

## Biographical information

Place and date of birth 28<sup>th</sup> July 1988, Leonberg, Germany  
Nationality German

## Language skills

Mother tongue German  
Foreign languages English (level B2), Latin (high school level), Spanish (level A2), French (level A1)

## Employment

10/2023 - 09/2025 **Postdoc in mathematics at the Leibniz University Hannover**  
Institute of Algebra, Number Theory and Discrete Mathematics  
Mentor: Prof. Dr. Michael Cuntz

## Education

08/2018 - 09/2023 **Doctoral student in mathematics, TU Kaiserslautern** (funded by the DFG)  
Topic: Trivial source character tables of small finite groups  
Supervisor: Jun.-Prof. Dr. Caroline Lassueur

11/2011 - 09/2016 **Master of Science in mathematics, University of Stuttgart**  
Specialisations:  
◦ Representation theory of finite-dimensional algebras  
◦ Homological algebra  
◦ Master's Thesis (04/2016 - 09/2016)  
Title: Contributions to the representation theory of gendo-symmetric algebras  
Supervisor: Prof. Dr. Wolfgang Rump

10/2008 - 11/2011 **Bachelor of Science in mathematics, University of Stuttgart**  
Specialisations:  
◦ Representation theory of finite groups  
◦ Algebra  
◦ Bachelor's Thesis (05/2011 - 10/2011)  
Title: Influence of character degrees on the group structure  
Supervisor: Prof. Dr. Wolfgang Kimmerle

09/1999 - 07/2008 **Abitur, Albert-Schweitzer-Gymnasium Leonberg**

## Publications & preprints

In preparation A GAP package on trivial source character tables of finite groups  
Preprint Trivial source characters in blocks of domestic representation type  
DOI: <https://doi.org/10.48550/arXiv.2503.21703>

Submitted Frieze patterns over finite commutative local rings (with Michael Cuntz)  
DOI: <https://doi.org/10.48550/arXiv.2407.12596>

Submitted Trivial source character tables of Frobenius groups  
of type  $(C_p \times C_p) \rtimes H$  (with Caroline Lassueur)  
DOI: <https://doi.org/10.48550/arXiv.2403.14571>

07/2024 An appendix to the article *Selfextensions of modules over group algebras*  
J. Algebra **649** (2024), 319-346 (with René Marczinzik)

06/2022 On the extension-closed property for the subcategory  $\text{Tr}(\Omega^2(\text{mod } - A))$   
DOI: <https://doi.org/10.1007/s10468-022-10140-7>  
Algebr. Represent. Theory (2022) (with René Marczinzik)

05/2022 Trivial source character tables of  $\text{SL}_2(q)$   
J. Algebra **598** (2022), 308-350 (with Niamh Farrell and Caroline Lassueur)

- 01/2022 *A cluster tilting module for a representation-infinite block of a group algebra*  
J. Algebra **589** (2022), 483-494 (with René Marczinzik)
- 01/2018 *On a conjecture about Morita algebras*  
J. Algebra **508** (2018), 569-574 (with René Marczinzik)

## Research interests

- Group theory
- Modular and ordinary representation theory of finite groups
- Representation theory of finite-dimensional algebras and related combinatorial structures
- Auslander-Reiten theory
- Homological algebra
- Frieze patterns

## Research stays

- 10/2021 - 01/2022 4 months at the *University of California, Santa Cruz*, scholarship granted by the German Academic Exchange Service (DAAD)
- 03/2021 2 weeks at *Mathematisches Forschungsinstitut Oberwolfach*, Oberwolfach Research Fellowship
- 01/2020 1 week at the *Isaac Newton Institute for Mathematical Sciences*, University of Cambridge

## Contributed talks

### Invited talks

- 04/2025 **On theoretical and computational aspects of trivial source characters** during the *Algebra Seminar 2025* in Bilkent (online)

