

Anna MKRTCHYAN

PERSONAL DATA

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EDUCATION

- CURRENT PhD in MATHEMATICS, University of Edinburgh (j.w. University of Bonn)
Major: Algebra and Representation Theory
Advisors: Dr. David JORDAN, Prof. Catharina STROPPEL (University of Bonn)
- JULY 2016 M.Sc. in MATHEMATICS, University of Bonn, w. *the overall grade "sehr gut"(1.2)*
Major: Stochastic and Geometric Analysis
Thesis: "Conformal transformation on metric measure spaces"
Advisor: Prof. Karl-Theodor STURM | [List of Courses](#)
- JULY 2014 B.S in MATHEMATICS, Lomonosov Moscow State University, *summa cum laude*
Major: Algebra and Group Theory
Thesis: "Surprising divisibility in group theory"
Advisor: Dr. Anton KLYACHKO | [List of Courses](#)
- JULY 2013 Summer School at the University of Koblenz-Landau | [List of Courses.](#)

RESEARCH INTERESTS

- Classical and quantum geometric representation theory and its relationship with low-dimensional topology
- Categorification and TQFT
- Group Theory
- Non-smooth Differential Geometry

PAPERS AND PREPRINTS

- Klyachko Ant. A, Mkrtychyan A. A. *How many tuples of group elements have a given property? With an appendix by Dmitrii V. Trushin*, Intern. J. of Algebra and Comp., 24:4 (2014), 413-428. See also arXiv:1205.2824
- Klyachko A. A., Mkrtychyan A. A. *Strange divisibility in groups and rings*, Archiv der Mathematik, 108:5 (2017), 441-451.. See also arXiv: :1506.08967, 2015.

SCHOLARSHIPS AND AWARDS

- Pre-PhD scholarship awarded by Bonn International Graduate School of Mathematics, 2016-2019
- ERC Scholarship awarded by the University of Edinburgh, 2016-2020
- Qualifying Scholarship awarded by Bonn International Graduate School of Mathematics, 2014-2016

- Presidential Scholarship (scholarship for student's scientific achievements) awarded by the Lomonosov Moscow State University
- Highest State Stipend (for outstanding academic achievements) awarded by the Lomonosov Moscow State University
- Summer School Scholarship awarded by the University of Koblenz-Landau, July 2013

SELECTED TALKS

- *Gradings on the Brauer algebra*, 21 September, 2018, Algebra Seminar, Sydney
- *Borel-Weil-Bott theorem*, 9 May, 2017, Research Group Seminar, Edinburgh
- *Derived and Triangulated Categories*, 17 November, 2016, Homological Algebra Seminar, Edinburgh
- *The Affine q -Schur Algebra*, 16 November, 2016, Research Group Seminar, Edinburgh
- *Schur-Weyl Duality*, 13 October, 2016, Research Group Seminar, Edinburgh
- *Surprising Divisibility in Group Theory*, 31 May, 2016, Kolloquium (Invited talk), Aachen
- *Conformal Transformation on Metric Measure Spaces*, 6 July, 2016, Stochastic Seminar, Bonn
- *Properties of Triangulated Categories*, 12 November, 2015, Seminar on Derived Categories, Bonn
- *Ising model, Glauber dynamics, invariant measures*, 28 April, 2015, Graduate Seminar on Stochastic Analysis, Bonn
- *Particle Cycling Models*, 20 November, 2014, Interacting Particle Systems, Bonn
- *How many tuples of group elements have a given property?*, Algebra Seminar, Moscow

WORKSHOPS AND CONFERENCES ATTENDED

- Research visit, 1-30 September, 2018, Sydney, Australia.
- Summer School *Summer School on Geometric Representation Theory*, 9-13 July, 2018, Institute of Science and Technology, Austria.
- Conference: *Representation Theory, Mathematical Physics and Integrable Systems*, 4-8 June, 2018, Luminy.
- Conference: *Geometry and Representation Theory of Algebraic Groups*, 5-9 March, 2018, Bad Honnef
- Trimester Program: *Symplectic Geometry and Representation Theory*, October 2 – December 21, 2017, Bonn
- Workshop: *Subfactors, K -theory and conformal field theory*, 12-16 June, 2017, Cambridge
- Conference: *Representation Theory at the Crossroads of Modern Mathematics (in honour of Alexandre Kirillov)*, 29 May- 2 June, 2017, Reims
- Workshop: *(BIGW) Higgs bundles: algebraic and differential geometric perspectives*, 3-7 April, 2017, Isle of Wight
- *Workshop on quantum fields, knots and integrable systems*, 27 February- 2 March, 2017, Edinburgh
- Workshop: *Young Women in Representation Theory*, 23-25 June, 2016, University of Bonn

- Workshop: *Categorification* , 16-20 May, 2016, Bonn

Master of Science in MATHEMATICS

Courses

Foundations in Numerical Mathematics: Scientific Computing I
Foundations in Probability and Stochastic Analysis: Stochastic Analysis
Representation Theory I , II
Selected Topics in Discrete Mathematics
Stochastic Analysis
Selected Topics in Stochastic Analysis- Introduction to Optimal Transport and Applications
Graduate Seminar on Representation Theory - Derived Categories
Additional Graduate Seminar on Representation Theory
Graduate Seminar on Probability Theory-Particle Systems
Graduate Seminar on Stochastic Analysis-Interacting Particle Systems
Finance

B.S in MATHEMATICS

Courses

| OCCUPATIONAL | GENERAL |
|--|----------------------------|
| Algebra | Russian language |
| Analytic Geometry | Foreign Language (English) |
| Calculus | Physical education |
| Programming | National History |
| Theory of Discrete Functions | Economic Theory |
| Linear Algebra and Geometry | |
| Differential Equations | |
| Real Analysis | |
| Differential Geometry and Topology | |
| Probability Theory | |
| Computer Geometry | |
| Functional Analysis | |
| Mathematical Statistics | |
| Complex Analysis | |
| Partial Differential Equations | |
| Theory of Stochastic Processes | |
| Discrete Mathematics | |
| Number Theory | |
| Classical and Analytic Mechanics | |
| Numerical Methods | |
| History and Methodology of Mathematics | |
| Physics | |
| Sociology | |

Summer School at the University of Koblenz-Landau

Courses

Deepening Investment And Financing III: Derivatives and Financial Engineering
Entrepreneurial Design Thinking
