

## Chun-Ju Lai

Visiting Postdoc Fellow

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## Research Interests

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

## Experience

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|-------------|--|
| 2017 – 2020 | (Expected) Limited Term Assistant Professor, University of Georgia.          |
| 2016 – 2017 | <b>Postdoc Fellow, Max-Planck Institute for Mathematics in Bonn.</b>         |
| 2016        | Visitor, Institute of Mathematics, Academia Sinica.                          |
| 2011 – 2016 | Ph.D. Mathematics, University of Virginia.<br>Advisor: Prof. Weiqiang Wang.  |
| 2010 – 2011 | Research assistant, National Center of Theoretical Sciences, Taiwan.         |
| 2005 – 2009 | B.S. Mathematics; B.S.E. Electrical Engineering, National Taiwan University. |

## Publications

1. Z. Fan, C. Lai, Y. Li, L. Luo, and W. Wang, *Affine Hecke algebras and quantum symmetric pairs*, arXiv:1609.06199, **67** pages.
2. Z. Fan, C. Lai, Y. Li, L. Luo, and W. Wang, *Affine flag varieties and quantum symmetric pairs*, arXiv:1602.04383, **108** pages.
3. C. Lai and L. Luo. *An elementary construction of monomial bases of quantum affine  $\mathfrak{gl}_n$* , arXiv:1506.07263, **15** pages.
4. C. Lai. *On Weyl modules over affine Lie algebras in prime characteristic*, Transform. Groups **21** (2016), 1123–1153.
5. S. Eu, T. Fu and C. Lai. *Cycle lemma, parking functions and related multigraphs*. Graphs Combin., **26** (2010), 345–360.
6. 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

- Graduate instructor, University of Virginia – Calculus II (Fall 2015), Applied Calculus II (Spring 2016, 2015, 2014), Applied Calculus I (Fall 2013)  
*with full responsibility for the class – giving lectures, assigning homework, writing and grading exams, assigning course grades, and supervising teaching assistant.*
- Teaching assistant, University of Virginia – Calculus I (Fall 2012)

## Conference talks

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|------|-----|--|
| 2016 | May | (invited) Southeastern Lie Theory Workshop, University of Virginia.                                  |
|      | May | (poster) Workshop on Hecke Algebras and Lie Theory, University of Ottawa.                            |
| 2015 | Oct | (contributed) Southeastern Lie Theory Workshop, North Carolina State University.                     |
|      | Jul | (invited) Workshop on Lie Theory and Representation Theory, East China Normal University.            |
|      | Mar | (invited) AMS Sectional Meeting, Georgetown University.  |
| 2014 | May | (contributed) Southeastern Lie Theory Workshop, University of Georgia.                               |
| 2007 | Jun | (contributed) Cross-strait Conference on Graph Theory and Combinatorics, National Taiwan University. |

## Seminar talks and mini courses

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

## Honors and Awards

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| 2014 | Dissertation fellowship, University of Virginia.            |
| 2011 | Presidential fellowship, University of Virginia.            |
| 2011 | Studying Abroad Scholarship, Ministry of Education, Taiwan. |