

Joseph Ricci

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RESEARCH INTERESTS

Quantum topology and algebra, modular tensor categories.

EDUCATION

Ph.D., Mathematics

University of California, Santa Barbara, CA, Expected June 2018

Thesis Advisor: Zhenghan Wang

Thesis Title: *Congruence subgroups from quantum representations of mapping class groups.*

M.A., Mathematics

University of California, Santa Barbara, CA, June 2015

M.A., Mathematics

State University of New York at Buffalo, Buffalo, NY, May 2013

B.S. with Honors, Mathematics

State University of New York at Buffalo, Buffalo, NY, February 2012

Thesis Advisor: David Hemmer

Thesis Title: *Decomposing induced characters of the centralizer of an n -cycle in the symmetric group on $2n$ elements.*

PUBLICATIONS

“*Congruence subgroups from representations of the three-strand braid group.*” Journal of Algebra, Vol 487, 1 October 2017, 93-117.

“*Decomposing induced characters of the centralizer of an n -cycle in the symmetric group on $2n$ elements.*” Involve, Vol. 6 (2013), No. 2, 221-232.

TEACHING EXPERIENCE

At UCSB:

Teaching Assistant

- Differential Equations (Winter 2016)
- Vector Calculus I (Winter 2016)
- Calculus II (Fall 2013, Winter 2014, Fall 2014, Summer 2015, Fall 2015, Summer 2016, Fall 2016, Winter 2017)
- Linear Algebra (Spring 2014)
- Transition to Higher Mathematics (Winter 2015)

Instructor

- Differential Equations (Summer 2014)

At SUNY Buffalo:

Teaching Assistant

- Calculus I (Fall 2011, Fall 2012)
- Calculus II (Spring 2012, Summer 2012, Fall 2012)
- Linear Algebra (Summer 2012)
- Abstract Algebra (Spring 2013)

Instructor

- Calculus for Social Sciences II (Summer 2013)

HONORS AND AWARDS

RTG Fellowship in Geometry-Topology (NSF, UCSB, Spring 2016)
Nominated for Outstanding Teaching Assistant Award (UCSB, 2014)
Hazel and John Wilson Scholarship (SUNY Buffalo Dept. of Math, 2011)

TALKS GIVEN

Invited and Research Talks

- *Non-congruence subgroups from weakly integral anyons* (AMS Sectional Meeting, UI-Bloomington, Indiana, 2017)
- *Congruence subgroups from low-dimensional representations of the braid group* (Knots in Hellas, Ancient Olympia, 2016)

Local Seminar Talks

- *Where does the group go?* (UCSB Quantum Topology Seminar, 2016)
- *Egyptian fractions, Kellogg's equation, and finite group representations* (UCSB Discrete Geometry Seminar, 2015)
- *Classifying Local Representations of the Braid Group* (UCSB Discrete Geometry Seminar, 2015)
- *Representations of the Braid Group* (UCSB Discrete Geometry Seminar, 2014)
- *Young Tableaux and Representations of the Symmetric Group* (UCSB Discrete Geometry Seminar, 2014)
- *Hopf Algebras and Monoidal Categories* (UCSB Graduate Category Theory Seminar, 2014)
- *Braid Groups* (UCSB Graduate Algebra Seminar, 2014)
- *Quandles* (UCSB Graduate Algebra Seminar, 2013)

CONFERENCES ATTENDED

- West Coast Lie Theory Workshop, San Diego, CA (2017)
- American Mathematical Society Section Meeting, Bloomington, IN (2017)
- Knots in Hellas 2016, Ancient Olympia, Greece (2016)
- UCB/UCSB Algebra Day, Berkeley, CA (2015)
- Graduate Geometry and Topology Conference, Syracuse, NY (2013)