# Barnabás Farkas

## Curriculum Vitae

University of Vienna
DMG/Algebra, TU Wien
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## Personal Data and Education

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| Born | May 12, 1981, Budapest, Hungary |
| Citizenship | Hungarian |
| Languages | Hungarian (native), English (fluent), German (basic) |
| 04/2012 | PhD in Mathematics, Budapest University of Technology and Economics (BUTE). Thesis: Combinatorics of Borel ideals, supervisor: Lajos Soukup, Alfréd Rényi Institute of Mathematics, Hungarian Academy of Sciences. |
| 06/2005 | MSc in Mathematics, Eötvös Loránd University, Budapest. Thesis: $\mathbb{D}$-completeness and its applications (in Hungarian), supervisor: Lajos Soukup. |

## Research interest (set theory, in particular)

structure of the real line and cardinal invariants of the continuum,

combinatorics of ideals on countable sets,

descriptive set theory and methods of forcing related to these topics.

## Employment

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| 02/2017–01/2020 | senior postdoc, Institute of Discrete Mathematics and Geometry, TU Wien |
| 10/2013–09/2016 | postdoctoral fellow, Kurt Gödel Research Center, University of Vienna |
| 10/2012–09/2013 | postdoctoral fellow and assistant professor, University of Wroclaw |
| 09/2010–07/2012 | junior research associate, Department of Algebra, BUTE |
| 09/2007–06/2010 | teaching assistant, Department of Algebra, BUTE |

## Teaching experience

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| Fall 2014, UniWien | tutorials on cardinal invariants and iterated forcing for graduate mathematicians. |
| 2005–2012, BUTE | seminars on one and multivariable calculus, complex analysis, linear algebra, and differential equations for electrical engineers, transportation engineers, and architects; |
| | seminars on number theory, group theory, and linear algebra for mathematicians and physicists; |
| | tutorials on complex analysis for electrical engineers; |
| | tutorials on forcing for graduate mathematicians. |

## Participations in research grants

02/2017–01/2020 Austrian Science Fund No. P29907, project leader: B. Farkas.

05/2013–04/2016 Austrian Science Fund No. P25671, project leader: S.D. Friedman.

02/2011–01/2015 Hungarian Scientific Research Fund No. K 83726, project leader: I. Juhász.

04/2009–03/2014 Hungarian Scientific Research Fund No. K 77476, project leader: L. Rónyai.

07/2007–07/2011 Hungarian Scientific Research Fund No. K 68262, project leader: A. Hajnal.

## Selected talks

04/2015 *Ideals, almost disjoint refinements, and mixing reals*, Sets and Computations, 30 March - 30 April 2015, Institute for Mathematical Sciences, University of Singapore.

08/2014 *Representations of ideals in Banach spaces*, First Brazilian Workshop in Geometry of Banach Spaces, 25-29 August 2014, Maresias, Brazil.

03/2014 *Almost disjoint refinements*, INFTY Final Conference, 4-7 March 2014, Hausdorff Center for Mathematics, University of Bonn.

07/2013 *Representations of ideals in Banach spaces*, 4th European Set Theory Conference, 15-18 July 2013, Mon St Benet, Spain.

02/2012 *Covering properties of ideals*, 40th Winter School in Abstract Analysis, section Topology and Set Theory, 28 January - 4 February 2012, Hejnice, Czech Republic.

## Publications

[8] *Towers in filters, cardinal invariants, and Luzin type familes* (with J. Brendle and J. Verner), arxiv:1605.04735v1, submitted.

[7] *Almost disjoint refinements and mixing reals* (with Y. Khomskii and Z. Vidnyánszky), arxiv:1510.05699v1, to appear in Fund. Math.

[6] *Representation of ideals in Polish groups and in Banach spaces* (with P. Borodulin–Nadzieja and G. Plebanek), J. Symbolic Logic **80** (2015), no. 4, pages 1268-1289.

[5] *Covering properties of ideals* (with M. Balcerzak and S. Głąb), Arch. Math. Logic **52** (2013), no. 3-4, pages 279-294.

[4] *Cardinal coefficients associated to certain orders on ideals* (with P. Borodulin–Nadzieja), Arch. Math. Logic **51** (2012), pages 187-202.

[3] *Hechler's theorem for tall analytic P-ideals*, J. Symbolic Logic **76** (2011), no. 2, pages 729-736.

[2] *Forcing indestructible extensions of almost disjoint families*, Acta Univ. Carolin. Math. Phys. **51** (2010), pages 9-12.

[1] *More on cardinal invariants of analytic P-ideals* (with L. Soukup), Comment. Math. Univ. Carolin. **50** (2009), no. 2, pages 281-295.