

Jakub Löwit – CV

Address	Treustrasse 42, 1200, Wien, Austria
Date of Birth	23 rd January 1997
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Education

09/2021–now	PhD studies Institute of Science and Technology Austria (ISTA) Advisor: Tamás Hausel, ISTA Thesis committee: Tamás Hausel, ISTA Xinwen Zhu, Stanford Timothy Browning, ISTA
10/2019 – 08/2021	Master's studies Rheinische Friedrich-Wilhelms-Universität Bonn Mathematics Master's thesis: <i>On modulo ℓ cohomology of p-adic Deligne–Lusztig varieties for GL_n</i> First advisor: Alexander Ivanov, Mathematical Institute Second advisor: Peter Scholze, Mathematical Institute Graduated with very good grades
09/2016 – 06/2019	Bachelor's studies Charles University Prague, Faculty of Mathematics and Physics General mathematics Bachelor's thesis: <i>Modules over string algebras</i> Advisor: Jan Šťovíček, Department of Algebra Graduated with honors

Additional research experience

10/2021 – 12/2021	Rotation Institute of Science and Technology Austria (ISTA) Project: <i>Homological methods for morphism counts over finite fields</i> Advisor: Timothy Browning, ISTA
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Scholarships and grants

- 2024–2026** DOC Fellowship of the Austrian Academy of Sciences
funding for doctoral candidates in all areas of research
(24 months)
- 2019–2021** DAAD Study scholarship for graduates of all disciplines
complete funding of master's studies
(24 months)
- 2016–2019** Scholarship for excellent academic results
Charles University Prague
- 2017** Student faculty grant
Charles University Prague
co-authored expository notes on *group theory* for high school students

Publications and preprints

- [3] *Equivariant K -theory, affine Grassmannian and perfection*
Jakub Löwit, preprint, 2024
[arXiv], [pdf]
- [2] *On modulo ℓ cohomology of p -adic Deligne–Lusztig varieties for GL_n*
Jakub Löwit, Journal of Algebra, 663, 2025, 81–118
[journal], [arXiv], [pdf]
- [1] *Modules over string algebras*
Jakub Löwit, bachelor's thesis, Charles University Prague, 2019,
[available online] [pdf]

Talks

Invited seminar talks

- 28/06/2024** Oberseminar Darstellungstheorie, Universität Bonn
On equivariant K -theory, affine Grassmannians and perfection
- 03/06/2024** Oberseminar Lie Theorie, Ruhr-Universität Bochum
On modular p -adic Deligne–Lusztig theory for GL_n

Seminar talks

- 10/2024** Hausel group working seminar, ISTA
2 talks
Equivariant algebraic K -theory, fixed-point schemes and Dennis trace
- 2022–2023** Hausel group working seminar, ISTA
4 talks in learning seminar on geometric Langlands:
Introduction to geometric Langlands
Affine Grassmannians and geometric Satake equivalence
- 12/01/2022** Browning group working seminar, ISTA
Homological methods for morphisms counts over finite fields

Expository talks

- 07/11/2022** MIX colloquium, ISTA
Finite and infinite fields in algebraic geometry
- 09/11/2017** Fall school of the Department of Algebra of Charles University Prague
Cards, permutations and quadratic reciprocity

Teaching and organization

2023–2024 Reading seminar: *Introduction to infinity categories*, ISTA
co-organizer (with Kamil Rychlewicz)

Summer schools, workshops, conferences

- 10/2024** Reduction of arithmetic varieties, Seminar
Oberwolfach, Germany
- 10/2024** Clay research conference
Oxford, United Kingdom
- 09/2024** Alpine algebraic geometry, Conference
Universitätszentrum Obergurgl, Austria
- 07/2024** Arithmetic geometry in honour of Gerd Faltings' 70th birthday, Conference
Max Planck Institute for Mathematics, Bonn, Germany
- 07/2024** Moduli of Higgs bundles and the Langlands program, Workshop
Simons Center for Geometry and Physics, Stony Brook, USA
- 06/2024** Continuous K-theory, dualizable and rigid categories, Masterclass
University of Copenhagen, Denmark
- 10/2023** Geometric and categorical representation theory, Conference
Besse-et-Saint-Anastaise, France
- 09/2023** Algebraic K-theory and redshift, Fall school
Johannes Gutenberg Universität Mainz, Germany
- 07/2023** Motives in moduli and representation theory, Workshop
Radboud University Nijmegen, Netherlands
- 07/2023** Homotopy theory, K-theory, and trace methods, Conference
Motivic and non-commutative aspects of enumerative geometry, Workshop
Radboud University Nijmegen, Netherlands
- 04/2023** The Hitchin system, Langlands duality and mirror symmetry, Workshop
ICMAT, Madrid, Spain
- 09/2022** Recent perspectives on Hodge theory, Summer school
Centro De Giorgi, Pisa, Italy
- 07/2022** Number theory and algebraic geometry, ICM sectional meeting
ETH Zürich, Switzerland
- 06/2022** Non-abelian Hodge theory, Summer school
Saint-Jacut-de-la-Mer, France
- 07/2021** Motivic homotopy, Summer school
Park City Mathematical Institute
(virtual)
- 09/2021** 8th Heidelberg laureate forum
(virtual)
- 08/2018** ICRA, International conference on representations of algebras, Workshop
Charles University, Prague
- 07/2017** Modern mathematics, Summer school
Jacobs University, Bremen

International competitions

07/2019	IMC, International mathematical competition, Bulgaria – Gold medal
07/2018	IMC, International mathematical competition, Bulgaria – Gold medal
07/2017	IMC, International mathematical competition, Bulgaria – Silver medal
07/2016	IMO, International mathematical olympiad, Hong-Kong – Honorable mention

Extracurricular activities

2018-now	Czech mathematical olympiad Co-organizer: <ul style="list-style-type: none">• member of the problem selection committee• co-organized Czech-Austrian-Polish-Slovak-Austrian match CAPS (3×)• co-organized MEMO 2019• graded problems• gave lectures
2016–2021	<i>PraSe</i> – correspondence seminar for talented high school students Co-organizer: <ul style="list-style-type: none">• selected problems• co-organized math camps (6×)• gave lectures• wrote lecture notes
2016–2021	<i>iKS</i> – correspondence seminar for talented high school students Co-organizer: <ul style="list-style-type: none">• selected problems• co-organized math camps (5×)• gave lectures• wrote lecture notes

Languages

English	fluent
German	satisfactory
Czech	native