

Philipp Hieronymi

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Positions

Associate Professor <i>University of Illinois at Urbana-Champaign</i>	since 2017
Assistant Professor <i>University of Illinois at Urbana-Champaign</i>	2012–2017
JL Doob Research Assistant Professor <i>University of Illinois at Urbana-Champaign</i> Supervisor: Lou van den Dries	2010–2012
German Academic Exchange Service Postdoctoral Scholar <i>Fields Institute and McMaster University</i> Supervisor: Patrick Speissegger	2009

Education

Doctor of Philosophy in Mathematics <i>University of Oxford, UK</i> Supervisor: Alex Wilkie	2005–2008
Diplom in Mathematics with a minor in Computer Science <i>University of Bonn, Germany</i> Supervisor: Peter Koepke	2000–2006
Master of Advanced Study in Mathematics ('Part III') <i>University of Cambridge, UK</i> Supervisor: Peter Johnstone	2003–2004
Bachelor of Science in Economics <i>University of Bonn, Germany</i>	2002–2008

Grants

National Science Foundation CAREER Grant <i>DMS-1654725 (\$400,002)</i>	2017–2022
National Science Foundation Grant <i>DMS-1300402 (\$140,225)</i>	2013–2016
UIUC Campus Research Board Award <i>(\$10,418)</i>	2014
UIUC Campus Research Board Award <i>(\$13,370)</i>	2013
German Academic Exchange Service Postdoctoral Scholarship <i>(\$37000)</i>	2009

Scholarships, Prizes & honors

CAREER Award	2017
<i>National Science Foundation, USA</i>	
NSF's most prestigious awards in support of early-career faculty	
Helen Corley Petit Scholar	2017
<i>College of Liberal Arts and Sciences, University of Illinois at Urbana-Champaign, USA</i>	
given to recently promoted associate professors with extraordinary record	
Evelyn Nelson Lecture 2015-16	2015
<i>McMaster University, Canada</i>	
named lecture series focused on matters relating to the Foundations of Mathematics	
N. Tenney Peck Teaching Award in Mathematics	2015
<i>University of Illinois at Urbana-Champaign, USA</i>	
given to tenure-track faculty for exemplary teaching	
Back2Fields Colloquium	2012
<i>Fields Institute, Canada</i>	
colloquium series to 'celebrate the accomplishments of former postdoctoral fellows of Fields Institute thematic programs'	
Merton College Prize Scholarship	2007–2008
<i>University of Oxford, UK</i>	
awarded to 'the graduate students at Merton who are of the highest distinction'	
Predocctoral Scholarship	2006–2008
<i>German Academic Exchange Service (DAAD)</i>	
Predocctoral scholarship for graduate studies at the University of Oxford	
Predocctoral Scholarship	2005–2008
<i>Engineering and Physical Science Research Council, UK</i>	
Rosalind Lady Carlisle Scholarship	2004
<i>Girton College, University of Cambridge</i>	
May Smithels Prize	2004
<i>Girton College, University of Cambridge</i>	
awarded for 'distinction in Part III of the Mathematical Tripos at Cambridge'	
Hölderlin Scholarship	2003-2004
<i>Allianz Lebensversicherung AG, Germany</i>	
Scholarship for graduate studies at the University of Cambridge	
Scholarship of the German National Academic Foundation	2000-2005
<i>(Studienstiftung des deutschen Volkes)</i>	
awarded to the top 0.25 per cent of German students	
Bookprice of the German Physical Society	2000

Publications

Mathematics

- [1] Defining the set of integers in expansions of the real field by a closed discrete set
Proc. Amer. Math. Soc. 138 (2010) 2163-2168

