

Florian Aigner

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Date of birth: February 4, 1992

Place of birth: Vöcklabruck, Austria.

Education

2015–2019 **PhD in Mathematics**, *University of Vienna*.
(expected)

Adviser Ilse Fischer

2014–2015 **MsC in Mathematics**, *University of Vienna*, passed with distinction.

Thesis Height functions and the ring of adeles over a global field

Adviser Joachim Schwermer

2010–2014 **BsC in Mathematics**, *University of Vienna*, passed with distinction.

Thesis 1 Algebraic Stars , Adviser: Herwig Hauser

Thesis 2 Clifford Algebren, Adviser: Joachim Schwermer

2010–2014 **Studies in Physics**, *University of Vienna*.

2010 **Matura**, *Oberstufen Realgymnasium der Diözese Linz*, Austria.

Academic Employment

2015– **PhD Position**, *University of Vienna*, Austria.

2015–2017 **External lecturer**, *University of Vienna*, Austria.

2012–2014 **Teaching assistant**, *University of Vienna*, Austria.

Awards

2015 **Honorary prize - Austrian State Prize for exceptional graduation**,
Würdigungspreis-Staatspreis für die besten Diplom- und Masterabschlüsse.

Research interests

Combinatorics (algebraic, enumerative and bijective) with a focus on alternating sign matrices and their relatives.

Publications

- [1] F. Aigner. Fully packed loop configurations: polynomiality and nested arches (extended abstract). *DMTCS proc. BC*, pages 1–12, 2016. FPSAC 2016.

- [2] F. Aigner. Refind enumerations of alternating sign triangles (extended abstract). *Sém. Lothar. Combin.*, 78B:Art. 60, 2017. FPSAC 2017.
- [3] F. Aigner. Fully packed loop configurations: polynomiality and nested arches. *Elect. J. Combin.*, 25(1), 2018.

Preprints

- [4] F. Aigner. A new determinant for the Q -enumeration of alternating sign matrices. *arXiv:1810.08022, submitted*, 2018.
- [5] F. Aigner. Refind enumerations of alternating sign triangles. *arXiv:1804.10370, submitted*, 2018.

Talks

- November 2018 **An Introduction to Alternating Sign Matrices (A Combinatorial Story of Missing Bijections)**, *PhD Colloquium*, Vienna, Austria.
- October 2018 **A determinantal expression for the Q -enumeration of ASMs**, *Séminaire Combi du Plateau de Saclay*, Paris, France.
- July 2018 **A determinantal expression for the Q -enumeration of ASMs**, *4th Algorithmic and Enumerative Combinatorics Summer School*, Hagenberg, Austria.
- May 2017 **Polynomiality phenomena for FPLs and AS-trapezoids**, *SFB-Colloquium*, Linz, Austria.
- April 2017 **An interaction of Combinatorics and Statistical Physics: Square Ice, the 6-vertex model and ASMs**, *Vienna Doctoral School Student Retreat*, Strobl, Austria.
- September 2016 **Fully packed loop configurations: polynomiality and nested arches**, *77th Séminaire Lotharingien de Combinatoire*, Strobl, Austria.
- April 2016 **Fully packed loop configurations: polynomiality and nested arches**, *Arbeitsgemeinschaft Diskrete Mathematik*, Vienna, Austria.

Poster presentations

- September 2017 **An ASM Story**, *Interscience - First interdisciplinary symposium of the Vienna Doctoral Schools*, Vienna, Austria.
- July 2017 **Refined enumerations of alternating sign triangles**, *FPSAC*, London, United Kingdom.
- January 2017 **Polynomiality phenomenon for FPLs and AST-trapezoids**, *Introductory school at CIRM*, Marseille, France.
- July 2016 **Fully packed loop configurations: polynomiality and nested arches**, *FPSAC*, Vancouver, Canada.

Teaching

- 2015 Exercise Class for “Number Theory”
- 2016 Exercise Class for “Graph theory and discrete optimization”

2017 Exercise Class for “Mathematics teaching studies - elementary geometry and vector algebra”

Administrative activities

2017 Organiser, Interdisciplinary symposium “Interscience” (200 participants), University of Vienna.

2017–2018 Student speaker of the “Vienna doctoral school mathematics”.

2018– Organiser, Combinatorics Working Seminar, University of Vienna.

Further activities

2006–2010 **Austrian Mathematical Olympiad.**

best result: 7th place at the austrian federal competition in 2010

2008–2010 **Austrian Physics Olympiad.**