

Léa Bittmann  
Hodge Institute,  
University of Edinburgh  
Email: [lea.bittmann@ed.ac.uk](mailto:lea.bittmann@ed.ac.uk)

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

## Education and Academic career

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- 2021 –** UNIVERSITY OF EDINBURGH, Edinburgh.  
**Research 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

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- October 2021** *Type A DAHA and Doubly Periodic Tableaux* (with A. Chandler, A. Mellit and C. Novarini), preprint, [arXiv:2110.03258](https://arxiv.org/abs/2110.03258).
- December 2020** *A quantum cluster algebra approach to representations of simply-laced quantum affine algebras*, in *Mathematische Zeitschrift*.
- July 2020** *Quantum Grothendieck rings as quantum cluster algebras*, in *Journal of the London Mathematical Society*.
- July 2019** PhD Thesis: *Quantum Grothendieck rings, cluster algebras and quantum affine category  $\mathcal{O}$* .
- August 2018** *Asymptotics of Standard Modules of Quantum Affine Algebras*, in *Algebras and Representation Theory*.
- September 2015** Master Thesis: *Representations of the Yangian in Deligne's category  $\text{Rep}(GL_t)$* .

## Teaching

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- 2021 – 2022** UNIVERSITY OF EDINBURGH, Scotland, UK.  
**Tutor**, *Introduction to Linear Algebra*.
- July 2020** ÉCOLE NORMALE SUPÉRIEURE ADMISSION EXAMINATION.  
**Examiner** for the *Mathématiques D* paper, Admission board.
- 2019 – 2020** LYCÉE FRANÇAIS DE VIENNE, Vienna, Austria.  
Occasional substitute teacher in senior and junior high school classes.
- 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

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- November 2021** ENVELOPING ALGEBRAS AND GEOMETRIC REPRESENTATION THEORY, MFO, Germany.  
*A Schur-Weyl duality between Double Affine Hecke Algebras and quantum groups.*
- Decembre 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.*
- January 2017** GEOMETRY AND REPRESENTATION THEORY, ESI, Vienna, Austria.  
*Quantum Grothendieck Rings and Baxter relations.*

## Administration

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- 2021 – 2022: Organizer of the [Hodge Seminar](#), University of Edinburgh.
- 2021 – 2022: 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).
- 2016 – 2019: Member of the PhD Student Body, IMJ-PRG.
- **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*.

## Research visits

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- May 2018** UC RIVERSIDE, Riverside, USA.  
Visited Pr. Vyjayanthi Chari.
- March – July 2015** MASSACHUSETTS INSTITUTE OF TECHNOLOGY, Boston, USA.  
**Research internship** in Mathematics. Advisor: Pr. Pavel Etingof.