- [2] **Dependent pairs**
with A. Günaydin, J. Symb. Logic (2) 76 (2011) 377-390
- [3] **The real field with the rational points of an elliptic curve**
with A. Günaydin, Fund. Math. 211 (2011) 15-40
- [4] **The real field with an irrational power function and a dense multiplicative subgroup**
J. London Math. Soc. (2) 83 (2011) 153-167
- [5] **Expansions of subfields of the real field by a discrete set**
Fund. Math. 215 (2011) 167-175
- [6] **Expansions which introduce no new open sets**
with G. Boxall, J. Symb. Logic (1) 77 (2012) 111-121
- [7] **A dichotomy for expansions of the real field**
with A. Fornasiero and C. Miller, Proc. Amer. Math. Soc. 141 (2013) 697-698
- [8] **An analogue of the Baire Category Theorem**
J. Symb. Logic (1) 78 (2013) 207-213
- [9] **Interpreting the projective hierarchy in expansions of the real line**
with M. Tychonievich, Proc. Amer. Math. Soc. 142 (2014) 3259-3267
- [10] **A fundamental dichotomy for definably complete expansions of ordered fields**
with A. Fornasiero, J. Symb. Logic (4) 80 (2015) 1091-1115
- [11] **Expansions of the ordered additive group of real numbers by two discrete subgroups**
J. Symb. Logic (3) 81 (2016) 1007-1027
- [12] **Ostrowski numeration systems, addition and finite automata**
with A. Terry Jr., Notre Dame J. Formal Logic to appear (2015)
- [13] **A tame Cantor set**
J. European Math. Soc. to appear (2015)
- [14] **Distal and non-distal pairs**
with T. Nell, J. Symb. Logic (1) 82 (2017) 375-383
- [15] **Interpreting the monadic second order theory of one successor in expansions of the real line**
with E. Walsberg, Israel J. Math. to appear (2016)
- [16] **How to avoid a compact set**
with E. Walsberg, A. Fornasiero, Adv. Math. 317 (2017) 758-785
- [17] **When is scalar multiplication decidable?**
submitted
- [18] **Metric dimensions and tameness in expansions of the real field**
with C. Miller, submitted
- [19] **Structure theorems in tame expansions of o-minimal structures by a dense set**
with P. Eleftheriou and A. Günaydin, submitted
- [19] **Definability and decidability in expansions by generalized Cantor sets**
with W. Balderrama, submitted
- [20] **Wild theories with o-minimal open core**
with E. Walsberg and T. Nell, submitted

[21] The Choice Property in tame expansions of o-minimal structures

with P. Eleftheriou and A. Günaydin, submitted

Economics

[1] The Clean-Development Mechanism, stochastic permit prices and energy investments

with D. Schüller, *Energy Economics* 47 (2015) 25–36

[2] The Influence of Permit Price Uncertainty and Lobbying on Energy Investments

with D. Schüller, in 'Emissions Trading as a Policy Instrument: Evaluation and Prospects', *CESifo Seminar Series, MIT Press* (2015) 87-120

Advising

PhD students

Travis Nell (since 2014)

Erin Caulfield (since 2013)

Graduate students (who participated in research projects)

William Balderram (2016)

Alonza Terry Jr. (2013-2016)

Nathan Rehfuss (2013-2014)

Pete Glaze (2010-2011)

Talks

Model Theory Conference **July 2017**
Bedlewo, Poland

AMS Sectional Meeting **May 2017**
Model Theory Special session, Hunter College, NY

VIG 2017 **February 2017**
UCLA, Los Angeles, California

Colloquium Logicum 2016 **September 2016**
University of Hamburg, Hamburg, Germany

Workshop on Model Theory: From Fields to Hardy Fields **August 2016**
Fields Institute, Toronto, Canada

Summer School in Tame Geometry **July 2016**
University of Konstanz, Konstanz, Germany

Ohio State University **March 2016**
Logic Seminar, Columbus, Ohio

University of Illinois at Chicago **March 2016**
Logic Seminar, Chicago, Illinois

McMaster University **December 2015**
The Evelyn Nelson Lecture, Hamilton, Ontario

McMaster University **December 2015**
Logic Seminar, Hamilton, Ontario

City University of New York <i>Logic Workshop, New York, NY</i>	November 2015
Future directions in model theory and analytic functions <i>Manchester, UK</i>	July 2015
University of Konstanz <i>Model Theory Seminar, Konstanz, Germany</i>	June 2015
Ohio State University <i>Logic Seminar, Columbus, Ohio</i>	May 2015
University of Wisconsin <i>Southern Wisconsin Logic Colloquium, Madison, Wisconsin</i>	April 2015
University of Münster <i>Colloquium, Münster, Germany</i>	March 2015
Canadian Mathematical Society Winter Meeting <i>Model Theory Special session, Hamilton, Ontario</i>	December 2014
Eastern Illinois University <i>Colloquium, Charleston, Illinois</i>	November 2014
University of Illinois at Chicago <i>Logic Seminar, Chicago, Illinois</i>	March 2014
University of California at Los Angeles <i>Logic Colloquium, Los Angeles, California</i>	January 2014
University of Notre Dame <i>Logic Seminar, South Bend, Indiana</i>	November 2013
Applications of O-Minimality Workshop <i>Passau, Germany</i>	September 2013
ASL Annual Meeting <i>Model Theory Special session, Waterloo, Ontario</i>	May 2013
ASL Winter Meeting <i>Plenary talk, San Diego, California</i>	January 2013
Fields Institute <i>Back 2 Fields Colloquium, Toronto, Ontario</i>	October 2012
McMaster University <i>Logic Seminar, Hamilton, Ontario</i>	October 2012
Western Illinois University <i>Colloquium, Macomb, Illinois</i>	October 2012
University of Konstanz <i>Oberseminar, Konstanz, Germany</i>	May 2012
University of Illinois <i>Colloquium, Urbana, Illinois</i>	January 2012
MidWest Model Theory Day <i>Chicago, Illinois</i>	October 2011

