

Ahmet Çevik

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Education Degrees

- 2014 | Ph.D in Mathematics, University of Leeds, United Kingdom.
Thesis: *Degrees of members of Π_1^0 classes.*
Advisor: S. Barry Cooper, Andrew E. M. Lewis.
- 2009 | M.Sc. in Computer Engineering, Atılım University, Ankara, Turkey.
Thesis: *State Change Languages: Algebraic and Language Class Properties.*
Advisor: Hürevren Kılıç.
- 2007 | B.Sc. in Computer Engineering, Atılım University, Ankara, Turkey.
Thesis: *Collective Behavior Intelligence and Optimization.*
Advisor: Nergiz Ercil Çağiltay.

Interest Areas

logic, philosophy of mathematics, computability, theoretical computer science (quantum computing, formal language theory).

Languages

Turkish (native), English (fluent), Russian (beginner-intermediate).

Academic Experience

Research visit | July - Sep 2019
UCLA, Department of Mathematics, Los Angeles, CA, USA

Asst. Prof. | January 2018 - Present
Gendarmerie and Coast Guard Academy, Ankara, Turkey

Adjunct | ; Spring 2019, Spring 2020
Middle East Technical University, Department of Computer Engineering, Turkey

Adjunct | Fall 2019
Middle East Technical University, Department of Mathematics, Ankara, Turkey

Adjunct | Spring 2015 to Fall 2019
Middle East Technical University, Department of Philosophy, Turkey

Postdoc | 2015 - 2016
UC Berkeley, Department of Mathematics, Berkeley, CA, USA

Research and Teaching Assistant | 2007 - 2010
Atılım University, Department of Computer Engineering, Turkey

Teaching

Middle East Technical University, Department of Mathematics

Lecturer

Teaching duties included preparing the syllabus and some lecture notes; lecturing, assigning and grading homework; writing and grading exams; and holding weekly office hours.

- *Courses:* Introduction to Mathematical Logic and Model Theory

Middle East Technical University, Department of Computer Engineering

Lecturer

Teaching duties included preparing the syllabus and lecture notes; lecturing, assigning and grading homework; writing and grading exams; and holding weekly office hours.

- *Courses:* Quantum Computing

Middle East Technical University, Department of Philosophy

Lecturer

Teaching duties included preparing the syllabus and lecture notes; lecturing, assigning and grading homework; writing and grading exams; and holding weekly office hours.

- *Courses:* Philosophy of Logic and Mathematics
Axiomatic Set Theory

Atilm University, Department of Computer Engineering

Teaching and Research Assistant

Teaching duties included holding weekly tutorials, writing and grading worksheets; holding office hours.

- *Courses:* Artificial Intelligence
Formal Language Theory
Algorithms
Computer Programming in C
Digital Logic
Computer Architecture

Refereed Journal Publications

- (i) A. Çevik
Minimal bounds and members of effectively closed sets, submitted.
- (ii) A. Çevik, S. Topal
Most-Intersection of Countable Sets, submitted.
- (iii) A. Çevik
Descriptive classification of a priori propositions by analytic derivation, submitted.
- (iv) A. Çevik
Hierarchical Multiverse of Sets, submitted.
- 1 A. Çevik
An effectively closed set with no join property, Math. Logic. Quarterly, accepted.
- 2 A. Çevik
Palindromic characteristic of committed graphs and some model theoretic properties, International J. Foundations of Computer Science, Vol. 31(4), p. 483-498 (2020).
- 3 S. Topal, A. Çevik, F. Smarandache
A New Group Decision Making Method with Distributed Indeterminacy Form under Neutrosophic Environment: Neutrosophic Social Choice Theory, IEEE Access, Vol. 8, p. 42000-42009 (2020).
- 4 S. Topal, A. Çevik
Natural Density and the Quantifier “Most”, Journal of Logic, Language and Information, **29**(4), p. 511-523, DOI 10.1007/s10849-019-09312-4 (2020).
- 5 A. Çevik
 ω -circularity of Yablo’s paradox, Logic and Logical Philosophy, **20**(3), p. 325-333 (2020).
- 6 A. Çevik
Axiom of Neutrosophic Choice, International Journal of Unconventional Computing, Vol. 14, p. 467-478 (2019).
- 7 A. Çevik, S. Topal, F. Smarandache
Neutrosophic Logic Based Quantum Computing, DOI: 10.3390/sym10110656, Symmetry, 10(11), 656 (2018).
- 8 A. Çevik, S. Topal, F. Smarandache
Neutrosophic Computability and Enumeration, DOI: 10.3390/10110643, Symmetry, 10, 643 (2018).
- 9 A. Çevik
Hypercomputation and Non-Computable Functions, Journal of Logic, Mathematics, and Linguistics in Applied Sciences, 2(1), p. 1-14 (2017)
- 10 A. Çevik
 Π_1^0 choice classes, DOI 10.1002/malq201500055, Mathematical Logic Quarterly, Vol. 62, No 6, p. 563-574 (2016).
- 11 A. Çevik
Antibasis theorems for Π_1^0 classes and the jump hierarchy, DOI 10.1007/s00153-012-0310-y, Archive for Mathematical Logic, Vol. 52, Issue 1-2, p. 137-142, Springer, (2013).
- 12 A. Çevik
On the possibility of supertasks, Beytulhikme - An International Journal of Philosophy, Vol. 5, p. 171-180 (2013).
- 13 A. Çevik
Philosophy of Hilbert’s Formalization Program, Felsefe Dünyası, Vol. 60, p. 265-280 (2014).
- 14 H. Koyuncu and A. Çevik
Indoor Localization by using Particle Filtering Approach with Wireless Sensor Nodes, JCOMSS - Journal of Communications Software and Systems, Vol.9, No.1, p. 74-83 (2013).

