

Janina C. Letz

Research Assistant

Faculty of Mathematics

Bielefeld University

PO Box 100 131

33501 Bielefeld, Germany

✉ jletz@math.uni-bielefeld.de

🌐 www.math.uni-bielefeld.de/~jletz

Research

Area *Commutative Algebra and Homological Algebra*

Topics of interest *Triangulated Categories, Derived Categories, Stable Categories.*

Employment

2020–current **Research Assistant**, *Bielefeld University*, Bielefeld, Germany.

Education

2015–2020 **Ph.D. Mathematics**, *University of Utah*, Salt Lake City, Utah, USA.

Advisor: Srikanth Iyengar

Title of thesis: *Generation Time in Derived Categories*

2012–2015 **B.Sc. Physics**, *Johannes Gutenberg-University*, Mainz, Germany.

Advisor: Peter Virnau

Title of thesis: *Computersimulationen zum Phasenverhalten von aktiven Dimeren* (computer simulations about phase characteristics of active dimers)

2012–2014 **B.Sc. Mathematics**, *Johannes Gutenberg-University*, Mainz, Germany.

Advisor: Manuel Blickle

Title of thesis: *Bernstein-Gelfand-Gelfand Korrespondenz*

2008–2012 **Pre-university course work**, *Johannes Gutenberg-University*, Mainz, Germany.

University courses during high school in mathematics (Frühstudium).

Publications

- [] Srikanth B. Iyengar, *Janina C. Letz*, Jian Liu, and Josh Pollitz. Exceptional complete intersection maps of local rings. arXiv e-prints, 2021. arXiv:2107.07354v1.
- [2] Benjamin Briggs, Srikanth B. Iyengar, *Janina C. Letz*, and Josh Pollitz. Locally complete intersection maps and the proxy small property. *Int. Math. Res. Not. IMRN*, pages 1–28, 2021. Advance article.
- [1] *Janina C. Letz*. Local to global principles for generation time over commutative noetherian rings. *Homology Homotopy Appl.*, 23(2):165–182, 2021.

Awards

- 2019 **Graduate Student Travel Assistance Award**, *University of Utah*.
- 2018 **American Mathematical Society Travel Funding**.

Conference Talks

- 2021 **Homotopical characterization of exceptional complete intersection maps**, *Workshop on Homotopy Theory and Group Theory (IRP Higher Homotopical Structures)*, virtually.
Invited Speaker
- 2021 **Computations for thick subcategories in Macaulay2**, *AMS Spring Southeastern Sectional Meeting*, virtually.
Invited Speaker
- 2020 **Smallness properties and locally complete intersections**, *Joint Mathematics Meeting*, Denver, Colorado, USA.
Poster at the AWM Poster Session, Funded
- 2020 **Local to global principles for generation time over commutative rings**, *Joint Mathematics Meeting*, Denver, Colorado, USA.
Invited speaker
- 2019 **Smallness properties and locally complete intersections**, *KUMUNU*, Lincoln, Nebraska, USA.
Poster
- 2019 **Smallness properties and locally complete intersections**, *AMS Fall Central Sectional Meeting*, Wisconsin, Madison, USA.
Invited speaker
- 2019 **Smallness properties and locally complete intersections**, *Equivariant Topology and Derived Algebra*, Trondheim, Norway.
Gong show talk (10 minutes)
- 2019 **Smallness properties and locally complete intersections**, *RRAGE: Ragnar's Ramifications in Algebra and Geometry Emerging Workshop*, Toronto, Canada.
5-minute talk
- 2019 **Local to global principles for generation time over commutative rings**, *KUMUNUjr*, Lincoln, Nebraska, USA.
Invited speaker
- 2017 **Local Cohomology**, *European Talbot Workshop: Dualities in Algebra, Geometry, and Topology*, Geestland, Germany.

Seminar Talks

- 2021 **A homotopical characterization of locally complete intersection maps**, *Algebra Seminar*, University of Leeds, Leeds, UK (virtually).

