

Léa Bittmann
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Date of birth: 26/12/1991
Nationality: French and
Canadian

Education and Academic career

2021 –	UNIVERSITY OF EDINBURGH , Edinburgh. Researche Associate , working with Alexander Shapiro.
2019 – 2021	UNIVERSITÄT WIEN , Vienna. Postdoctoral Researcher in the team of Anton Mellit.
2016 – 2019	UNIVERSITÉ PARIS DIDEROT , Paris. PhD in Mathematics , Advisor: David Hernandez.
July 2016	Agrégation de mathématiques , French diploma for higher education teaching.
2015 – 2016	UNIVERSITÉ PIERRE ET MARIE CURIE , Paris. M.Sc. of teaching in Mathematics , Summa cum Laude. Training for higher education teaching.
2014 – 2015	UNIVERSITÉ PARIS DIDEROT , Paris, France. M.Sc. in Fundamental Mathematics , Summa cum Laude.
2012 – 2014	ÉCOLE NORMALE SUPÉRIEURE (ENS), Paris. First year of M.Sc. in Fundamental Mathematics. B.Sc. in Mathematics , with high honors.

Publications

January 2023	<i>On a determinant formula for some real regular representations</i> , preprint, arXiv:2301.00784 .
March 2022	<i>On the simplicity of the tensor product of two simple modules of quantum affine algebras</i> (with J-R. Li), preprint, arXiv:2203.17268 .
October 2021	<i>Type A DAHA and Doubly Periodic Tableaux</i> (with A. Chandler, A. Mellit and C. Novarini), preprint, arXiv:2110.03258 .
December 2020	<i>A quantum cluster algebra approach to representations of simply-laced quantum affine algebras</i> , in Mathematische Zeitschrift .
July 2020	<i>Quantum Grothendieck rings as quantum cluster algebras</i> , in Journal of the London Mathematical Society .
July 2019	PhD Thesis: <i>Quantum Grothendieck rings, cluster algebras and quantum affine category \mathcal{O}</i> .
August 2018	<i>Asymptotics of Standard Modules of Quantum Affine Algebras</i> , in Algebras and Representation Theory .
September 2015	Master Thesis: <i>Representations of the Yangian in Deligne's category $\text{Rep}(Gl_t)$</i> .

Teaching

2021 – 2023	UNIVERSITY OF EDINBURGH , Scotland, UK. Tutor , <i>Introduction to Linear Algebra</i> , <i>Honours Algebra</i> (Computer Workshop), <i>Honours Analysis</i> .
July 2020	ÉCOLE NORMALE SUPÉRIEURE ADMISSION EXAMINATION . Examiner for the <i>Mathématiques D</i> paper, Admission board.
2017 – 2019	UNIVERSITÉ PARIS DIDEROT , Paris, France. Teaching Assistant in Mathematics, for second year B.Sc. students preparing for engineer schools.

2016 – 2017

UNIVERSITÉ PARIS DIDEROT, Paris, France.

Teaching Assistant in Mathematics, for first year B.Sc. students majoring in Computer Science.

Some talks

May 2022

CONFERENCE: BRIDGES BETWEEN REPRESENTATION THEORY AND ALGEBRAIC GEOMETRY: SINGULARITIES, FRIEZES AND CLUSTER CATEGORIES, Leeds, UK.

Simplicity of tensor product of quantum affine algebras representations.

April 2022

SÉMINAIRE D'ALGÈBRE, IHP, Paris, France.

A Schur-Weyl duality between Double Affine Hecke Algebras and quantum groups.

November 2021

ENVELOPING ALGEBRAS AND GEOMETRIC REPRESENTATION THEORY, MFO, Germany.

A Schur-Weyl duality between Double Affine Hecke Algebras and quantum groups.

Décembre 2020

QUANTUM GROUPS AND COHOMOLOGY THEORY OF QUIVER AND FLAG VARIETIES, CIRM, BBB.

Monoidal categorification of cluster algebra and quantum affine Schur-Weyl duality .

November 2020

QUANTUM ALGEBRA DAYS, IMAG, Montpellier, Zoom.

Anneaux de Grothendieck quantiques, vers les types non simplement lacés.

June 2020

ARTIN WORKSHOP, UNIVERSITY OF NOTTINGHAM, Microsoft Teams.

t-deformations of Grothendieck rings as quantum cluster algebras.

February 2020

COLLOQUE TOURNANT DU GDR TLAG, IHP, Paris, France.

Représentations des algèbres affines quantiques du point de vue des algèbres amassées quantiques.

January 2019

SÉMINAIRE GROUPES, REPRÉSENTATIONS ET GÉOMÉTRIE, UNIVERSITÉ PARIS-DIDEROT, Paris, France.

Anneaux de Grothendieck quantiques et algèbres amassées quantiques.

December 2018

XXV BRAZILIAN ALGEBRA SCHOOL, Campinas, Brazil.

t-deformations of Grothendieck rings as quantum cluster algebras.

June 2018

QUANTUM AFFINE ALGEBRAS, Washington DC, USA.

t-deformations of Grothendieck rings as quantum cluster algebras.

May 2018

UC RIVERSIDE, Riverside, USA.

Asymptotics of standard modules of quantum affine algebras.

Administration

- 2022 – 2023: Organizer of the [Algebra Seminar](#), University of Edinburgh.
- 2021 – 2022: Organizer of the [Hodge Seminar](#), University of Edinburgh.
- 2021 – 2023: Member of the School of Mathematics [Equality, Diversity and Inclusion](#) committee, University of Edinburgh.
- 2017 – 2019: Organizer of biannual meetings between graduate students and PhD students, Université Paris Diderot.
- 2017 – 2019: Member of the Gender Equality Committee of the Institut de Mathématiques de Jussieu-Paris Rive Gauche (IMJ-PRG), Member of the PhD Student Body.
- **Reviewer** for the following journals: *Advances In Mathematics*, *Journal of the London Mathematical Society*, *Journal of Algebra*, *Algebra and Representation Theory* and *AMS Mathematical Reviews*.