O-minimal Structures and Real Analytic Geom. Workshop <i>Fields Institute, Toronto, Canada</i>	August 2011
University of Münster <i>Oberseminar, Münster, Germany</i>	June 2011
MidWest Model Theory Meeting <i>Columbus, Ohio</i>	May 2011
Ohio State University <i>Logic Seminar, Columbus, Ohio</i>	May 2011
University of Notre Dame <i>Colloquium, South Bend, Indiana</i>	February 2011
University of Notre Dame <i>Logic Seminar, South Bend, Indiana</i>	February 2011
University of Wisconsin <i>Logic Seminar, Madison, Wisconsin</i>	December 2010
Logic Colloquium 2010 <i>Model Theory Special session, Paris, France</i>	July 2010
University of Freiburg <i>Oberseminar, Freiburg, Germany</i>	July 2010
Ohio State University <i>Logic Seminar, Columbus, Ohio</i>	April 2010
MidWest Model Theory Meeting <i>Urbana, Illinois</i>	November 2009
ESF Research Conference in Model Theory <i>Bedlewo, Poland</i>	August 2009
Logicum Urbanae Lugduni <i>Lyon, France</i>	July 2009
Fields Institute <i>Geometry and Model Theory Seminar, Toronto, Ontario</i>	May 2009
University of Manchester <i>Logic Seminar, Manchester, UK</i>	November 2008
University of Oxford <i>Logic Seminar, Oxford, UK</i>	May 2008
MODNET Research Workshop <i>Berlin, Germany</i>	September 2007
University of Amsterdam <i>Colloquium on Mathematical Logic, Amsterdam, Netherlands</i>	April 2006

Teaching Experience

University of Illinois: Lecturer

- Appl. Linear Algebra (Math 415, 2 × 200 Students, Fall 2016 *)
- Appl. Linear Algebra (Math 415, 2 × 200 Students, Fall 2015 *)

- Appl. Linear Algebra (Math 415, 2 × 200 Students, Fall 2014 *)
 - Appl. Linear Algebra (Math 415, 215 Students, Spring 2014, *)
 - Appl. Linear Algebra (Math 415, 200 Students, Fall 2013, *)
 - O-minimal structures (Math 595, 8 Students, Fall 2013, *)
 - Mathematical Logic (Math 414, 18 Students, Spring 2013)
 - Mathematical Logic (Math 570, 17 Students, Fall 2013, *)
 - Intro Matrix Theory (Math 225, 200 Students, Spring 2012, *)
 - Mathematical Logic (Math 414, 17 Students, Spring 2012, *)
 - Fundamental Math. (Math 347, 25 Students, Fall 2011, *)
 - Intro Matrix Theory (Math 225, 200 Students, Spring 2011)
 - Mathematical Logic (Math 414, 12 Students, Spring 2011)
 - Differential Equations (Math 285, 60 Students, Fall 2010)
- (*) indicates appearance on the 'List of teachers ranked as excellent by their students')

Merton College, University of Oxford: Tutor

- Undergraduate course in Logic (2007)

University of Oxford: Teaching Assistant

- Undergraduate course in Logic (2006)

University of Bonn: Teaching Assistant

- Undergraduate courses in Algebra and Logic 2004–2005
- Undergraduate courses in Linear Algebra 2002–2003

Service

Refereeing:

- Referee for the following journals: Annals of Pure and Applied Logic, Archive of Mathematical Logic, Fundamenta Mathematicae, Israel Journal of Mathematics, Journal of Symbolic Logic, Mathematical Logic Quarterly, Notre Dame Journal of Formal Logic, Proceedings of the American Mathematical Society, Transaction of the American Mathematical Society
- Panelist for the National Science Foundation
- Reviewer for the German Academic Exchange Service

Organizing:

- Co-organizer of the Special Session in Model Theory of the 2017 AMS Sectional Meeting in Bloomington, IN
- Member of the Organizing and Program Committee of the 2015 North American Meeting of the Association of Symbolic Logic
- Organizer of the Special Session in Model Theory for the 2014 North American Meeting of the Association of Symbolic Logic

Outreach: Organzier of the following outreach events:

- Gathering for Gardner 2016 - A Math Carnival at Urbana-Champaign
- Gardner 100 - Gathering for Gardner 2014 at Urbana-Champaign
- G4G - Gathering for Gardner 2012 at Urbana-Champaign
- G4G - Gathering for Gardner 2011 at Urbana-Champaign

Governance: Member of the Council of the Faculty for Mathematics and Science of University of Bonn (2003)