- 2021 **Generation in derived categories and applications to commutative algebra**, *New directions in group theory and triangulated categories*, virtually.
- 2020 **A homotopical characterization of locally complete intersection maps**, *Algebra and Discrete Mathematics Seminar*, Clemson University, South Carolina, USA (virtually).
- 2020 **Local to global principles for generation time over commutative rings**, *Algebra Seminar*, Syracuse University, Syracuse, New York, USA.
- 2020 **Local to global principles for generation time over commutative rings**, *Algebra and Algebraic Geometry Seminar*, University of Wisconsin, Madison, Wisconsin, USA.
- 2019 **Local to global principles for generation time over commutative rings**, *Oberseminar Algebra*, Osnabrück, Germany.
- 2019 **Local to global principles for generation time over Noether algebras**, *BIREP seminar*, Bielefeld, Germany.
- 2019 **Local to global principles for generation time over commutative rings**, *Commutative algebra seminar*, University of Nebraska, Lincoln, Nebraska, USA.
- 2019 **Local to global principles for generation time over commutative rings**, *Commutative algebra seminar*, University of Utah, Salt Lake City, Utah, USA.

Conferences Attended

- 2021 **Workshop on Homotopy Theory and Group Theory (IRP Higher Homotopical Structures)**, virtually.
Invited Speaker
- 2021 **AMS Spring Southeastern Sectional Meeting**, virtually.
Invited Speaker
- 2021 **Dualities in Topology and Algebra**, ICTS, India (virtually).
Participant
- 2021 **Flash Talks in Representation Theory at NTNU**, virtually.
Participant
- 2020 **International Conferences on Representations of Algebras (ICRA) 2020**, virtually.
Participant
- 2020 **Workshop: Cohomology of Finite Groups: Interactions and Applications**, Mathematisches Forschungsinstitut Oberwolfach, Germany.
Editor for the Oberwolfach Report
- 2020 **Advances in Mixed Characteristic Commutative Algebra and Geometric Connections**, Cancelled due to COVID-10.

- 2020 **Zoom Special Session on DG Methods in Commutative Algebra and Representation Theory**, virtually.
Organizer
- 2020 **AMS Spring Central Sectional Meeting**, West Lafayette, Indiana, USA, Canceled due to COVID-19.
Invited speaker
- 2020 **Joint Mathematics Meeting**, Denver, Colorado, USA.
Invited speaker
- 2019 **KUMUNU**, *commutative algebra conference*, Lincoln, Nebraska, USA.
Funded Participant
- 2019 **AMS Fall Central Sectional Meeting**, Madison, Wisconsin, USA.
Invited speaker
- 2019 **Equivariant Topology and Derived Algebra**, *A Jolly Pleasant Conference for Greenlees*, Trondheim, Norway.
Funded Participant
- 2019 **Ragnar's Ramifications in Algebra and Geometry Emerging Workshop (RRAGE)**, Toronto, Canada.
Funded Participant
- 2019 **CIME-CIRM Course: Recent developments in Commutative Algebra**, Levico Terme, Italy.
Funded Participant
- 2019 **Noether Konferenz—Wie kommt das neue in die Welt? (How does something new arise?)**, Berlin, Germany.
Participant
- 2019 **KUMUNUjr**, *commutative algebra conference for young researchers*, Lincoln, Nebraska, USA.
Invited speaker
- 2018 **AMS Fall Western Sectional Meeting**, San Francisco, California, USA.
Participant
- 2018 **Stable Cohomology: Foundations and Applications**, Snowbird, Utah, USA.
Funded participant
- 2018 **Minicourse: Topics in commutative algebra**, Salt Lake City, Utah, USA.
Local participant
- 2017 **European Talbot Workshop: Dualities in Algebra, Geometry, and Topology**, Geestland, Germany.
Funded participant
- 2017 **Triangulated Categories and Geometry—a conference in honour of Amnon Neeman**, Bielefeld, Germany.
Participant

Professional Affiliations/Memberships

- 2015–2020 **American Mathematical Society**, *Student membership*.
2018–2020 **Association for Women in Mathematics**, *Student membership*.

