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Noah White

education University of Edinburgh, PhD in Mathematics, 2016 (expected)

Thesis: Monodromy of real Bethe vectors
Advisors: Iain Gordon and Michael Wemyss

University of Sydney, Honours in pure mathematics, 2011

Thesis: Modular representation theory of the symmetric groups
Advisor: Anthony Henderson

University of Sydney, Bachelor of Science, 2010

research interests *Broad areas:* Representation theory, combinatorics, algebraic geometry, quantum algebra.

Key words: Crystals, cactus groups, complex or unitary reflection groups, Cherednik algebras, Bethe algebras, Gaudin model, Schubert calculus, tableaux, dual equivalence, asymptotic Hecke algebra, reflection equation algebra, invariant theory, cluster combinatorics.

papers and preprints Noah White. "Monodromy of real Bethe vectors". In preparation.

Adrien Brochier, Iain Gordon, and Noah White. "Calogero-Moser cells in type A and the RSK correspondence". In preparation.

David Jordan, and Noah White. "Quantisation of 2×2-minors and a quantum Caley Hamilton theorem". In preparation.

See website for up-to-date material.

Talks *Department seminar talks*

University of Melbourne algebra / geometry / topology seminar, August 2015, "Cactus group action on Young Tableaux"

University of Queensland pure maths seminar, August 2015, "Cactus group action on Young Tableaux"

University of Sydney algebra seminar, July 2015, "Cactus group actions in Schubert calculus, crystals and integrable systems"

Queen Mary University of London algebra seminar, February 2015, "Schubert calculus and the cactus group"

Research conferences and meetings

Algebra and Representation Theory in the North (ARTIN), March 2014, "The centre of quantum GL_n"

General interest and colloquium style talks

Joint Scottish PG Colloquium, May 2015 "Reality in algebraic geometry"

GEARS seminar, Glasgow, December 2014, "The representation theory of the symmetric groups via the action of a "maximal torus""

Postgraduate colloquium, Edinburgh, October 2015, "Group cohomology and wallpaper groups"

Postgraduate colloquium, Edinburgh, March 2013, "Symmetric functions and pipe dreams"

Workshops, summer schools, and working groups

WZW working seminar, Edinburgh, January 2015, "Affine Kac-Moody algebras."

PBW filtrations, Glasgow, May 2014, "Degenerate flag varieties of type A are Schubert varieties"

Tensor categories working seminar, Edinburgh, October 2013, "Fusion categories"

Geometry club, Edinburgh, September 2014, "Galois theory in enumerative geometry"

Geometry club, Edinburgh, January 2014, "Perverse sheaves"

Geometry club, Edinburgh, September 2013, "Invariants of knots from representation theory"

organising activities

Glasgow Edinburgh Algebra Research Student (GEARS) Seminar, 2014-present.
Organiser, grant holder (£1750 per year) and founder. GEARS is a regular meeting for Scottish algebra students (10-20 participants). Activities include, invited international speakers, participant talks, social events.

Geometry club, Edinburgh 2013-2014.
Organiser. A weekly seminar for postgraduates and postdocs in Edinburgh.

conferences

Geometric and categorical representation theory, Mooloolaba, December 2015

ARTIN, Glasgow, November 2015

ARTIN, Edinburgh, September 2015

On the interaction of representation theory with geometry and combinatorics, Bonn, March 2015

Derived categories, Weyl algebras and Hodge theory, Warwick, March 2015

Workshop on particle collision, geometry and representation theory, in Edinburgh, March 2015

Homological interactions between representation theory and singularity theory, Edinburgh, December 2014

ARTIN, in Glasgow, November 2014

Algebraic Lie theory, ICMS in Edinburgh, September 2014

Algebraic Lie theory summer school, Glasgow, August 2014

PBW filtrations of modules for Lie algebras, Glasgow, May 2014

ARTIN, Newcastle, March 2014

PARTE: Probability and representation theory, Edinburgh, February 2014

ARTIN, Aberdeen, November 2013

Cluster algebras and representation theory, Oberwolfach, October 2013

Young researchers in mathematics, Edinburgh, June 2013

GLEN, Edinburgh, June 2013

ARTIN, Glasgow, May 2013

ARTIN/BLOC, Sheffield, March 2013

Soergel bimodules and Kazhdan-Lusztig conjectures, Aarhus, March 2013

ARTIN, Edinburgh, December 2012

GLEN, Glasgow, November 2012

grants and awards   Edinburgh IAD researcher-led initiative grant, for the running of GEARS 2014-15.

Nominated for the (university-wide) Teaching Award: 2015 (best student who tutors award), 2015 (best feedback award), 2013 (best student who tutors award).

Laura Wisewell travel scholarship, 2015.

Edinburgh global research scholarship, 2012-2016 .

Eleanor Sophia Wood Postgraduate Research Travelling Scholarship, 2012-2016.

teaching experience   *Courses taught*

Mathematics bridging course 2012, University of Sydney. I lectured this intensive course designed for new students without the requisite mathematical background for their chosen degree. Teaching takes place over three weeks and includes 24 hours of class time.

Tutoring at the University of Edinburgh

SMSTC (graduate) algebra 2015/16

SMSTC (graduate) geometry/topology 2015/16

Differential manifolds 2014/15

Honours algebra 2014/15

Geometry 2015/16, 2014/15

Introduction to Lie groups 2013/14

Calculus and its applications 2015/16, 2014/15, 2013/14

Fundamentals of pure mathematics 2013/14, 2012/13

Introduction to linear algebra 2015/16, 2014/15, 2013/14, 2012/13

Tutoring at the University of Sydney

Basic pharmaceutical sciences (mathematics component) 2012

Linear algebra 2011, 2012

Discrete mathematics 2011

references Iain Gordon, University of Edinburgh

Michael Wemyss, University of Edinburgh

Andrew Mathas, University of Sydney

Ivan Losev, Northeastern University

David Jordan, University of Edinburgh

Toby Bailey, University of Edinburgh (teaching)

languages English (native)

German (fluent)