### Research talks

- 12/2024 **Trivial source character tables of Frobenius groups of type  $(C_p \times C_p) \rtimes H$**  during the *Nikolaus Conference 2024* in Aachen
- 12/2023 **Trivial source characters in domestic representation type** during the *Nikolaus Conference 2023* in Aachen
- 09/2022 **On the computation of trivial source character tables using computer algebra** during the conference *Representation Theory at the Villa Denis* in Kaiserslautern
- 08/2022 **On the computation of trivial source character tables using computer algebra** during the conference *Structure of Group Algebras over Local Rings* in Ambleside (England)
- 09/2021 **On the computation of trivial source character tables** during the *Young Algebraists' Conference* at the EPFL (Switzerland)
- 02/2021 **Broué's abelian defect group conjecture via  $p$ -permutation equivalences** during the seminar *Promotionen und Postdocs in Darstellungstheorie* (online)
- 02/2020 **Charaktertafeln von Moduln kleiner endlicher Gruppen mit trivialen Quellen** during the *Grüppchen* at the Martin-Luther-University in Halle/Saale
- 01/2020 **Trivial source character tables of small finite groups** during the *IRTG-seminar* at the Saarland University
- 09/2019 **Representation type and combinatorics** at the 83<sup>rd</sup> *Séminaire Lotharingien de Combinatoire* in Bad Boll

### Working group talks

- 12/2023 **On the computation of projective indecomposable modules over group algebras using GAP** during the seminar *Algebra and Combinatorics* at the Leibniz University Hannover
- 06/2021 **The Littlewood-Richardson rule** during the seminar *Representation Theory of the Symmetric Group* at the TU Kaiserslautern
- 01/2021  **$p$ -permutation equivalences** during the seminar *Equivalences of block algebras* at the TU Kaiserslautern
- 06/2019 **Blocks with cyclic defect groups I** during the seminar *Block Theory* at the TU Kaiserslautern
- 04/2019 **On a counter-example to a conjecture about Morita algebras** during the seminar *Groups and Representations* at the TU Kaiserslautern
- 10/2018 **Projective and injective modules** during the seminar *Perverse equivalences and applications* at the TU Kaiserslautern

## Theses (co-)supervised

- 01/2025 **Anzahl der Friesmuster von Köchertyp** *Bachelor thesis* (co-supervised with Michael Cuntz) at the Leibniz University Hannover

## Selected attended conferences and workshops

- 05/2025 Frieze patterns in algebra, combinatorics and geometry  
 02/2025 Darstellungstheorietage in Stuttgart  
 12/2024 Nikolaus conference in Aachen  
 12/2023 Nikolaus conference in Aachen  
 10/2022 Darstellungstheorietage in Kaiserslautern  
 09/2022 Representation Theory at the Villa Denis in Kaiserslautern  
 08/2022 Structure of Group Algebras over Local Rings in Ambleside (England)  
 09/2021 Young Algebraists' Conference at the EPFL (Switzerland)  
 02/2021 Promotionen und Postdocs in Darstellungstheorie (online)  
 12/2020 Nikolaus conference (online)  
 09/2020 SFB-TRR 195: Annual conference (online)  
 02/2020 Grüppchen at the Martin-Luther-University in Halle/Saale  
 12/2019 Nikolaus conference in Aachen  
 10/2019 Darstellungstheorietage in Jena  
 06/2019 Norddeutsches Gruppentheorie-Kolloquium in Halle  
 06/2019 Groups, Rings and Associated Structures in Spa (Belgium)  
 12/2018 Nikolaus conference in Aachen  
 09/2018 Darstellungstheorietage in Hannover  
 03/2016 Workshop on Brauer Graph Algebras at the University of Stuttgart (as aide)  
 03/2016 Conference on Triangulated Categories in Algebra, Geometry and Topology University of Stuttgart (as aide)  
 09/2015 Third GAP Days 2015 at the NTNU in Trondheim (Norway)

