

Jieru Zhu

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Research Interests	Categorification, webs, Lie superalgebras, affine Hecke algebras, diagrammatic algebras, Schur algebras, symmetric pairs, flag varieties.	
Positions	Okinawa Institute of Science and Technology Okinawa, Japan Postdoc Mentor: Liron Speyer	Feb 2021 - present
	Hausdorff Institute for Mathematics Bonn, Germany Postdoc <i>Junior Trimester Program: New Trends in Representation Theory</i>	Sep 2020 - Dec 2020
	University at Buffalo (State University of New York) Buffalo, New York, USA Visiting Assistant Professor (Postdoc) Mentor: Yiqiang Li	Aug 2018 - June 2020
Education	University of Oklahoma Norman, Oklahoma, USA PhD, MA, mathematics Thesis: <i>Two Boundary Centralizer Algebras for $\mathfrak{q}(n)$</i> . Advisor: Jonathan Kujawa	Aug 2011 - June 2018
	Tongji University Shanghai, China BSc, Mathematics Thesis advisor: Jiachen Ye	Sep 2007- June 2011
Fellowship	Bullard Dissertation Fellowship University of Oklahoma	Spring 2018

Scholarships	Richard V. Andree Memorial Scholarship	Apr 2016
	J.C. Brixey Graduate Scholarship	Apr 2015
	Nancy Scofield Hester Mathematics Scholarship	Apr 2013
Travel Support	AWM symposium	Apr 2019
	HIM winter school	Nov 2018
	MSRI summer school	July 2018
	IHP conference	Feb 2017
	ICRA conference	Aug 2016
	PIMS/UBC summer school	July 2016
	AMS travel support	Nov 2014
Publications	[7] (with Georgia Benkart, Rekha Biswal, Ellen Kirkman, Van C. Nguyen) Tensor Representations for The Drinfeld Double of The Taft Algebra. <i>submitted. 39 pages. arXiv:2012.15277</i>	
	[6] Two Boundary Centralizer Algebras for $\mathfrak{gl}(n m)$. <i>submitted. 25 pages. arXiv:1809.08172</i>	
	[5] (with Georgia Benkart, Rekha Biswal, Ellen Kirkman, Van C. Nguyen) McKay Matrices for Finite-dimensional Hopf Algebras. <i>to appear on Canadian Journal of Math.</i>	
	[4] (with Mee Seong Im) Transitioning between The Tableau and Spider Bases of The Specht Modules. <i>to appear on Algebras and Representation Theory.</i>	
	[3] (with Yiqiang Li) Quasi-split Symmetric Pairs of $U(\mathfrak{gl}_N)$ and Their Schur Algebras. <i>Nagoya Mathematical Journal. September 2020, pages 1-27. doi</i>	
	[2] Two Boundary Centralizer Algebras for $\mathfrak{q}(n)$ <i>Journal of Algebra, 567, February 2021, pages 386-458. doi</i>	
	[1] Two Boundary Centralizer Algebras for $\mathfrak{q}(n)$ <i>PhD Thesis, 197 pages.</i> <i>Available on Share OK.</i>	
Collaboration Workshops	AIM SQuaREs workshop San Jose, CA American Institute of Math, Structured Quartet Research Ensembles <i>(with N. Davidson, J. Kujawa, R. Muth)</i>	Dec 2020
	IAS Summer Collaborators program Princeton, NJ Institute of Advanced Studies <i>(with M. S. Im, C.J. Lai, A. Wilbert)</i>	June 2019

	WINART 2 workshop Leeds, UK Women in Noncommutative Algebra and Representation Theory (with G. Benkart, R. Biswal, E. Kirkman, V. Nguyen)	May 2019
Conferences & Colloquium	2021 <hr/>	
	AMS Virtual Joint Math Meetings Interactions between Noncommutative Algebra and Noncommutative Algebraic Geometry	Jan 2021
	2020 <hr/>	
	Representation Theory Seminar Okinawa Institute of Science and Technology (virtual)	Nov 2020
	Algebra and Representation Theory Seminar University of Oklahoma (virtual)	April 2020
	MSRI Connections for Women: Quantum Symmetries Berkeley, CA Short Poster Talk	Jan 2020
	2019 <hr/>	
	WINART 2 Workshop Leeds, UK Women in Noncommutative Algebra and Representation Theory Short Report	May 2019
	Association for Women in Math (AWM) Symposium Houston, TX Special Session on Homological Methods in Noncommutative Algebra and Representation Theory.	Apr 2019
	AMS Special Session Auburn, AL Geometric Methods in Representation Theory.	Mar 2019
	AMS Special Session Auburn, AL Representations of Lie Algebras, Algebraic Groups, and Quantum Groups.	Mar 2019
	2018 <hr/>	
AMS Special Session San Francisco, CA. Combinatorial and Categorical Aspects of Representation Theory.	Oct 2018	
Interactions of Low-dimensional Topology and	Sep 2018	

“Higher” Representation Theory.
Zürich, Switzerland.

