Alexandre Minets

Nationality: Belarusian, French
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Research interests:

Representation theory, moduli spaces of sheaves, quantum groups, knot invariants, quiver varieties, topological field theory.

Employment:

2018-present Postdoctoral researcher at Hausel Group, *IST Austria*, Klosterneuburg, Austria

Education:

2015-2018 PhD student in Mathematics, *Université Paris-Sud*, Orsay, France
Topic: "Nakajima varieties associated to curves" | Advisor: Olivier Schiffmann
defended on *September 3, 2018*,

2012-2015 Élève at *École Normale Supérieure*, Paris, France

2014 Master 2 in Mathematics, mention "très bien" (GPA 18/20), *Paris 7*

2013 Master 1 in Mathematics, mention "très bien" (GPA 17,8/20), *Paris 6*

2009-2012 Student in Applied Mathematics, *Belarusian State University*, Minsk, Belarus

Papers:

- Cohomological Hall algebras for Higgs torsion sheaves, moduli of triples and sheaves on surfaces, *Selecta Mathematica (2020) 26:30 (67 pages)*, doi: 10.1007/s00029-020-00553-x
- KLR and Schur algebras of curves and semi-cuspidal representations,
joint with Ruslan Maksimau, *prepublication (51 pages), submitted*, arXiv:2010.01419

Teaching experience:

2020 Co-taught graduate course "$\mathcal{D}$-modules" (with Quoc P. Ho)
IST Austria, Klosterneuburg, Austria

2015-2017 Teaching assistant, *Université Paris-Sud*, Orsay, France:
- Calculus and probability theory (3 times)
- Linear algebra and differential equations (2 times)
- Multivariate calculus and optimization

2011 Co-taught special course in algebraic topology (with Sasha Patotski)
Belarusian State University, Minsk, Belarus

Invited talks:

2020 RepNet Virtual Seminar
KLR and Schur algebras for curves and semi-cuspidal representations

Institut Henri Poincaré, Colloque Tournant
Schur algebras of curves and semi-cuspidal categories

2019 University of Stuttgart, Algebra Seminar
Cohomological Hall algebras and sheaves on surfaces

USTC Hefei, Séminaire MathJeunes
Hall algebras and sheaves on surfaces

Academia Sinica, Postdoc Seminar
Hall algebras and sheaves on surfaces

University of Edinburgh, Geometric Representation Theory and Low-dimensional Topology Conference
A primer on cohomological Hall algebras

Universität Bonn, Representation Theory Seminar
Shuffle presentation of cohomological Hall algebras for curves

University of Edinburgh, ARTIN 2019
Cohomological Hall algebras and sheaves on surfaces

Université de Montpellier, AGATA Seminar
K-theoretic Hall algebras of surfaces and quantum toroidal $\mathfrak{gl}_n$

2018 IST Austria, Algebraic Geometry Seminar
Cohomological Hall algebras and their representations

IST Austria, Working Seminar
Hall algebras and moduli of sheaves (mini-course)

2017 Institut Henri Poincaré, Seminaire RéGA
GIT for algebraic stacks (expository)

Isle of Wight, British Isles Graduate Workshop
P=W conjecture (expository)

RIMS, Algebraic Analysis and Representation Theory Conference
Cohomological Hall algebras for Higgs torsion sheaves on curves (poster)

2015 University of Wuppertal, School on Kac Conjectures and Quiver Varieties
Proof of second Kac conjecture (expository, with Hans Franzen)

École Normale Supérieure, Seminaire MathJeunes
Hall algebras and quantum groups (expository)

Other activities:

- Refereed articles for Compositio Mathematica, Communications in Mathematical Physics
- Supervised student project "Atiyah's classification of vector bundles on an elliptic curve", IST Austria
- Organized reading group "Number fields with given ramifications and automorphic forms", Université Paris-Sud
- Member of jury at TFJM² (2017, 2018) and ITYM (2018)
- Member of selection committee and teaching assistant at MoMISSS summer school, Bremen, Germany (2013, 2017) and Lyon, France (2014)

Languages:

English:	Fluent	Russian:	Native
French:	Fluent	German:	Basic