

CV OF AYHAN GÜNAYDIN

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CURRENT POSITION

Associate Professor
Boğaziçi University

FORMER POSITIONS

Associate Professor, 2015–2017
Mimar Sinan Fine Arts University, Turkey

Assistant Professor, 2012–2015
Mimar Sinan Fine Arts University, Turkey

FCT Postdoc, September 2009–September 2012
Universidade de Lisboa, Portugal

Visiting Scholar, January 2009 – July 2009
Fields Institute, Toronto, Canada.

Marie Curie Postdoc, January 2008 – January 2009
University of Oxford, UK.

EDUCATION

PhD in Mathematics, October 2008
University of Illinois at Urbana-Champaign
Dissertation title: *Model theory of fields with multiplicative subgroups*
Advisor: Lou van den Dries

BSc in Mathematics, 2001
Istanbul Bilgi University, Mathematics, Istanbul, Turkey

TEACHING EXPERIENCE

University of Illinois at Urbana-Champaign

- Calculus I, II; including “Calculus&Mathematica” Sections
- Introduction to Matrix Theory

Mimar Sinan Fine Arts University and Boğaziçi University

- Complex Analysis (Graduate Level)
- Algebra (Graduate Level)
- Model Theory
- Computational Galois Theory
- Number Theory I and II
- Real Analysis
- Metric Spaces

- Introduction to Linear Algebra
- Linear Algebra
- Mathematical Logic

AWARDS AND GRANTS

- **BAGEP - Young Scientist Award of Science Academy** - Bilim Akademisi - Turkey, 2013 - <http://www.bilimakademisi.org/node/100>
- **Incomplete List of Teachers Rated as Excellent** - University of Illinois at Urbana-Champaign, Fall 2005
- **TÜBİTAK - ARDEB 3501** - Coordinator - *Groups Definable in Pairs of Algebraically Closed Fields* - October 2013 – October 2016
- **TÜBİTAK - BİDEB 2221** - Host - March – August 2016
- **TÜBİTAK - ARDEB 1001** - Researcher - September 2020 – Present

THESIS SUPERVISION

Completed

- MSc Thesis - Ahmet Burak Akpulat - *Diofant Yaklaşım ve Roth Teoremi*
- MSc Thesis - Dicle Mutlu - *Grup Konfigürasyon Teoremi*

Ongoing

- PhD - Melissa Özşahakyan - *Tame Expansions of the Abelian Group of Integers*
- PhD - Ebru Nayir - *VC-density Calculations in Some Tame Pairs*

ADMINISTRATIVE

Organizer - Workshop 'A Variety of Model Theory in Lisbon', October 19-20, 2011. For more information: <http://ptmat.fc.ul.pt/~ayhan/workshop/home.html>

PUBLICATIONS

Published:

- Fields of Real and Complex Numbers with a Small Multiplicative Group (with L. van den Dries), *Proceedings of London Mathematical Society*, **93**, (2006), pp. 43–81.
- Thorn Independence in the Field of Real Numbers with a Small Multiplicative Group (with A. Berenstein and C. Ealy), *Annals of Pure and Applied Logic*, **150**, (2007), pp. 1–18.
- Mann Pairs (with L. van den Dries), *Trans. Amer. Math. Soc.*, **362**, (2010), 2393–2414.
- Definable Sets in Mann Pairs (with L. van den Dries), *Communications in Algebra*, **39** (2011), pp. 2752–2763.
- Dependent Pairs (with P. Hieronymi), *Journal of Symbolic Logic*, **76**, (2011), pp. 377–390.
- The Real Field with the Rational Points of an Elliptic Curve (with P. Hieronymi), *Fundamenta Mathematicae*, **211**, (2011), pp. 15–40.
- Rational Solutions of Polynomial-exponential Equations, *International Journal of Number Theory*, **8** (2012) 1391–1399.

- Structure Theorems in Tame Expansions of o-minimal Structures by Dense Sets (with P. Eleftheriou and P. Hieronymi), *Israel J. Math.*, **239**, (2020), 435–500.
- The Choice Property in Tame Expansions of o-minimal Structures (with P. Eleftheriou and P. Hieronymi), *Math. Log. Q.*, **66**, (2020), 239–246.
- Expansions of the Group of Integers by Beatty Sequences, (joint work with M. Özsahakyan), *Annals of Pure and Applied Logic*, **173**, (2022), No. 3, Paper number 103062.

Preprints:

- Topological Study of Pairs of Algebraically Closed Fields, available on arXiv.
- The real field with two multiplicative subgroups, available at my homepage.
- The field of real numbers with a small subgroup of the circle group, available at my homepage.

RECENT TALKS AND SEMINARS

2022

- Istanbul Üniversitesi, Matematik Bölüm Semineri, April, 2022
- Introductory Workshop on Tame Geometry, Transseries and Applications to Analysis and Geometry, Fields Institute, Toronto, Canada, January 2022

2021

- Yeditepe Üniversitesi Matematik Bölümü 25. Yıl Seminerleri, June 2021
- Topological and Differential Expansions of O-minimal Structures, May 2021

2018

- Oberseminar at Westfälische Wilhelms-Universität Münster, Germany, July 2018
- Workshop on Tame Expansions of O-minimal Structures, Konstanz, Germany, October 1–4, 2018

2017

- Sabancı University, Mathematics Colloquium, Istanbul, November 2017
- Structures Algébriques Ordonnées, Paris, June 2017
- Géométrie et Théorie des Modèles, Paris, May 2017

2016

- Fields Institute, Invited Speaker at “Workshop on Model Theory: From Fields to Hardy Fields”, August 2016
- Antalya Algebra Days, June 2016
- Koç University, Mathematics Seminar, January 2016
- İstanbul University, Mathematics Seminar, October 2016

2015

- Università di Pisa, Seminario “o-minimalità e dintorni”, January 2015
- Oberseminar at Albert-Ludwigs-Universität Freiburg, Mathematisches Institut, Freiburg, Germany, May 2015
- Coloquio de Matemáticas, Universidad de Los Andes, Bogotá, Colombia, November 2015.
- Seminario de Teoría de Modelos, Universidad Nacional de Colombia, Bogotá, Colombia November 2015