#  **CURRICULUM VITAE**

 **NAME, LAST NAME :** David Austin Pierce

**DATE AND PLACE OF BIRTH :** 1965, Virginia, USA

**NATIONALITY :** USA

###### **ACADEMIC DEGREES**

**YÖK Doçentlik :** 29 February 2008

**Ph.D. :** Mathematics, University of Maryland, USA, 1997

**BA :** St John's College, Santa Fe N.M. and Annapolis Md., USA, 1987

**Language proficiency**

* Native speaker of English
* ÜDS score in French: 97.500
* can teach in Turkish

**EMPLOYMENT HISTORY**

**Mimar Sinan Güzel Sanatlar Üniversitesi, İstanbul**

**Professor**

November 2013---present

**Associate Professor**

December 2011—November 2013

**Middle East Technical University (METU), Ankara**

**Associate Professor**

December 2010—September 2011

**Assistant Professor**

Winter 2000/2001—December 2010

**Postdoctoral Fellow**

Spring 1999—Spring 2000 McMaster University, Department of Mathematics and Statistics, Canada

Spring 1998 Mathematical Sciences Research Institute, Berkeley, USA

**Visiting Assistant Professor**

Fall 1997 University of Illinois at Urbana-Champaign, Department of Mathematics, USA

**Lecturer**

Fall 1995 University of Maryland, Department of Mathematics, USA

# **Teaching Assistant**

# Fall 1989 - Spring 1995 University of Maryland, Department of Mathematics, USA

**AREA OF SPECIALIZATION**

Model theory

Model Theory of Fields

Differential Fields

Function Fields

Mathematical history and philosophy

# **MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS**

American Mathematical Society

**PUBLICATIONS**

**Ph.D. Dissertation**

*On the Model Theory of Function Fields*, 1997

Supervisor: Chris Laskowski (University of Maryland)

**Research Articles / Refereed Conference Proceedings**

 1. A note on the axioms for differentially closed fields of characteristic zero. With Anand Pillay. *Journal of Algebra* **204**, 108-115 (1998).

1. Function fields and elementary equivalence. Bull. London Math. Soc. 31 (1999), no. 4, 431--440.
2. Differential forms in the model theory of differential fields. J. Symbolic Logic 68 (2003), no. 3, 923—945.
3. Geometric characterizations of existentially closed fields with operators. Illinois J. Math. 48 (2004), no. 4, 1321--1343.
4. Model-theory of vector-spaces over unspecified fields. *Archive for Mathematical Logic* **48** (2009), no. 5, 421--436
5. Induction and Recursion. *De Morgan Journal* **2** no. 1 (2012), 99-125.
6. Fields with several commuting derivations. *Journal of Symbolic Logic* **79** (2014), no. 1, 1--19
7. Numbers. <http://arxiv.org/abs/1104.5311>
8. Abscissas and Ordinates. *Journal of Humanistic Mathematics* **5** (2015), no. 1, 223-264.

# Chains of Theories and Companionability. With Özcan Kasal. *Proceedings of the American Mathematical Society* **143** (2015), 4937-4949

# *The Foundations of Arithmetic in Euclid.* 140 pp. <http://mat.msgsu.edu.tr/~dpierce/Mathematics/Euclid/>

1. Thales and the Nine-point Conic, The De Morgan Gazette 8 no. 4 (2016), 27-78
2. Commensurability and Symmetry. Journal of Humanistic Mathematics, Volume 7, Issue 2 (July 2017), 90-148
3. Model Theory of Group Actions. With Ayşe Berkman. In preparation.
4. Fields With Automorphism and Valuation. With Özlem Beyarslan, Daniel Max Hoffmann, and Gönenç Onay. In preparation.

**Citations by other authors:** 38

**Article on education**

1. St John's College. *De Morgan Journal* **2** no. 2 (2012), 63-73.

**Course notes**

 **English**

1. Foundations of Mathematical Practice. 2010. 236 pages.
2. Minimalist Set Theory. 2011. 166 pages.
3. Elementary Number Theory. 2012. 196 pages.
4. Recursion and Induction: Notes on Mathematical Logic and Model Theory. 2008. 109 pages.
5. Groups and Rings. 2015. 248 pages.
6. Ultraproducts. 2014. 263 pages.
7. Infinitesimal Analysis. 2015. 40 pages.
8. The Cantor Set. 2017. 35 pages.
9. Finite Fields. 2017. 27 pages.

 **Turkish**

1. Öklid'in *Öğeleri'*nin Birinci Kitabı. Özer Öztürk ile çeviri. 2011-14.
2. Öklid Alıştırmaları. 2014. 58 sayfa.
3. Önermeler Mantığı. 2014. 64 sayfa.
4. Kümeler Kuramı. 2014. 150 sayfa.
5. Modeller Kuramına Giriş. 2015. 54 sayfa.
6. Analitik Geometri Özeti. 2015. 57 sayfa.
7. İskenderiyeli Pappus'un *Toplama*'sının Yedinci Kıtabında Öklid'in *Porizmalar*'ı İçin 38 lemmadan İlk 19 lemma (giriş ve çeviri). 2016. 64 sayfa.

