JULIET COOKE

RESEARCH INTERESTS

Quantum algebra, category theory, tensor categories, low dimensional topology, skein theory, quantum groups.

CURRENT POSITION

Visiting Postdoctorate at the Max Planck Institute for Mathematics in Bonn, January 2021-present

PAST POSITIONS

Collaborateur scientifique F.R.S.-FNRS, Université Catholique de Louvain, September 2019-December 2020.

EDUCATION

University of Edinburgh PhD Mathematics September 2015 – September 2019 Factorisation Homology and Skein Categories of Surfaces

University of York MMath Mathematics October 2012 – June 2015 First class honours with Distinction

PRIZES AND SCHOLARSHIPS

- EPSRC studentship for PhD
- P B Kennedy Prize for outstanding performance in the final degree examination in Mathematics
- Kathleen Ryan Project Prize for the best overall MMath final year project performance

TEACHING

Tutoring and marking (2015–2019):

- Proofs and Problem Solving
- Accelerated Proofs and Problem Solving
- Introduction to Linear Algebra
- Algebraic Topology
- General Topology
- Honours Algebra Skills (including Maple)
- Probability
- Probability with Applications

RESEARCH

- Kauffman Skein Algebras and Quantum Teichmüller Spaces via Factorisation Homology (arXiv:1811.09293)
- Excision of Skein Categories and Factorisation Homology (arXiv:1910.02630)

- 'Factorisation Homology and Skein Algebras': Categorification in quantum topology and beyond (Vienna January 2019)
- 'Skein Categories': ICMS Summer School: Geometric representation theory and low-dimensional topology (Edinburgh June 2019)
- 'Skein Categories': Workshop around Skein Modules (Orsay October 2019)
- 'Skein Categoires': Joint UCL-ULB-VUB seminar on quantum groups, Hopf algebras and monoidal categories (UCLouvain October 2019)
- 'Higher Rank Askey-Wilson Algebras as Skein Algebras': Clifford Research Group Seminar (Ghent May 2020)
- 'Higher Rank Askey-Wilson Algebras as Skein Algebras': Oberseminar (Universitat Bonn June 2020)
- 'Skein Categories': Monoidal and 2-categories in representation theory and categorification Workshop (HIM Bonn December 2020)

CONTACT DETAILS

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