
- Pantano, A., Representation Theory and Theta Correspondence, "Methods for studying complementary series of split groups," AMS National Meetings, New Orleans, LA. (January 2007).
- Pantano, A., "Atlas of Lie Groups" AIM workshop, "On the double cover of split  $F_4$  and its petite K-types," American Institute of Mathematics (AIM), Palo Alto, CA. (July 2006).
- Pantano, A., Cornell Lie Groups Seminar, "On the complementary series of the double cover of  $F_4$ ," Cornell University, Ithaca, NY. (March 2006).
- Pantano, A., "Atlas of Lie Groups" AIM workshop, "Petite and relevant K-types for exceptional groups," American Institute of Mathematics (AIM), Palo Alto, CA. (July 2005).
- Pantano, A., "Atlas of Lie Groups" AIM workshop, "Unitarity of non-spherical principal series," American Institute of Mathematics (AIM), Palo Alto, CA. (July 2005).
- Pantano, A., Oliver Club Talk, "The geometry of conjugacy classes of nilpotent matrices," Cornell University, Ithaca, NY. (April 2005).
- Pantano, A., Cornell Lie Groups Seminar, "The non-spherical unitary dual of real split groups," Cornell University, Ithaca, NY. (September 2004).
- Pantano, A., "Atlas of Lie Groups" AIM workshop, "On the construction of petite K-types," American Institute of Mathematics (AIM), Palo Alto, CA. (July 2004).

Pantano, A., Representation Theory Seminar, "Weyl group representations and signatures of intertwining operators," University of Massachusetts at Amherst, Amherst, MA. (April 2004).

Pantano, A., MIT Student Seminar in Representation Theory, "The classification of nilpotent orbits by means of weighted Dynkin diagrams," MIT, Cambridge, MA. (October 2003).

## Grants

`Innovate from the Start: Engaging Engineering and Computer Science Undergraduates', Co-PI, NSF IUSE, \$1,800,000 (October 2014 - September 2018)

`Mighty Math: Fuel for the curious minds', PI, Mary P. Dolciani Halloran Foundation, through the American Institute of Mathematics, \$6,000 (March 2015 – June 2016)

`Increasing College Preparedness in Latino Students Through Mathematics Enrichment and Parents Engagement', PI, ADVANCE Spirit Grant, through the American Institute of Mathematics, \$5,000 (January 2015 – December 2015)

`The UCI Math Circle: Exploring, Embracing and Enjoying Mathematics', PI, Mary P. Dolciani Halloran Foundation, through American Institute of Mathematics, \$5,995 (September 2014 – June 2015)

`Nurturing Mathematical Creativity: The UCI Math Circle for middle Schools Students', PI, Mathematical Sciences Research Institute (MSRI), \$2,000 (September 2013 – December 2014)

`The UCI Math Circle: Afternoons of Mathematical Investigations', PI, Mary P. Dolciani Halloran Foundation, through American Institute of Mathematics, \$5,996 (April 2013 - November 2014).

`Exploring symmetry: A voyage into the mathematical world of Escher's art and Sudoku puzzles', PI, National Research Experience for Undergraduates Program (NREUP), NSF and NSA, through Mathematical Association for America, \$27,500 (July 2012 - September 2012).

`Irvine Area Math Modelers (IAMM): Training High School Mathematical Modeling Teams', Collaborator, Mary P. Dolciani Halloran Foundation, through the American Institute of Mathematics, \$5,723 (January 2011 – June 2012)

`AWM Sonia Kovalevsky High School Mathematics Day', Collaborator, NSF, through Association for Women in Mathematics, \$2,600 (May 2011)

## Professional Training

### Related to Teaching

- MAA Minicourse, 'Getting mathematics majors to think outside the box' (January 2011)
- MAA PREP Workshop 'Using Inquiry Based Learning (IBL) in Second-Year Calculus and Courses for Prospective Teachers' (June 2012)
- The Legacy of R. L. Moore - 'IBL conference' (June 2013, June 2014, June 2015)
- MAA Minicourse, 'Using Videos of Students Developing Proofs to Guide Teaching and Learning' (August 2015).

### Related to Undergraduate Research

- MAA minicourse on 'Getting students involved in undergraduate research' (January 2011)

- 'TURMS (Trends in Undergraduate Research in Mathematical Sciences) conference' (October 2012)
- IAS/PCMI 'Workshop for Mentors of Undergraduate Mathematics Research by Minority Students' (July 2012)
- Mount Holyoke conference on 'New Direction for Mathematical Research Experiences for Undergraduates (REUs)' (June 2013).

## **Professional Memberships**

Association of Mathematics Teacher Educators. (November 30, 2013 - Present).

Mathematical Association of America. (2010 - Present).