**INTERNATIONAL CONFERENCE PARTICIPATION**

**Title of the Talk**

November 1997: AMS meeting, Milwaukee, USA: "Axioms for differentially closed

fields" (invited)

July 1999: Barcelona Logic Meeting, Barcelona, Spain: "Model-completion of fields with

several commuting derivations"

June 2000: Math 2000 meeting, Hamilton, Canada: "Differential geometry in

model theory" (invited)

July 2000: Logic Colloquium 2000, Paris, France: “Model-theoretic differential geometry”

May 2001: Antalya Algebra Days III, Antalya, Turkey: “Differential forms in model theory”

July 2001: Joint AMS-SMF meeting, Lyon, France: “Differential forms in model-theory”

May 2003: Antalya Algebra Days V, Antalya, Turkey: “On the model-theory of Lie-rings”

August 2003: Logic Colloquium 2003, Helsinki, Finland: “Fields with operators, and Lie-rings”

July 2004: Logic Colloquium 2004, Turin, Italy: “Fields of any characteristic with operators”

May 2005: Antalya Algebra Days VII, Antalya, Turkey: “Differential fields of arbitrary characteristic”

July 2005: Logic Colloquium 2005, Athens, Greece: “Lie-rings”

July 2006: Logic Colloquium 2006, Nijmegen, the Netherlands: “Vector-spaces over unspecified fields”

November 2006: MODNET Midterm Conference, Antalya: “Differential fields”

July 2008: Logic Colloquium 2008, Bern, Switzerland: “Induction and recursion”

July 2009: Logicum Urbanae Lugduni, Lyon, France: “Interacting rings” (invited)

September 2009: Connecticut Logic Seminar: “Fields with several derivations”

December 2009: Conference in honour of Oleg Belegradek, Istanbul: “Interacting rings” (invited)

August 2012: 43rd Iranian Mathematics Conference, Tabriz, Iran: “Model-theory of differential fields”

September 2014: Caucasian Mathematics Meeting, Tbilisi, Georgia: “Compactness”

June 2015: 5th World Congress and School on Universal Logic, Istanbul: “Compactness” (a course of three lectures; invited)

July 2017: 11th Panhellenic Logic Symposium: “A Method for Companionability, Applied to Group Actions and Valuations”

**Only Participated**

August 1996: NATO ASI Meeting on Model Theory at Toronto, Canada

Fall 1996: Workshop on Algebraic Model Theory, Toronto, Canada

February 1998:Model Theory of Fields, MSRI, Berkeley, USA

November 1999: Model Theory and Number Theory Workshop, Urbana, Illinois, USA

November 1999: Workshop on Hilbert’s 10th Problem, Ghent, Belgium

May 2002: Euro-Conference on Model Theory and Applications, Ravello, Italy

June, 2007: Differential Fields Workshop, Leeds, UK

July 2007: Panhellenic Logic Symposium, Volos, Greece

November 2008: final MODNET meeting, Barcelona, Spain

June, 2009: Groups and Models: Cherlin Bayramı, Istanbul, Turkey

June 2011: Recent Developments in Model Theory, Oléron, France

August 2012: Algebra, Combinatorics and Model Theory, Istanbul

November 2012: Model theory of groups (interactions between model theory and
geometrical group theory), Centre Internationale de Rencontres Mathematiques, Marseille, France

May 2014: Summer School Around Valuation Theory, Şirince, Turkey

June 2015: Growth, Symbolic Dynamics and Combinatorics of Words in Groups, École normale supérieure, Paris, France

**NATIONAL CONFERENCES**

Ulusal Matematik Sempozyumu:

September 2000: “Differential geometry in model theory”

September 2002: “Theories of fields with operators”

September 2003: “Existentially closed expansions of fields”

September 2013: “Teori Zincirleri”

**PROJECTS**

European Union FP6 Marie Curie Research Training Network: Model Theory and Applications Network (MODNET), Researcher: January 2005—December 2008

Research group: The model theory of fields with operators. Nesin Matematik Köyü, Şirince, Selçuk, İzmir, July 1—8, 2016

**NEW COURSES**

**At MSGSÜ:**

MAT 113 (Introduction to Euclidean Geometry: Öklid Geometrisine Giriş)

MAT 340 (Axiomatic Set Theory: Aksiyomatik Kümeler Kuramı)

**At METU:**

Math 736 (Basic Model Theory)

Math 746 (Model Theory II)

**CONTRIBUTIONS TO MATHEMATICAL COMMUNUTY**

**Refereeing**

Internet Encyclopedia of Philosophy

Journal of Symbolic Logic

Archive for Mathematical Logic

Annals of Pure and Applied Logic

London Mathematical Society

Logic Journal of the Interest Group in Pure and Applied Logics

Turkish Journal of Mathematics

**Reviewing**

Mathematical Reviews (MathSciNet)

## **Conference organization**

## Antalya Algebra Days, 2003—12, 2014--2016

## Groups and Models: Cherlin Bayramı, İstanbul, June 2009

Midterm conference of MODNET (Research training network in model theory), Antalya, November 2006

**Teaching**

Turkish Mathematical Society Summer School, Nesin Mathematics Village, 2008—present

**Popular talk**

Thales Kanıt Kavramı Öncüsü Olarak, Thales Buluşması, Didim, 24 Eylül 2016

**GRADUATE STUDENT SUPERVISION**

**Ph.D.** Özcan Kasal “Model theory of derivation spaces”, 2010, METU

**M.S.** İrem Yıldırım “The theory of generic difference fields”, 2003, METU