Konstantina Christodoulopoulou

Curriculum Vitae

Education

2007 **Ph. D., Mathematics**, *University of Wisconsin-Madison*.
Thesis Title: *Whittaker modules for Heisenberg and affine Lie algebras*
Advisor: Georgia Benkart

2001 **MA, Mathematics**, *National and Kapodistrian University of Athens*, Greece.

1998 **B. Sc., Mathematics**, *National and Kapodistrian University of Athens*, Greece.

Professional Experience

2021–present **Senior Lecturer**, *University of Florida*.

2015–2021 **Lecturer**, *University of Florida*.

2019–present **Undergraduate Coordinator**, *Department of Mathematics*, University of Florida.

2014–2015 **Lecturer**, *University of Kentucky*.

2011–2014 **Assistant Professor in Residence/Visiting Assistant Professor**, *University of Connecticut*.

2008–2011 **Visiting Assistant Professor**, *University of California, Riverside*.

Fall 2017 **Postdoctoral Fellow**, *University of Windsor, Canada*.

Scholarship Interests

General Algebra, mathematics education

Specific Representation theory, Lie theory, quantum groups and related topics, undergraduate mathematics education, K-12 mathematics education.

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Teaching Experience

2015–present **University of Florida**.

- Introduction to Real Analysis 1
- History of Mathematics
- Abstract Algebra
- Geometry
- Sets and Logic
- Functions and Modeling
  - An elective course for the UF Teach minor in Mathematics.
  - The course is taught using Inquiry Based Learning.
- Elementary Differential Equations
  - Developed the online version of the course.
  - 2018–2019: I taught the online residential and dual enrollment sections.
- Calculus with Analytic Geometry 1
  - Multi-section course with large enrollment and assembly exams.
  - Course co-coordinator and taught a large lecture.
  - Supervised and mentored on average each semester 18 graduate students, adjuncts, and a postdoc as teaching assistants and instructors for the course.
  - Fall 2016: I taught the flipped sections of the course for engineering students implementing the innovative assessment approach of Standards Based Grading.
- Calculus with Analytic Geometry 2
  - Multi-section course with large enrollment and assembly exams.
  - Course coordinator.
  - Supervised and mentored 11 graduate students as teaching assistants for the course.
  - Taught two large lectures, the UF Online, residential online, and dual enrollment sections of the course.
  - Spring 2017: Taught the flipped sections of the course for engineering students implementing the innovative assessment approach of Standards Based Grading.
- Survey of Calculus 1

2014–2015 **University of Kentucky**.

- College Algebra (course co-coordinator)
- Precalculus with Trigonometry
- Finite Mathematics & its Applications
- Introduction to Number Theory

2011–2014 **University of Connecticut**.

- Abstract Algebra I
- Abstract Linear Algebra
- Transitions to Advanced Mathematics
- Geometry (a course for future high school teachers)
- Calculus I
- Elementary Discrete Mathematics (course coordinator)
- Fundamentals of Algebra and Geometry II (a course for future elementary teachers)
- History of Mathematics
- Applied Linear Algebra
- Calculus for Business and Economics (course coordinator)

2008–2011 **University of California, Riverside**.

- Various courses: Ordinary Differential Equations; Set Theory; Introduction to Number Theory; Linear Algebra I; Linear Algebra II; Combinatorics; Applied Linear Algebra; Multivariable Calculus; First Year Calculus; Introduction to College Mathematics for Science.

Instructional Supervision

2018-present **Chair TA Training Committee**.
- I organize and run a week long orientation before the beginning of the fall semester for the new TAs in the math department.

2016-2017 **Supervisor for TAs in MAC231** & **MAC2312**.
- Met regularly with TAs to discuss lesson planning, materials development, and assessment.
- Organized and ran a mini-orientation for the TAs in these courses at the beginning of each term.
- Observed and evaluated teaching.

College/University Service

2021–2023 **CLAS Curriculum Committee**, *(2021-2022: Chair)*.

2021-2022 **Math Pathways Committee, Florida Student Success Center**, *Member*, a representative committee composed of State University System & Florida College System faculty.

2021–2024 **Faculty Senate**, *Member*.

