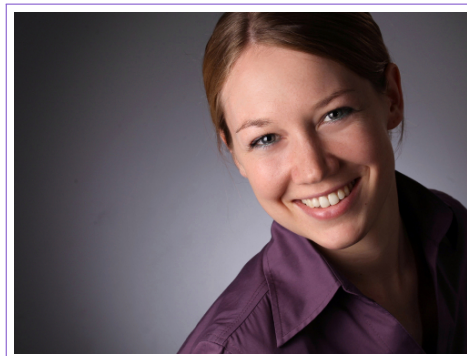


Magdalena Boos

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Personal details

Date of Birth **27th May 1984**
Nationality **German**

Education

- 11.2008 - 07.2012 **Doctoral studies of Mathematics**, *Bergische Universität*, Wuppertal
Certificate: Promotion (Doctorate), *Grade*: magna cum laude
Dissertation: "Conjugation on varieties of nilpotent matrices"
Main focus: "Representation Theory", "Invariant Theory" and "Algebraic Geometry"
- 04.2008 - 11.2008 **Diploma studies of Mathematics**, *Bergische Universität*, Wuppertal
Certificate: Diplom (Advanced Degree), *Grade*: Sehr gut (Very good)
Diploma thesis: "B-Bahnen 2-nilpotenter Matrizen"
- 10.2003 - 10.2007 **Diploma studies of Mathematics**, *Westfälische Wilhelms-Universität*, Münster
Main focus: "Representation Theory" and "Probability Theory"
Minor field of study: "Mathematical Logic"

Work Experience

- Since 08.2014 **Research assistant**, *Bergische Universität*, Wuppertal
Department of Mathematics, Research group "Algebra and Number Theory"
- 10.2012 - 08.2014 **Product manager**, *zeb/information.technology GmbH & Co. KG*, Münster
Duties: Full responsibility of one of the software applications, for example of budget, customer contact, requirements and testing; Supervision of a Bachelor thesis (information technology)
- 11.2008 - 09.2012 **Research assistant**, *Bergische Universität*, Wuppertal
Department of Mathematics, Research group "Algebra and Number Theory"
- 04.2008 - 11.2008 **Student assistant**, *Bergische Universität*, Wuppertal
- 10.2007 - 12.2007 **Intern**, *Escola de Educação Infantil Kinderland*, Curitiba, Brasil
Duties: Teaching in various courses (Mathematics and German), specific coaching of struggling pupils, organisation of working groups and day trips

10.2005 - 03.2006 **Student assistant**, *Westfälische Wilhelms-Universität, Münster*
10.2006 - 03.2007

Publications and Preprints

- 2015 **“Staircase algebras and graded nilpotent pairs”**
Preprint, <http://arxiv.org/abs/1509.04584>
- 2015 **“Finite parabolic conjugation and commuting varieties”**
Published in: “Oberwolfach Reports”, Mathematisches Forschungsinstitut Oberwolfach
- 2014 **“Finite parabolic conjugation on varieties of nilpotent matrices”**
Published in: “Algebras and Representation Theory”, Springer
- 2014 **“Non-reductive conjugation on the nilpotent cone”**
Published in: “Algebras and Representation Theory”, Springer
- 2011 **“B-orbits of 2-nilpotent matrices and generalizations”**, *with Markus Reineke*
Published in: “Highlights in Lie Algebraic Methods”(Progress in Mathematics), Birkhäuser, Springer

Progressing Projects

- Since 2015 **“Approaching the singularity category of $\mathcal{A}(l)$ by staircase algebras”**
The singularity category of a particular finite-dimensional algebra $\mathcal{A}(l)$ is calculated. Our approach is to better understand certain full subcategories of the representation categories of staircase algebras.
- Since 2015 **“A stratification of the nilpotent cone”**, *joint with Hans Franzen*
We are working out a stratification of the nilpotent cone in order to better understand the Borel-action.
- Since 2015 **“Parabolic orbits in single nilpotent GL_n -orbits”**, *joint with Martin Bender and Hans Franzen*
Parabolic actions on GL_n -orbits of nilpotent matrices are examined and translated to different Lie types.
- Since 2014 **“Finite parabolic conjugation and commuting varieties”**, *joint with Michaël Bulois*
Parabolic conjugation on the variety of nilpotent matrices in the Lie algebra of the parabolic is examined.