Southeastern Lie theory workshop X
Athens, GA
Parallel Session
June 2018

TORA
Norman, OK
Texas-Oklahoma Representation Theory and Automorphic Forms
Speed Talk
April 2018

Department Algebra Seminar
University of Colorado at Boulder
April 2018

Department Algebra Seminar
University at Buffalo
Feb 2018

Joint Math Meetings
San Diego, CA
Contributed Paper Session
Jan 2018

2017

Hausdorff Research Institute for Math (HIM) Winter School
Bonn, Germany
Categorification, Representation Theory and Symplectic Geometry
Trimester program short poster Talk
Nov 2017

AMS Special Session
Orlando, FL.
Categorical Methods in Representation Theory.
Sep 2017

AMS Special Session
Denton, TX.
Combinatorics and Representation Theory of
Reflection Groups: Real and Complex.
Sep 2017

Department Algebra Seminar
University of Bonn
Feb 2017

Joint Math Meetings
Atlanta, GA
Contributed Paper Session
Jan 2017

2016

Department Algebra Seminar
Oct 2016

University at Buffalo

International Conference on Representations of Algebras (ICRA) Aug 2016
Syracuse, NY
Parallel Session

Southeast Lie Theory Series May 2016
Charlottesville, VA.
Algebraic Groups, Quantum Groups and Geometry
Parallel Session

Texas-Oklahoma Representation Theory Mar 2016
and Automorphic Forms (TORA)
Denton, TX
Speed Talk

Poster Presentations MSRI Connections for Women: Quantum Symmetries Jan 2020
AWM Poster Session at JMM Jan 2018
HIM Winter School Nov 2017
TORA Mar 2016

Panelist MSRI Connections for Women Feb 2020
Berkeley, CA
Higher Categories
Creating Space for Yourself and Others

Journal Review Algebras and Representation Theory
Journal of Algebra
Journal of Pure and Applied Algebra
Proceedings of AMS
Surveys in Mathematics and its Applications

Organizing Lecture Series on Modified Trace Oct 2020
Junior Trimester Program: New Trends in Representation Theory
Hausdorff Institute of Math, Bonn, Germany
*Co-organizers: N. González, A. Hazi, L. Sutton,
D. Tubbenhauer, P. Wedrich.*

TORAS Mar 2015
(Texas-Oklahoma Representations and
Automorphic Forms Student Conference)
University of Oklahoma
Co-organizers: J. Merlini, M. Molander, H. El Turkey, S. Turki.

	Student Algebra Seminar University of Oklahoma	Fall 2014 - Spring 2015
Local Talks	<u><i>Hausdorff Institute of Mathematics</i></u> Leaning seminar on tilting modules	Sep 2020
	<u><i>University at Buffalo</i></u> Introduction to Gradescope	May 2019
	<u><i>University of Oklahoma</i></u> Algebra and Representation Theory Seminar	Mar 2017
	Graduate Student Seminar	Nov 2016
	Student Algebra Seminar	Sep 2016
	Research in Undergraduate Mathematics Education (RUME) Seminar	Feb, Sep 2016
	Student Algebra Seminar	Mar, Apr, Nov 2015
	Algebra and Representation Theory Seminar	Nov 2014
	Student Algebra Seminar	Jan, Feb, May, Aug 2014
	Student Algebra Seminar	Oct 2013
Mentoring	<u><i>Graduate Mentoring</i></u> PhD Students of GRT Research Group University at Buffalo Geometric Representation Theory	Fall 2018
	<u><i>Undergraduate Mentoring</i></u> Lars Gartenberg University at Buffalo Undergraduate Abstract Algebra Unofficial Reading Course.	Spring 2019
	Joshua McDermett University of Oklahoma Undergraduate Lie Theory Directed Reading Program	Spring 2016
Teaching	<u><i>Instructor of Record</i></u> Introduction to Linear Algebra	Spring, Fall 2019
	College Calculus III	Fall 2018
	Calculus III	Summer 2017
	Calculus II	Spring, Summer 2016
	Trigonometry	Fall 2014
	College algebra	Spring 2014
	Precalculus	Spring, Summer 2013

Discussion Section Leader

Calculus III Fall 2017
Calculus I Fall 2016, Fall 2015, Fall 2013
Calculus II Fall 2012

**Career
Development**

OU Center for Teaching Excellence Workshop Spring 2018
Endorsement in Preparation for Teaching Undergraduate
Mathematics Fall 2017
University of Oklahoma Department Certificate
Six Credit Hours in Math Education
OU LGBTQ Sooner Alley Session Spring 2017

**Computer
Skills**

MAGMA
Python
MATLAB
C++

**Language
Skills**

Mandarin: Native Speaker
English: Fluent
Cantonese: Good
German: Level A1
Japanese: Fair