Outreach and Service

- 2021–current **FDLIST**, *Network for research in representation theory of finite-dimensional algebras and related topics*.
Setup and maintenance of the forum
- 2021–current **Examination Committee Bachelor of Science in Mathematics**, *Bielefeld University*, Bielefeld, Germany.
Member
- 2021–current **Examination Committee Master of Science in Mathematics**, *Bielefeld University*, Bielefeld, Germany.
Member
- 2020–current **Seminar Representation Theory**, *Bielefeld University*, Bielefeld, Germany.
Co-Organizer
- 2017–2020 **Student Chapter of the Association for Women in Mathematics**, *University of Utah*, Salt Lake City, Utah, USA.
- 2019–2020: Chair of the conference committee
Organizing a conference aimed towards early graduate students and advanced undergraduate to support students from underrepresented groups.
 - 2019–2020: Webmaster
 - 2019–2020: Mentor in the mentoring program for undergraduate students
 - 2018: Facilitator of the ‘What is math day?’
Activity with middle school kids.
- 2018–2020 **Graduate Student Advisory Committee**, *University of Utah*, Salt Lake City, Utah, USA.
- 2019–2020: Co-chair of the Professional development committee
Organizing a job material editing group and some workshops and panels.
 - 2019–2020: Co-chair of the peer mentoring program
Pairing incoming graduate students with advanced graduate students.
 - 2018–2020: Mentor in the peer mentoring program
 - 2018–2019: Graduate student colloquium chair
- 2018–2019 **Student Seminar in Commutative Algebra (BIKES)**, *University of Utah*, Salt Lake City, Utah, USA.
Organizer

Teaching

- 2020–current **Instructor and Organizer for Tutorials**, *Bielefeld University*, Bielefeld, Germany.
Writing problem sheets, organizing tutorial sessions and leading a tutorial session
- Complex Analysis (Funktionentheorie)
Winter 2020/21
- 2016–2019 **Instructor**, *University of Utah*, Salt Lake City, Utah, USA.
Teaching undergraduate courses with full responsibility for lectures and grades.
- Accelerated Engineering Calculus II (MATH 1321)
Fall 2019
 - Engineering Calculus II (MATH 1320)
Spring 2019, Fall 2018, Spring 2018
 - Bridge to Engineering Calculus II (MATH 13)
Spring 2019, Fall 2018
 - Engineering Calculus I (MATH 1310)
Fall 2017
 - Calculus II (MATH 1220)
Fall 2016
- 2019 **Directed Reading Program: Mentor**, *University of Utah*, Salt Lake City, Utah, USA.
Mentoring an undergraduate student for an independent reading project.
Mentee: Corbin Baldwin, Project: Category Theory
- 2015–2017 **Lab instructor**, *University of Utah*, Salt Lake City, Utah, USA.
Leading group discussions and grading problem sheets.
- Spring 2017: Engineering Calculus II (MATH 1320)
 - Spring 2016: Calculus I (MATH 1210)
 - Fall 2015: Engineering Calculus I (MATH 1310)
- 2012–2015 **Übungsleiter (Lab instructor)**, *Johannes Gutenberg-University*, Mainz, Germany.
Leading group discussions and grading problem sheets.
- Theoretical Physics IV (Theoretische Physik IV)
Summer 2015
 - Principles of numerics (Grundlagen der Numerik)
Summer 2014
 - Linear algebra 1 (Lineare Algebra 1)
Winter 2013/14, Summer 2013, Winter 2012/13

Language skills

English, German

Computer skills

L^AT_EX, Macaulay2, Java, C, C++, MATLAB, Python