## PEDAGOGICAL ACTIVITIES

### Teaching

#### Courses taught at the University of California, Irvine

- Introduction to Galois Theory (MATH 120C, Spring 2013)
- Intro Rings/Fields (MATH 120B, Winter 2015, Spring 2015, Winter 2014, Spring 2013, Spring 2009)
- Intro Group Theory (MATH 120A, Fall 2014, Fall 2013, Fall 2012, Winter 2012)
- Intro Abstract Math (MATH 13, Winter 2015, Fall 2014, Spring 2014, Winter 2014, Fall 2013, Winter 2013, Fall 2012, Spring 2012, Winter 2012, Fall 2011)
- Single Variable Calculus (MATH 2A, Spring 2014, Winter 2013, Fall 2011, Spring 2011, Winter 2011, Fall 2010)
- Single Variable Calculus (MATH 2B, Fall 2010, Spring 2009, Winter 2008)
- Multivariable Calculus (MATH 2D, Spring 2012)
- Mathematics for Economists (MATH 2D, Winter 2011)
- Infinite series Linear Algebra (MATH 2J, Spring 2010)
- Introduction to Linear Algebra (MATH 3A, Spring 2010)
- Boolean Algebra/ Logic (MATH 6B, Winter 2008)

#### Courses taught at Cornell University

- Second Semester Calculus for Engineers (MATH 192, Fall 2004)
- Topics in Algebra: Representation Theory (MATH 739, Spring 2006)
- Honors Calculus II (MATH 122, Spring 2005)
- Linear Algebra (MATH 221, Fall 2005)

#### Courses taught at Princeton University

- Linear Algebra (MATH 202, Spring 2002)

### Special Pedagogical Activities

#### New format for the 'Introduction to Proofs' Course

- On-going revision of content and style (September 2011 - Present).
- Co-author of course lecture notes, joint with Dr. Neil Donaldson, currently replacing the textbook (Spring 2014).
- Co-author of thought-provoking online quizzes, joint with TA Andres Forero, to enhance student understanding of the most difficult concepts and offer students a chance for formative assessment (Winter 2014).

#### Active Learning in Mathematics, Promoter

- Introduced active learning techniques in the teaching of 'Introduction to proofs', 'Group theory and 'Ring theory'. Example includes proof portfolios, concept maps, warm-ups questions, end-of-the-quarter conjecture project, weekly Friday projects (student presentations), etc. (June 2012 - Present).
- Taught an IBL (inquiry based learning) course in Galois Theory.
- Promoted cooperative learning in mathematics through study sessions and challenging group homework assignments.
- Used i-clickers in 'Calculus' courses, to enhance students participation. (Fall 2010)

### Undergraduate Research

#### Undergraduate research supervisor

- NREUP (MAA National Research Experience for Undergraduates) Summer 2012 (4 students).

- Math 199s.  
Winter 2015 (1 student), Fall 2014 (3 students), Summer 2014 (1 student), Spring 2014 (8 students), Winter 2014 (1 student), Fall 2013 (2 students), Summer 2013 (2 students), Spring 2013 (6 students), Summer 2012 (1 student), Spring 2012 (1 student), Winter 2012 (3 students), Fall 2011 (2 students).

#### **Other activities to promote undergraduate research**

- Co-author of a successful proposal to request funding from a donor to support undergraduate research in mathematics, joint with Dr. Z. Lu (Aug 2014). Administrator of the funding for research fellowships and student travel allowances (Spring 2015).
- Organizer of an afternoon celebration of undergraduate research where UCI math majors shared their research experiences and presented research results (May 2015).
- Organizer of an REU workshop to inform UCI math majors about research opportunities in mathematics (Feb 2013, Jan 2014, Jan 2015).

## **Mentoring and Nurturing Undergraduate Students**

#### **Academic Advising of mathematics majors**

- Advisor for the Honors Program in Mathematics (2013 - Present).
- Co-advisor for the Specialization and the Concentration in Math and Education, joint with Dr. Zhiqin Lu (2014 - Present).
- Organizer of a mandatory advising system for junior math majors (2013 - Present).
- Organizer of a mandatory advising system for sophomore math majors (2012, 2014, 2105; joint with Dr. Sarah Eichhorn in 2012).
- Organizer of an academic advising session for the UCI Anteater Mathematics Club (Nov 2014).
- New freshmen orientation (Sept 2014).
- New transfers orientation (Oct 2012).

#### **Advising of student organizations**

- Faculty advisor for The UCI Anteaters Mathematics Club (2013 - Present)
- Faculty advisor for the UCI Actuarial Society (2013 - Present).
- Faculty advisor for the UCI chapter of the (national) honor society for mathematics majors
  - Co-founder of the UCI Phi chapter (joint with Dr. S. Eichhorn, Feb 2014).
  - Organizer of a PME Celebration to initiate new members and recognize graduating seniors (May 2014, May 2015).
  - Help students prepare presentation for the PME conference at MathFest (June 2014, June 2015).

