

Marie-Charlotte Brandenburg

Curriculum Vitæ

Current as of December 7, 2020

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04103 Leipzig
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Education and Professional Experience

- 2020 – to date **Max Planck Institute for Mathematics in the Sciences**
Ph.D. Student
Research Group: Non-Linear Algebra
Advisor: Rainer Sinn
- 2019 – 2020 **Berlin Mathematical School | Freie Universität Berlin**
Ph.D. Student
Research Groups:
 Discrete Geometry
 Discrete Methods in Algebraic Geometry
Advisor: Rainer Sinn
- 2019 **Freie Universität Berlin**
M.Sc. Mathematics
Master Thesis: *Competitive Equilibrium and Lattice Polytopes*
Advisor: Christian Haase
- 2016 – 2017 **Minodes GmbH**
Data Analyst
Business Intelligence
- 2017 **Freie Universität Berlin**
B.Sc. Mathematics
Bachelor Thesis: *A 4-Simple 4-Simplicial 8-Polytope*
Advisor: Günter M. Ziegler

Preprint

- 2020 **Multivariate Volume, Ehrhart and h^* -Polynomials of Polytopes** ([arXiv:2006.01920](https://arxiv.org/abs/2006.01920))
joint work with Sophia Elia and Leon Zhang

Invited Talks

- 2020 Research Seminar Discrete Geometry, Freie Universität Berlin, Germany
Multivariate Volume, Ehrhart and h^ -Polynomials of Polytopes*
- 2019 Research Seminar Algebra and Geometry, Otto-von-Guericke-Universität Magdeburg, Germany
Competitive Equilibrium and Lattice Polytopes
- 2018 Colloquium Graduiertenkolleg Facets of Complexity, Berlin, Germany
Product-Mix Auctions, Competitive Equilibrium and Lattice Polytopes

Posters

- 2019 Women in Algebra and Symbolic Computing, Bad Dürkheim, Germany
Multivariate Volume and Ehrhart Polynomials of Polytopes

Teaching

- 2020 **Linear Algebra II**
Teaching Assistant
Bachelor course, Freie Universität Berlin
- 2019 **Panorama der Mathematik**
Teaching Assistant
Bachelor course, Freie Universität Berlin
- 2018 **Geometry**
Teaching Assistant
Bachelor/Master course, Freie Universität Berlin

Service

- 2019 Co-organizer for the Workshop *AG+ Research Retreat*

Extended Stays

- 06/2019 – **Max Planck Institute for Mathematics in the Sciences**
09/2019 Leipzig, Germany
Research Group: Non-Linear Algebra
- 01/2019 – **Simons Institute for the Theory of Computing**
02/2019 Berkeley, CA, USA
Program: Geometry of Polynomials

Conferences and Workshops

- 06/2020 **Algebraic and Tropical Online Meetings**, online summer school
- 04/2020 **Algebraic Combinatorics Online Workshop**, online
- 01/2020 **11th Polymake Conference and Developer Meeting**, Leipzig, Germany
- 12/2019 **AG+ Research Retreat**, Döllnsee, Germany
- 12/2019 **Women in Algebra and Symbolic Computation**, Bad Dürkheim, Germany
- 12/2019 **Workshop on Polytopes and Discrete Geometry**, Berlin, Germany
- 10/2019 **Opening Conference of the Thematic Einstein Semester on Algebraic Geometry**, Berlin, Germany
- 10/2019 **Fall School of the Thematic Einstein Semester on Algebraic Geometry**, Berlin, Germany
- 09/2019 **Workshop On Discrete Geometry With A View Towards Symplectic And Tropical Geometry**, Cologne, Germany
- 09/2019 **Real Applied Algebraic Geometry**, Berlin, Germany
- 09/2019 **Convexity Day**, Leipzig, Germany
- 07/2019 **Non-Archimedean and Tropical Geometry**, Regensburg, Germany
- 06/2019 **Workshop on Non-Linear Algebra**, Leipzig, Germany
- 06/2019 **Network Games, Tropical Geometry and Quantum Communication**, Berlin, Germany
- 04/2019 **Sage Days 98 : Women in sage**, Archanes, Crete, Greece
- 02/2019 **Beyond Randomized Rounding and the Probabilistic Method**, Berkeley, CA, USA
- 01/2019 **Geometry of Polynomials Bootcamp**, Berkeley, CA, USA
- 11/2018 **Workshop on Algebraic Combinatorics**, Berlin, Germany
- 10/2018 **Workshop on Geometric and Topological Combinatorics**, Berlin, Germany

10/2018 **International Undergraduate Workshop**, Jerusalem, Israel
05/2018 **Combinatorics Day**, Leipzig, Germany
03/2018 **Workshop on Discrete Geometry and Topology**, Berlin, Germany