Summer 2021 **CLAS Academic Advisor Search Committee**, *Member*.

2020–2021 **Liberal Arts and Sciences Selection Committee for Professional Development Leave**, *Member*.

2020–2021 **HHMI iE3 Proposal Leadership Team**, *Member*.

Departmental Service

2021–2022 **Lecturer Search Committee**, *Chair*.

2020–2022 **Steering Committee**, *Member*.

2019–present **Undergraduate Coordinator**, *Department of Mathematics*, University of Florida.

2016–2018 **Lecturer Search Committee**, *Member*.

2019-present **Undergraduate Committee Upper Division**, *Member*.

2015–present **TA Training Committee**, *Member, Chair(2018-present)*.

2015–present **Undergraduate Committee Lower Division**, *Member, Chair(2019-present)*.

2015–present **Teaching Methods Committee**, *Member, Chair(2018-2019)*.

2014–2015 **Undergraduate Program Committee**, *Member*, Department of Mathematics, University of Kentucky.

Mentoring

2021–present **Undergraduate Research**.
- Teegan Bailey–Mathematics Education
  - University Scholars Program 2022-2023

Professional Service

Referee The Journal of Algebra, The Journal of Pure and Applied Algebra

Workshop/Symposium Organization

2021, 2022 **Co-organizer of the UF Undergraduate Mathematics Research Symposium**, *Department of Mathematics*, University of Florida.

2015 **Co-organizer of the Clickers in the Mathematics Classroom Teaching Workshop**, *Department of Mathematics*, University of Kentucky.

Community Service

2019 **Julia Robinson Mathematics Festival**, *University of Florida.*
Facilitator for K–12 students to explore mathematics though puzzles, games, and creative problem-solving

Publications

1. T. Bailey, D. Chamberlain Jr., K. Christodoulopoulou, Undergraduate's Covariational Reasoning across Function Representations, *Proceedings of the 24th Conference on Research in Undergraduate Mathematics Education,* Boston, MA.
2. K. Christodoulopoulou and K.-H. Lee, Representations of spin quiver Hecke algebras for orthosymplectic Lie superalgebras, *J. Pure Appl. Algebra* (220) 2016, 3733-3751.
3. I. Bagci, K. Christodoulopoulou, E. Wiesner, Whittaker Categories and Whittaker Modules for Lie Superalgebras, *Communications in Algebra* (42) 2014, 1-16.
4. F. Cardetti, K. Christodoulopoulou, S. Pon, Exploring Students' Questions From Online Video Lectures, *Proceedings of the 17th Conference on Research in Undergraduate Mathematics Education,* Denver, CO: Northern Colorado University.
5. F. Cardetti, S. Pon, K. Christodoulopoulou (2013), Flipped Classrooms in College: Calculus Student's Perceptions and Performance. In Gómez Chova, L., López Martínez, A., and Candel Torres, I. (Eds.), *Proceedings to EDULEARN13 International Conference on Education and New Learning Technologies*, Barcelona, Spain, 5793-5800.
6. K. Christodoulopoulou, Whittaker Modules for Heisenberg Algebras and Imaginary Whittaker modules for Affine Lie Algebras. *Journal of Algebra* (320) 2008, no. 7, 2871–2890.

Presentations at Conferences

1. *Analyzing Student-Generated Questions in Calculus.* Presented in the MAA Session on Scholarship of Teaching and Learning in Collegiate Mathematics, Joint Mathematics Meetings, January 15-18, 2014, Baltimore, MD.
2. *On Modules over Affine Kac-Moody Algebras at the Critical Level Induced from Whittaker Modules*, Special Session on Representation Theory, AMS Sectional Meeting, November 2009, University of California, Riverside.
3. *Imaginary Whittaker Modules for Affine Lie Algebras*, Poster Presentation, Connections for Women: Introduction to the Spring 2008 Programs, January 16-18, 2008, MSRI, Berkeley, CA.
4. *Imaginary Whittaker Modules for Affine Lie Algebras*, AWM Workshop for Women Graduate Students and Recent PhDs, Joint Mathematics Meetings, January 6-9, 2008, San Diego, CA.

