Curriculum Vitae

Ángel Chávez

PhD Student
Department of Mathematics, University of Arizona

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Born: February 11, 1987 Wheat Ridge, CO United States
Citizenship: United States

Research Interests

My primary research interests lie in the areas of mathematical physics, geometry and probability. Specifically, my research involves the application of ideas from geometry and representation theory to study families of measures on simple loops in Riemann surfaces that were introduced by Wendelin Werner. These measures are loop analogues of Schramm-Loewner evolution.

Education

University of Arizona
PhD Mathematics (Expected May 2015), Adviser: Douglas Pickrell

University of Arizona
MA Mathematics, 2014, Adviser: Douglas Pickrell

University of Colorado at Boulder
B.A. Mathematics with Minor in Physics, 2009

Certifications

University of Arizona
Office of Instruction and Assessment Certificate in College Teaching (Expected May 2015)

Grants, Honors and Awards

NSF VIGRE Fellowship, Fall 2013

University of Arizona Graduate College Diversity Fellowship, Fall 2009-Spring 2010

NSF S-STEM Fellowship, Fall 2009-Spring 2010

UROP Team Grant (with Evan Thomas & Eric Tomassini), Fall 2008-Spring 2009

Summer Multicultural Access to Research Training (SMART) at University of Colorado at Boulder, Summer 2008

Undergraduate Research Opportunities Program (UROP) Individual Grant, Spring 2008

Talks, Posters and Workshops

Mathematical Physics and Probability Seminar, Department of Mathematics, University of Arizona, November 19, 2014, *"The Kontsevich-Suhov Loop Measures."* (Talk)

Tucson Math Teachers' Circle at the University of Arizona, November 10, 2014, *"Graphs and their Applications."* (Workshop)

Summer School on SLE, Conformal Welding and Random Planar Graphs at the UCLA Conference Center in Lake Arrowhead, CA on September 22, 2014, *"Half-Plane Capacity and Conformal Radius I."* (Talk)

Summer School on SLE, Conformal Welding and Random Planar Graphs at the UCLA Conference Center in Lake Arrowhead, CA on September 23, 2014, *"Half-Plane Capacity and Conformal Radius II."* (Talk)

Mathematical Physics Seminar, Department of Mathematics, University of Arizona, March 12, 2014, *"Werner's Measure on Self-Avoiding Loops and Welding."* (Talk)

Graduate Student Colloquium, Department of Mathematics, University of Arizona, February 26, 2014, *"Realizing Virasoro Verma Modules."* (Talk)

Graduate Student Colloquium, Department of Mathematics, University of Arizona, November 13, 2013, *"The Bieberbach Conjecture."* (Talk)

Graduate Student Colloquium, Department of Mathematics, University of Arizona, January 30, 2013, *"Lie Groups (with Applications)."* (Talk)

Mathematical Physics Seminar, Department of Mathematics, University of Arizona, October 17, 2012, *"Moments of Coefficients of Univalent Functions on the Disk."* (Talk)

Graduate Student Colloquium, Department of Mathematics, University of Arizona, September 19, 2012, *"An Interesting Lie Algebra."* (Talk)

Master's Thesis Defense, Department of Mathematics, University of Arizona, April 25, 2012, *"An Action of the Conformal Algebra on Self-Avoiding Loops."* (Talk)

Graduate Student Colloquium, Department of Mathematics, University of Arizona, November 23, 2011, *"Conformal Welding."* (Talk)

Research Tutorial Group Presentations, Department of Mathematics, University of Arizona, December 9, 2010, *"The Tropical Grassmannian."* (Talk)

Graduate Student Colloquium, Department of Mathematics, University of Arizona, November 10, 2010, *"Tropical Geometry."* (Talk)

American Physical Society April Meeting, Denver, CO. May 5, 2009, *"Charmless B Decays to $b_1\rho$ Final States."* (Talk)

NSBP/NSH Joint Annual Conference, Nashville, TN. February 11-15, 2009, *"CP-Violation and the Origins of the Universe."* (Poster)

Leadership Alliance National Symposium, Hartford, CT. July 24-26, 2008, *"CP-Violation and the Origins of the Universe."* (Poster)

Publications and Preprints

(with D. Pickrell) *Werner's Measure on Self-Avoiding Loops and Welding*, SIGMA **10** (2014), 081, 42 pages

Teaching

An instructor has full responsibility of a class, including holding lectures, assigning and grading homework, writing and grading exams, and holding office hours. I was an instructor for:

- MATH 129-Calculus II (Spring 2015)
- MATH 122B-Calculus I (Spring 2014, Fall 2014)
- MATH 113-Elements of Calculus (Summer II 2013)
- MATH 120R-Pre-Calculus (Spring 2012, Summer I 2012, Fall 2012, Spring 2013)
- MATH 112-College Algebra Concepts and Applications (Fall 2011)
- MATH 111-Plane Trigonometry (Spring 2009, Fall 2010, Spring 2010)

In the Super TA program a graduate student is paired with a professor of an upper-division course in order to assist them with the course. I was a Super TA for:

- MATH 323-Formal Mathematical Reasoning and Writing (Fall 2014)
  Duties: Holding office hours, grading homeworks and on occasion, holding lecture
  Instructor: Dr. Cody Patterson

Outreach

I have done local outreach with the *AZ Math Road Show* since Fall 2012. The Arizona Math Road Show is a mobile mathematics outreach program that brings hands-on activities to schools and local events.

Spoken Languages	English and Spanish
References	Available Upon Request