#### **Professional Training of mathematics majors**

- Training for GRE Math Subject Test, Co-organizer and instructor
  - Taught GRE practice session math majors applying to grad school (August 2011 – Present; joint with Dr. Dennis Eichhorn in Fall 2011 and Fall 2012).
  - Created the 'Acing the GRE Math Subject Test', a website containing resources for students preparing for the GRE (sample tests, practice problems and solutions).
- Career Workshops for UCI Mathematics Students, Organizer, (2011 – Present).
  - Panels of UCI Math Alumni and other professionals to introduce math majors to various careers options: Graduate School (Oct 2011, Oct 2013, Oct and Nov 2014), Finance (Oct 2013, Oct 2014); Aerospace (Nov 2013), Teaching (Feb 2014), Actuarial Sciences (Oct 2013, Feb 2015).
  - Job search talks (Oct 2011, Apr 2014).

#### **Mathematical enrichment for undergraduates**

- UCI Math Lunch Seminars for Undergraduates, Organizer.



Monthly seminar series for undergraduates supported by a NSF RTG grant (PI: Matthew Foreman). Organized a total of 32 math talks for undergraduates between September 2011 and June 2015.

- UCI Freshman Seminar, Instructor.  
Taught two one-unit Freshman Seminar to promote critical thinking, attract incoming freshmen towards the major and ease their transition to college (Fall 2011, Winter 2013).
- The Mathematics Book Club, Organizer.  
Weekly meetings with a group of undergraduate students to discuss mathematical concepts via a popular math book. (Winter 2011, Spring 2012, Winter 2012.)

## SERVICE

### Department Service

Assistant Vice-Chair for Undergraduate Studies. (July 2014 - Present).

#### Assessment

- Revision of the Math Department Honors Program (2014).
- Analysis of retention and graduation rates for minority students (2012 - Present).
- Analysis of transfer students' success in the UCI math department (2011).

#### UCI Math Department Committees

- Algebra Advisory/Comprehensive Exam Committee, Member (June 2011 - Present).
- Honors Committee, Member (November 2010 - Present).
- Cal Teach Committee, Member (September 2010 - Present).
- TA Training Committee, Member (July 2010 - Present).
- Undergraduate Studies Committee, Member (July 2010 - Present).
- LPSOE Hiring Committee, Member (September 2014 - June 2015).
- Mathcounts Committee, Chair (September 2014 - Present).
- Mathcounts Committee, Member (September 2011 – June 2014).
- Member of the Website Committee, Member (September 2011 – June 2012).

#### Pedagogical support for graduate students, post-docs and other instructors

- Future Faculty Program, Collaborator (joint with Dr. Jeff Streets)  
Training graduate students in preparing and delivering mathematics talks (September 2014 - Present).
- Pedagogical support for graduate students and post-docs
  - Informal consultations. (September 2010 - Present).
  - New instructors orientation (Fall 2013, Summer and Fall 2014, Summer 2015).
  - Teaching seminars for first and second year graduate students (Fall 2014).
  - Classroom observations and teaching letters (2013 - Present)
  - Orientation for Calculus TAs (2012- Present).
  - TAs workshop on the use of EEE tools (Sept 2010).
- UCI Calculus Coordinator (June 2011 - June 2015).  
To ensure uniformity across the various sessions of calculus. Update the Math 2A/2B resources webpage, provide assistance to instructors and TAs, coordinate the common final (write several versions of the exam, prepare seating charts, write solutions and rubrics, coordinate the grading, make curving decisions). Quarters: Summer 2011; Spring 2013 through Spring 2015 (except Summer Session 2 in 2013 and Summer Session 1 in 2014)
- Revision of Math Courses Syllabi (2014).
- 'Faculty Hand-book', a resource manual for faculty teaching in the UCI math department (distributed to all new instructors and posted on the department intranet). Co-author, joint with Dr. S. Eichhorn (Sept 2010).
- Webwork (online homework system). Webwork (online homework system).  
Selected problems for calculus MATH 2B (10/2011 - 6/2012), created Webwork assignments for Math for Economists MATH 4 (4/2012 - 6/2012) and coordinated Webwork for MATH 2A and MATH 2B (Summer Session 1, 2013 and Summer Session 2, 2014).
- 'Math 2J Resource page', a website containing syllabus, sample exams, suggested homework problems, step-by-step solutions to problems designed to enhance the students' proof-skills (Sept 2010).

#### Other service to the department

- Meetings with publishers to reduce prices for Calculus and Linear Algebra Textbooks. (December 2014 - June 2015).
- Department of Mathematics T-shirt. (2012).
- UCI Mathematics Undergraduate Program Brochure. (2011).