Seminar Talks

1. *Whittaker modules for Lie superalgebras*, Algebra Seminar, University of Connecticut, April, 2012.
2. *Egyptian fractions*, Math Club, University of Connecticut, November 2011.
3. *Quantized enveloping algebras,* Lie theory seminar, UC-Riverside, January 2011.
4. *On blocks and modules for Whittaker pairs (following P. Batra and V. Mazorchuk)*, Lie theory seminar, UC-Riverside, February 2010.
5. *The boson-fermion correspondence*, Lie theory seminar, UC-Riverside, February 2009.
6. *On modules induced from Whittaker modules*, Lie theory seminar, UC-Riverside, October 2008.
7. *Whittaker modules for Heisenberg and affine Lie algebras*, Algebra seminar, University of Windsor, October 2007.
8. *Whittaker modules for Heisenberg algebras and imaginary Whittaker modules for affine Lie algebras*, Algebra seminar, University of Florida, May 2007.
9. *Whittaker modules for Heisenberg algebras and imaginary Whittaker modules for affine Lie algebras*, Algebra seminar, University of Wisconsin-Milwaukee, May 2007.
10. *Whittaker modules for affine Lie algebras*, Lie theory seminar, University of Wisconsin-Madison, Fall 2006.
11. *An introduction to affine Weyl groups*, Combinatorics seminar, University of Wisconsin-Madison, Fall 2005.
12. *Verma type modules for affine Lie algebras*, Lie theory seminar, University of Wisconsin-Madison, Spring 2005.
13. *An introduction to cluster algebras*, Combinatorics seminar, University of Wisconsin-Madison, Fall 2004.

Conferences and Workshops

1. Joint Mathematics Meetings, Baltimore, MD, January 15-18, 2014.
2. NES/MAA Spring 2012 Section Meeting, Central Connecticut State University, June 8, 2012 - June 9, 2012.
3. Algebraic and Combinatorial Approaches to Representation Theory, Department of Mathematics, University of California Riverside, May 18-20, 2012.
4. Joint Mathematics Meetings, Boston, MA, January 4-7, 2012.
5. 40 Years and Counting: AWM's Celebration of Women in Mathematics, AWM Anniversary Conference, Brown University, September 17-18, 2011.
6. University of California Lie Theory Workshop, University of California, Riverside, May 21-22, 2011.
7. Joint Mathematics Meetings, New Orleans, LA, January 6-9, 2011.
8. The Second Annual Southeastern Lie Theory Conference on Homological Methods in Representation Theory, University of Georgia, May 22-24, 2010.
9. CBMS Conference on Quiver Varieties and Quantum Affine Algebras, NC State University, May 25-29, 2010.
10. University of California Lie Theory Workshop, University of California, Santa Barbara, March 13-14, 2010.
11. Summer School and Conference in Geometric Representation Theory and Extended Affine Lie Algebras, University of Ottawa, Ontario, Canada, June 15-July 3, 2009.

12. University of California Lie Theory Workshop, University of California, Riverside, January 17-18, 2009.
13. Quantum Affine Lie Algebras, Extended Affine Lie algebras, and Applications, Banff International Research Station (invited participant), March 2-7, 2008.
14. Connections for Women: Introduction to the Spring 2008 Programs, MSRI, Berkeley, CA, January 16-18, 2008.
15. AWM Workshop for Women Graduate Students and Recent PhDs, Joint Mathematics Meetings, San Diego, CA, January 6-9, 2008.
16. Lie Algebras, Vertex Operator Algebras and Their Applications: A Conference in Honor of Robert L. Wilson and James Lepowksy, NC State University, May 2005.

Honors and Awards

2021 **Nominated for Faculty Advising/Mentoring Award, College of Liberal Arts and Sciences**, *University of Florida*.

2016 **Nominated for Faculty Teaching Award, College of Liberal Arts and Sciences**, *University of Florida*.

2008 **Funded Participant**, *AWM Workshop for Women Graduate Students and Recent PhDs*, Selected as one of 20 women to present their work at the Joint Mathematics Meetings, San Diego, CA.

2006 **Elizabeth S. Hirschfelder Award, University of Wisconsin-Madison**.