

# Maximilian Kaipel

Website

Universität zu Köln

Email

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## RESEARCH INTERESTS

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Representation theory of finite-dimensional algebras,  $\tau$ -tilting theory, stability conditions

## EDUCATION

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**PhD in Mathematics** July 2022 - present

University of Cologne, Germany

Supervisors: Sibylle Schroll, Hipolito Treffinger

**MMath in Mathematics** Sep 2017 - June 2021

University of Edinburgh, Scotland

First Class Honours

## VOLUNTEER WORK

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**Volunteer intern** Jan 2022 - June 2022

Grenzenlos - Intercultural Exchange, Vienna, Austria

**Volunteer teaching assistant** Sep 2021 - Dec 2021

Livingstone Christian Academy, Cebu, Philippines

## PUBLICATIONS AND PREPRINTS

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### PREPRINTS

**The category of a partitioned fan** 2023

arXiv:2311.05444

### CONFERENCE PROCEEDINGS

**Wall-and-chamber structures for finite-dimensional algebras and** 2023

$\tau$ -tilting theory, lecture notes joint with Hipolito Treffinger

to be published in the conference proceedings of ICRA 2022

arXiv:2302.12699

## SEMINAR AND CONFERENCE TALKS

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### SEMINAR TALKS

**The category of a partitioned fan** December 2023

Seminar on Homological Algebra and Related Topics - *online, Buenos Aires, Argentina*

**On a category associated to a partitioned fan** June 2023

Algebra Group Seminar - *Cologne, Germany*

**A symmetric algebra with asymmetric wall-and-chamber structure** May 2023

Lancaster PG forum - *online, Lancaster, U.K.*

**The fan of  $g$ -vector cones of  $\tau$ -rigid pairs** Dec 2022

Algebra Group Seminar - *Cologne, Germany*

## CONTRIBUTED CONFERENCE TALKS

**An introduction to point modules** Aug 2021  
MAA MathFest 2021 - *online, USA*

## POSTER PRESENTATIONS

**The category of a partitioned fan** Sep 2023  
 $\tau$ -research school - *Cologne, Germany*

## AWARDS AND FUNDING

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### AWARDS

**William & Isabella Dick Prize** - £300 July 2021  
for the best dissertation from 5th year student

**Simon Gray Prize** - £100 July 2018  
for the best highest grade in “Logic 1”

**2nd place Dr. Hans Riegel-Fachpreis in Physics** - €400 July 2017  
for a project on air quality in classrooms as part of the Austrian Matura

### CONFERENCE PARTICIPATION

**Conference: “Combinatorial aspects of representation theory”** March 2023  
Accommodation funded *Oslo, Norway*

**Research school: “Categories, clusters and completions master class”** March 2023  
Accommodation funded *Aarhus, Denmark*

**Conference: “Quivers, Clusters, Moduli and Stability”** Jan 2023  
Accommodation and travel funded *Oxford, U.K.*

**Conference: “ICRA 2022”** Aug 2022  
Accommodation in Montevideo funded *Montevideo, Uruguay*

## ORGANISATION

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**$\tau$ -research school** Sep 2023  
Co-organised with K. Baur, S. Schroll and S. Barmeier *Cologne, Germany*

**SFB Summer Retreat** Aug 2023  
Part of local organising committee *Cologne, Germany*

**Algebras and Representation Theory in Germany #1** Jan 2023  
Co-organised with H. Krause, S. Schroll and C. Stroppel *Cologne, Germany*

**LAGOON Webinar** Oct 2022 - Dec 2022  
Managing mailing list and YouTube channel *online*

**Quivers, representation theory and physics** Sep 2022  
Part of the local organising committee *Cologne, Germany*

**ICRA 2022** Aug 2022  
Part of the local organising committee *Buenos Aires, Argentina*

## WIKIPEDIA CONTRIBUTIONS

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<b>Bergman's diamond lemma</b> - Article created	2021
<b>Singular cubic surfaces</b> - Subsection added	2021
<b>Sklyanin algebras</b> - Article created	2021

## OTHER

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### REFEREEING

Peer-review written for 1 article.

### SUPERVISION

Currently co-supervising one Master's student thesis together with Sibylle Schroll.

## LANGUAGES

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<b>German</b>	Native
<b>English</b>	Fluent
<b>Mandarin Chinese</b>	Intermediate
<b>German Sign Language (DGS)</b>	Basic
<b>Spanish</b>	Beginner