(Invited) Talks

- 15th Dec. 2015 **Oberseminar**, *Universität zu Köln*
Title: “Finiteness criteria for graded nilpotent pairs”
- 13th Nov. 2015 **Darstellungstheoretage 2015**, *Universität Stuttgart*
Title: “Staircase algebras and graded nilpotent pairs”
- 06th Nov. 2015 **BIREP Seminar**, *Universität Bielefeld*
Title: “Criteria for finite parabolic conjugation”

- 06th July 2015 **Oberseminar Darstellungstheorie**, *Rheinische Friedrich-Wilhelms-Universität, Bonn*
Title: "Towards a criterion for finite parabolic conjugation motivated by commuting varieties"
- 14th May 2015 **Workshop "Enveloping Algebras and Geometric Representation Theory"**, *Mathematisches Forschungsinstitut, Oberwolfach*
Title: "Finite parabolic conjugation and commuting varieties"
- 19th Jan. 2015 **Oberseminar Lie Theorie**, *Ruhr-Universität, Bochum*
Title: "Parabolische Konjugation auf Varietäten nilpotenter Matrizen - ein Endlichkeitskriterium"
- 11th Dec. 2014 **Séminaire d'algèbre**, *Institut Camille Jordan, Lyon*
Title: "Finite parabolic conjugation on varieties of nilpotent matrices"
- 9th Sep. 2014 **Conference "Representations of Algebraic Groups and Related Objects"**, *Friedrich Schiller University, Jena*
Title: "Parabolic conjugation on varieties of nilpotent matrices"
- 17th June 2011 **Doktorandentagung**, *Rheinische Friedrich-Wilhelms-Universität, Bonn*
Title: "Borel-conjugation on varieties of nilpotent matrices"
- 11th Dec. 2010 **BIREP - Workshop**, *Universität Bielefeld*
Title: "Parabolic orbits of 2-nilpotent matrices"
- 06th Dec. 2010 **Oberseminar Darstellungstheorie**, *Rheinische Friedrich-Wilhelms-Universität, Bonn*
Title: " B_n -orbits of 2-nilpotent matrices"
- 15th August 2010 **ICRA XIV**, *University of Tokyo*
Title: "B-orbits of 2-nilpotent matrices"

Grants and research stays

- 03.2016 **Grant "Professeur invité"**, *Institut Camille Jordan, Université Jean Monnet, St. Étienne*
- 05.2015 **Oberwolfach Leibniz Graduate Student**, *Funding Grant, MFO*
Workshop: "Enveloping Algebras and Geometric Representation Theory"
- 12.2014 **Funded stay**, *Institut Camille Jordan, Université Jean Monnet, St. Étienne*

Academic Self-Administration

- Since 10.2014 **Structural commission**, *Elected Member*
- Since 10.2014 **"Mathewerkstatt"**, *Director*
 Funded by "Gemeinsames Bund-Länder-Programm für bessere Studienbedingungen und mehr Qualität in der Lehre", Federal Ministry of Education and Research

Reviewing

- Since 03.2015 **Mathematical Reviews**
- Since 06.2015 **zbMATH**

Teaching

In Wuppertal (Bergische Universität)

- 2014-2015 **Commutative Algebra**, with Prof. Dr. M. Reineke
Seminar “Commutative Algebra”, with Prof. Dr. M. Reineke
Lie Algebras, with Dr. T. Weist
- 2011-2012 **Elementary Number Theory**, with Prof. Dr. K. Bongartz
Seminar “Elementary Number Theory”, with Prof. Dr. R. Huber and H. Franzen
Tutorial “Linear Algebra”, with Prof. Dr. R. Huber
- 2009-2010 **Linear Algebra 1 and 2**, with Prof. Dr. M. Reineke and Dr. O. Lorscheid
Seminar “Number Theory”, with Prof. Dr. M. Reineke and Dr. R. Olbricht
Number Theory, with Prof. Dr. M. Reineke and Dr. R. Olbricht
- 2008-2009 **Exercise classes “Algebra”**, with Prof. Dr. M. Reineke and Dr. R. Olbricht
Exercise class “Preparatory class”, Prof. Dr. K. Bongartz

In Münster (Westfälische Wilhelms-Universität)

- 2006-2007 **Exercise class “Linear Algebra”**, Prof. Dr. S. Bosch
2005-2006 **Exercise classes “Linear Algebra”**, Prof. Dr. M. Reineke

Further Skills

- Computers **LaTeX2e, MS Office (Excel, Powerpoint, ...)**, Proficient
HTML, Basic Knowledge
Scala, Basic Knowledge
- Languages **German**, First language
English, Business fluent
Portuguese, Advanced skills
French, Basic skills
- Engagement **Paediatric oncology of the University Medical Centre, Münster**
Person in charge of skiing groups
Skill enhancement: “Skiing with disabled children and adolescents”

Private Interests

- Literature **Amongst others Siegfried Lenz, Fred Vargas and Martin Suter**
- Travelling **For example to Brasil, Australia, Japan, France and Portugal**
- Sports **Skiing, Cycling, Inline Skating, ...**