## University Service

### UCI Senate Committees

- Member of Board of Undergraduate Scholarships, Honors and Financial Aids (BUSHFA) (January 1, 2011 - Present).
- Member of Council on Educational Policy (CEP), Policy Subcommittee (2012 - 2015).

### Other University Service

- Member of Faculty Advisory Committee for Italy, UC Education Abroad Program (UCEAP) (April 2012 - Present).
- Mathematics Department Faculty Liaison, Education Abroad Program (EAP). (2010 - Present).
- Panelist at the 'Experience Undergraduate Research in Physical Sciences Research', an event organized by and for undergraduate students (May 2012).
- Host of GLC Coffee Hour, Global Leadership Certificate Program (May 2011).
- Faculty representative, Undecided/Undeclared Faculty Fair (November, 2010).
- Representative of UCI Math Department Representative at the 'Transfer Streamlining Task Force'. (November 2010).

## Professional Service

**MTE-Partnership**, UCI Team Leader for the Mathematics Teacher Education Partnership. (March 2015 - Present).

**SMPP** (Single Matter Preparation program), Consultant to review matrices describing the alignment of college courses with the Common Core State Standards, in collaboration with the CalTeach program and the Commission on Teacher Credentialing. (December 2014 - Present).

**IUSD Math Pathways**, a committee organized by the Irvine Unified School District to shape effective pathways to college for secondary students. Participant to a few meetings (October 2014 - March 2015).

**'Atlas of Lie Groups'**, Member, 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>. (2004 - 2014).

**CalPASS** Professional Learning Council, UCI Math Department representative at several meetings in Spring 2011. The California Partnership for Achieving Student Success (Cal-Pass) is a program designed to create regional partnerships between K-12 schools, community colleges and universities, with the purpose of aligning curriculum, fostering student learning and creating smooth transitions for students moving from one educational segment to the next. (2011).

**Special Session** on Representations of Real and p-adic Lie Groups, AMS Fall Central Section Meeting, Co-Organizer, Kalamazoo, MI. (October 2008).

Advances in Mathematics, Journal Article **Reviewer**. (2005).

## Outreach

### UCI Math Circle, Organizer and Director

- Bi-monthly “Mathematical Exploration” sessions to expose middle school students to fun but challenging mathematical topics. (2013 - Present).
- Bi-monthly afternoons of mathematical investigations to engage bright high school students in problem solving, conjectures and proofs. (2012 - Present).

### UCI-Math day for Prentice Middle School, Organizer

- Campus visits for a group of students from Prentice, a middle school in Santa Ana specialized in students with learning differences. (8<sup>th</sup> graders in April 2013, 7<sup>th</sup> graders in March 2014, both 6<sup>th</sup> and 7<sup>th</sup> graders in April 2015).

### MathCounts: Regional/State Competitions for Middle School Students

- Master of Ceremonies (February 2014, February 2015, March 2015).
- Volunteer (2010 - 2013).

### AMC8 test (American Mathematics Competition), Administrator

- For students in the UCI Middle School Math Circle (November 2013, November 2014).
- For students in the Orange County Math Circle (OCMC) and other students in the Irvine community (November 2012).

### OCMC (Orange County Math Circle)

- Guest Speaker (December 2013).
- Coordinator of a Middle School Guest Lecture (January 2013).

## Promoting Diversity in mathematics

### Through teaching and mentoring

- Mentor of first generation undergraduates and other under-represented minorities, through Math Alliance, UC Leads and the NREUP program.
- Co-organizer of the ‘Math Opportunities Workshop’, a one-day conference at UCI to introduce a large (and very diversified) group of mathematics majors from Southern California to the many opportunities available in the mathematical sciences (2015).
- Speaker at PUMP (Preparing Undergraduates through Mentoring towards PhDs) summer program (2014).
- Organizer of a talk by Arizona State professor E. Camacho to promote diversity in academia; with the support of UCI Advance (2015).
- Presenter at the ‘2007 AWM (Association of Women in Mathematics) Workshop’ (2007)
- Panelist at the ‘Women in Science Seminar’, Institute for Advanced Study, Princeton NJ (2005).
- Presenter at the ‘First Noetherian Ring Meeting’, Princeton University, Princeton NJ (2002).

### Through service and outreach

- Creator and director of a Math Circle serving Middle-School Students in the under-served community of Santa Ana (Fall 2014-Present).
- Co-organizer of a ‘A day in college’, a one-day workshop at UCI for a group of 28 Latino middle school students from a nearby disadvantaged community (October 2014).
- Co-organizer of ‘College, here we come!’, a workshop for 300 Latino parents and their middle school children, to describe pathways to college (2015).
- Publicity Committee for ‘Truth Value’, a play to promote gender equity in mathematics; in collaboration with UCI Advance (2012).
- Co-organizer of “S. Kovalevsky High School and Middle School Mathematics Days” (2011).