## University teaching

- 04/2025 - 09/2025 B.Sc. lecture: Discrete Structures for computer scientists, assistant & tutor  
 10/2024 - 03/2025 B.Sc. lecture: Linear Algebra I for computer scientists, assistant & tutor  
 04/2024 - 09/2024 B.Sc. lecture: Discrete Mathematics, assistant & tutor  
 10/2023 - 03/2024 B.Sc. lecture: Higher Mathematics 1 for Engineers, tutor  
 04/2022 - 09/2022 B.Sc. lecture: Character Theory of Finite Groups, assistant & tutor  
 04/2022 - 09/2022 B.Sc. lecture: Complex Analysis for Engineers, assistant & tutor  
 04/2021 - 09/2021 M.Sc. lecture: Cohomology of Groups, assistant & tutor  
 04/2021 - 09/2021 B.Sc. lecture: Complex Analysis for Engineers, assistant & tutor  
 10/2020 - 03/2021 M.Sc. lecture: Representation Theory of Finite Groups, assistant & tutor  
 04/2019 - 09/2019 B.Sc. lecture: Character Theory of Finite Groups, assistant & tutor  
 10/2016 - 03/2017 B.Sc. lecture: Higher Mathematics 3 for Engineers, tutor  
 10/2015 - 12/2015 B.Sc. lecture: Higher Mathematics 3 for Electrical Engineering Technicians, tutor  
 10/2014 - 03/2015 B.Sc. lecture: Higher Mathematics 3 for Engineers, tutor  
 04/2014 - 09/2014 B.Sc. lecture: Higher Mathematics 2 for Engineers, tutor  
 10/2013 - 03/2014 B.Sc. lecture: Higher Mathematics 3 for Engineers, tutor  
 04/2013 - 09/2013 B.Sc. lecture: Algebra for Mathematicians, tutor  
 10/2012 - 03/2013 B.Sc. lecture: Higher Mathematics 1 for Engineers, tutor  
 04/2012 - 09/2012 B.Sc. lecture: Geometry for Mathematicians, tutor

## Work experience

- 09/2017 - 07/2018 High school teacher for mathematics and physics at the Stetten-Institute in Augsburg  
 05/2017 - 08/2017 Freelance collaborator at Schülerhilfe Leonberg (tutor for mathematics)

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## Computer skills

Typesetting	$\LaTeX$ (very good)
Computer languages	GAP (very good), MAGMA (good), SAGE (intermediate)

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## Extracurricular activities

### Further training

04/2018	DeltaPlus-course <i>Mathematik sprachsensibel unterrichten</i> in Augsburg
01/2018	Course <i>Die Kunst des guten Unterrichtens</i> with Dr. Siegfried Rodehau in Nürnberg
11/2017	Colloquium <i>Warum Geraden nicht Gerade sein müssen</i> about synthetic geometry with Prof. Wolfgang Schneider in Augsburg
11/2017	Courses " <i>Sprachsensibler Unterricht</i> ", " <i>Umgang mit Notfallsituationen</i> ", " <i>Gesprächsführung</i> " in the retreat house of St. Paulus in Leifershofen

### Special qualifications

10/2011 - 03/2012	Key qualification course for tutors of Higher Mathematics at the University of Stuttgart
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### Voluntary services

04/2019 - 09/2023	Clarinet player at the <i>university orchestra</i> of the TU Kaiserslautern
09/2019 - 03/2020	Tutor for mathematics at the <i>learning centre</i> of the TU Kaiserslautern
1999 - today	Member of (the executive board of) several <i>chess clubs</i>
1996 - 2016	Member of the wind band <i>Musikverein Stadtkapelle Leonberg</i> and leader of the clarinets

### Awards

03/2008	1 <sup>st</sup> price at the federal state music competition <i>Jugend musiziert</i> (solo piano)
03/2007	1 <sup>st</sup> price at the federal state music competition <i>Jugend musiziert</i> (Duo: clarinet & piano)
05/2006	3 <sup>rd</sup> price at the national music competition <i>Jugend musiziert</i> (solo clarinet)
03/2006	1 <sup>st</sup> price at the federal state music competition <i>Jugend musiziert</i> (solo clarinet)
10/2005	2 <sup>nd</sup> price at the <i>Matthaes</i> piano competition in Stuttgart (solo piano)

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## Referees

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