

Chun-Ju Lai

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Research Interests:

Affine Hecke algebras, quantum groups, modular representations, geometric representation theory, and algebraic combinatorics.

Professional Preparation:

2011 – 2016 | Ph.D. Mathematics, University of Virginia
2005 – 2009 | B.S. Mathematics; B.S.E. Electrical Engineering, National Taiwan University

Appointments:

2017 – now | **Limited Term Assistant Professor, University of Georgia**
2016 – 2017 | Postdoc Fellow, Max-Planck Institute for Mathematics in Bonn, Germany
2010 – 2011 | Research Assistant, National Center of Theoretical Sciences, Taiwan

Publications

1. C. Lai, D. K. Nakano and Z. Xiang, *On Schur algebras and quantum symmetric pairs with unequal parameters*, arXiv: 1902.07682, 29 pages.
2. C. Lai and L. Luo, *Schur algebras and quantum symmetric pairs with unequal parameters*, arXiv: 1808.00938, 32 pages.
3. Z. Fan, C. Lai, Y. Li, L. Luo, W. Wang and H. Watanabe, *Quantum Schur duality of affine type C with three parameters*, arXiv:1802.01047, 24 pages.
4. Z. Fan, C. Lai, Y. Li and L. Luo, *Length formulas in symmetrized forms*, Appendix of *Affine Hecke algebras and quantum symmetric pairs*, arXiv:1609.06199v2, 10 pages.
5. Z. Fan, C. Lai, Y. Li, L. Luo, and W. Wang, *Affine Hecke algebras and quantum symmetric pairs*, arXiv:1609.06199v1, 67 pages.
6. Z. Fan, C. Lai, Y. Li, L. Luo, and W. Wang, *Affine flag varieties and quantum symmetric pairs*, arXiv:1602.04383, 108 pages, accepted by Mem. Amer. Math. Soc.
7. C. Lai and L. Luo. *An elementary construction of monomial bases of quantum affine \mathfrak{gl}_n* , J. Lond. Math. Soc. **96** (2017), 15–27.
8. C. Lai. *On Weyl modules over affine Lie algebras in prime characteristic*, Transform. Groups **21** (2016), 1123–1153.
9. S. Eu, T. Fu and C. Lai. *Cycle lemma, parking functions and related multigraphs*. Graphs Combin., **26** (2010), 345–360.
10. S. Eu, T. Fu, and C. Lai. *On the enumeration of parking functions by leading terms*. Adv. in Appl. Math., **35** (2005), 392–406.

Teaching

- University of Georgia – Quantum groups (Fall 2018), Lie algebras (Fall 2019), Calculus III (Fall 2017, Spring 2018), Calculus I (Fall 2017, Spring 2019).
- University of Virginia – Calculus II (Fall 2015), Applied Calculus II (Spring 2016, 2015, 2014), Applied Calculus I (Fall 2013)

Conference Organizations

- Aug 2018 – present, Algebra Seminar at the University of Georgia
- Jun 10–12, 2018, Southeast Lie Theory Conference XI, Athens, University of Georgia

Conference Talks / Academic Visitings

2019	Jun	Summer Collaborators Program, Institute for Advanced Study, New Jersey
	May	Southeastern Lie Theory Workshop, Louisiana State University
	Mar	AMS Sectional Meeting, Auburn University, Alabama
2018	Oct	Representation Theory, Combinatorics, and Geometry, University of Virginia
2017	Sep	AMS Sectional Meeting, University at Buffalo (SUNY)
	Jul	Taipei Workshop on Representation Theory of Lie Superalgebras and Related Topics, Academia Sinica, Taiwan
2016	May	Southeastern Lie Theory Workshop, University of Virginia
	May	Workshop on Hecke Algebras and Lie Theory, University of Ottawa
2015	Oct	Southeastern Lie Theory Workshop, North Carolina State University
	Jul	Workshop on Lie Theory and Representation Theory, East China Normal University
	Mar	AMS Sectional Meeting, Georgetown University
2014	May	Southeastern Lie Theory Workshop, University of Georgia
2007	Jun	Cross-strait Conference on Graph Theory and Combinatorics, National Taiwan University

Seminar Talks/Mini Courses

2019	Jan	Algebra Seminar, University of Georgia
2018	Dec	Combinatorics Seminar, Academia Sinica, Taiwan
	Sep	Algebra Seminar, University of Georgia
	Apr	Algebra Seminar, University of Georgia
2017	Sep	Algebra Seminar, University of Georgia
	Aug	Oberseminar, University of Georgia
	Aug	Algebra Seminar, University of Georgia
	Apr	Algebra Seminar, Universität Bielefeld, Germany
	Feb	Algebra Seminar, Université Clermont Auvergne, France
2016	Dec	Algebra Seminar, Universität Bonn, Germany
	Dec	Algebra Seminar, Institut de mathématiques de Jussieu-Paris Rive Gauche, France
	Dec	Oberseminar, Max Planck Institute for Mathematics in Bonn, Germany
	Nov	Algebra Seminar, Newcastle University, UK
	Oct	Emmy Noether Seminar, FAU Erlangen-Nürnberg, Germany
	Sep	Algebra Seminar, University at Buffalo (SUNY)
	July	Mini-course: Fifty shades of quantum groups, Taiwan Normal University, Taiwan
2015	Dec	Lie Group/Representation Theory Seminar, University of Maryland
	Nov	Algebra seminar, University of Virginia
2014	Dec	Seminar, Academia Sinica, Taiwan
	Dec	Mini-course on representation theory of Lie algebras, Central University, Taiwan
	Dec	Seminar, National Central University
	Jul	Mini-course on representation theory of Lie algebras, Taiwan Normal University, Taiwan
	May	Algebra seminar, University of Virginia
2013	Nov	Graduate seminar, University of Virginia
	Sep	Algebra seminar, University of Virginia
2010	Nov	Seminar, University of Kaohsiung, Taiwan