Curriculum Vitae

October 11, 2023

Hongsheng Hu / 胡泓昇

A postdoctor in

Beijing International Center for Mathematical Research,

Peking University.

- **Research interests:** Representation theory, Lie theory, Coxeter groups and their representations, Kazhdan–Lusztig theory.
- **Email:** huhongsheng16@mails.ucas.ac.cn / huhongsheng@bicmr.pku.edu.cn
- **Address:** Beijing International Center for Mathematical Research, Peking University. No. 5 Yiheyuan Road, Haidian District, Beijing, 100871, China.
- **Tel / WeChat:** +86 18850287585.
- **Homepage:** https://huhongsheng.github.io
- **ORCID:** https://orcid.org/0000-0002-1850-056X
- **Language:** Chinese (native). English.
- **Birth:** May 16, 1994. Zhangzhou, Fujian Province, China.
- **Other information:** Male. Married. No child. Political status: masses.

Education and Working Experiences.

- Since Jul. 2022. Postdoc.
  Beijing International Center for Mathematical Research, Peking University. Beijing, China.
  Mentor: Xiang Fu.
- Feb. 26, 2019 – Aug. 26, 2019. Visiting graduate student.
  University of California, Riverside. California, USA.
  Host professor: Carl Mautner.
  Funding: China Scholarship Council. No. 201804910559.
- Sep. 2016 – Jun. 2022. Ph.D.
  Academy of Mathematics and Systems Science, Chinese Academy of Sciences. Beijing, China.
  Major in Fundamental Mathematics.
  Supervisor: Nanhua Xi.
- Sep. 2012 – Jun. 2016. B.S.
  Fudan University. Shanghai, China.
  Major in Mathematics and Applied Mathematics.
- Sep. 2009 – Jun. 2012. Senior high school.
  Zhangzhou No. 1 High School of Fujian. Zhangzhou, Fujian Province, China.
- Sep. 2006 – Jun. 2009. Junior high school.
  Zhao'an Huai'en Middle School. Zhangzhou, Fujian Province, China.

- Sep. 2000 – Jun. 2006. Primary school.

  Zhao'an Experimental Primary School. Zhangzhou, Fujian Province, China.

Ph.D. Dissertation (written in Chinese).

- Title: "Reflection" representations of Coxeter groups.

  Full text available at `https://huhongsheng.github.io/thesis.pdf`

Papers and Preprints.

- On exterior powers of reflection representations, II.

  In preparation.

- Representations of Coxeter groups of Lusztig's a-function value 1.

  Preprint. `arXiv:2309.00593`

- On exterior powers of reflection representations.

  Published online. Bull. Aust. Math. Soc.

  `https://doi.org/10.1017/S0004972723000965`

  `arXiv:2306.16946v2`

- Reflection representations of Coxeter groups and homology of Coxeter graphs.

  Preprint. `arXiv:2306.12846`

- A note on least squares solutions and Gaussian eliminations.

  Preprint (teaching paper, written in Chinese). To appear in College Mathematics.

  Manuscript available at `https://huhongsheng.github.io/22070035-20221008.pdf`

- Some infinite dimensional representations of certain Coxeter groups.

  Preprint. `arXiv:2205.09294v2`

Lectures and Talks.

(Abstracts and slides or notes are available on my homepage.)

- Graphs and reflection representations, I — classifications and beyond.

  Sep. 14, 2023. Seminar on representation theory.

  Academy of Mathematics and Systems Science, Chinese Academy of Sciences. Beijing, China.

- Graphs and reflection representations, II — exterior powers.

  Sep. 14, 2023. Seminar on representation theory.

  Academy of Mathematics and Systems Science, Chinese Academy of Sciences. Beijing, China.

- Hecke algebras — an incomplete introduction.

  Apr. 27, 2023. 3+X undergraduate seminar.

  School of Mathematical Sciences, Peking University. Beijing, China.

- Coxeter groups and their reflection representations.

  Nov. 28, 2022. Postdoc seminar (online).

  Beijing International Center for Mathematical Research, Peking University. Beijing, China.

Teaching.

- Linear Algebra II B. Spring 2022. Teaching assistant. Lecturer: Ming Fang.

  University of Chinese Academy of Sciences. Beijing, China.

- Algebra. Fall 2019. Teaching assistant. Lecturer: Nanhua Xi.
  University of Chinese Academy of Sciences. Beijing, China.
- Linear Algebra II A. Spring 2017. Teaching assistant. Lecturer: Nanhua Xi.
  University of Chinese Academy of Sciences. Beijing, China.
- Linear Algebra I A. Fall 2016. Teaching assistant. Lecturer: Nanhua Xi.
  University of Chinese Academy of Sciences. Beijing, China.

Professional Activities.

- Since Dec. 2021. Reviewer for zbMATH Open.

Funding.

- Feb. 2019 – Aug. 2019. China Scholarship Council. No. 201804910559.

——————— The following is intentionally left blank. ———————