Refereed Journal Publications (Turkish)

- 1 A. Çevik
Matematik Felsefesi, Kutadgubilig, Vol. 42, pp. 187-191, 2020 (Book Review).
- 2 A. Çevik
Aksiyomlanabilir Teorilerin Tam Tutarlı Uzantılarının Hesaplanabilirlik Dereceleri, DOI: 10.191113/sdufbed.18471, Süleyman Demirel University Journal of Natural and Applied Sciences, Volume 22, Special Issue, pp. 270-276 (2018).
- 3 A. Çevik
Seçim Aksiyomu'nun doğallığının veya yapaylığının belirlenmesi üzerine, Felsefe Tartışmaları, Boğaziçi Üniversitesi Yayınevi, No 53, pp. 1-23 (2017).
- 4 A. Çevik and Z. Ercan
Nedir Bu 'Modern' Matematik?, Bilim ve Gelecek, No 154, pp. 71-81 (2016).
- 5 A. Çevik
Matematik Felsefesi: Mantıkçuluk, Matematik Dünyası, No 104, pp. 50-53 (2016).
- 6 A. Çevik
Matematik Felsefesi: Sezgicilik, Matematik Dünyası, No 103, pp. 53-58 (2016).
- 7 A. Çevik
Matematik Felsefesi: Platonculuk, Matematik Dünyası, No 102, pp. 51-55 (2015).
- 8 A. Çevik
19. ve 20. yüzyıl bilinebilirliğinin matematiğe yansımaları, Bilim ve Ütopya, No 253, pp. 62-65 (2015).
- 9 A. Çevik
Kardinaller, Modeller ve Skolem Paradoksu, Matematik Dünyası, No 101, pp. 81-84. (2014).
- 10 A. Çevik
Sonluötesi hesaplama, Matematik Dünyası, No 95, pp. 69-72 (2013).
- 11 A. Çevik
Hesaplanabilirlik Kuramı ve Turing Derecelerine Giriş, Gaziosmanpaşa Üniversitesi Bilimsel Araştırma Dergisi, Vol. 1, pp. 1-20 (2012).
- 12 A. Çevik
Saylamaz sonsuzluk, karar verilemezlik, Gödel'in Eksiklik Teoremi, Felsefe Dünyası, Vol. 53, pp. 253-270 (2011).

International Conferences

- (i) A. Çevik
Multiverse theory of sets and hierarchical pluralism, Trends in Logic (TRENDS 2020), Taras Shevchenko National University of Kyiv, Kiev, Ukraine, 2021?, accepted.
- 1 A. Çevik and H. Kılıç
An Infinite Proper Subset of Regular Languages as a State Change Based Coupling of Finite Automata, International Conference on Computer Science and Applications 2015 (ICCSA 2015), San Francisco, USA, October 2015, Conference proceedings, Vol I, pp. 55-58 (2015).
- 2 A. Çevik
Is the Church-Turing thesis the new Pythagoreanism?, 5th World Congress and School on Universal Logic, University of Istanbul, June 25-30 2015, Turkey, Conference proceedings, pp. 85-86 (2015).
- 3 A. Çevik
A Linear-time algorithm for the prediction of compression during multimedia transmissions, International Conference on Theoretical and Mathematical Foundations of Computer Science (TMFCS 2009), Orlando, FL, USA, July 2009, Proc. of TMFCS-09, pp. 49-53 (2009)
- 4 A. Çevik
Cryptology in quantum computing, International Conference on Theoretical and Mathematical Foundations of Computer Science (TMFCS 2009), Orlando, FL, USA, July 2009, Proc. of TMFCS-09, pp. 54-58 (2009)
- 5 İ. K. Öcal, A. Çevik, İ. Cereci and H. Kılıç
F-Actor: A multiagent gaming environment for controlling virtual flow networks, The 13th International Games Conference, (CGAMES 2008), Wolverhampton, UK, Nov. 2008, Proc. of 13th International Games Conference, pp. 86-91 (2008).

Books

- (i) A. Çevik
Kuantum Hesaplama Kuramı (Eng. Quantum Computing Theory). Submitted.
- 1 A. Çevik
Philosophy of Mathematics: Classic and Contemporary Studies, CRC Press/Taylor and Francis Group, forthcoming.
- 2 A. Çevik
Matematik Felsefesi ve Matematiksel Mantık, Nesin Yayınevi, 2019.

National Conferences (Turkish)

- 1 A. Çevik
Seçim Aksiyomu Doğal mıdır Yapay mıdır?, VII. Mantık Çalıştayı, Bildiriler Kitabı, s. 1652-175, On Dokuz Mayıs Üniversitesi, Samsun, 28-30 June 2017.
- 2 A. Çevik
Church-Turing Tezi'ndeki ifadesel tamlık ve hipotezin alternatifleri, V. Mantık Çalıştayı, Bildiriler Kitabı, s. 241-244, Uludağ Üniversitesi, Bursa, 15-17 May 2015.
- 3 A. Çevik
Hesaplanabilirlik kuramı nedir?, XXVI. Ulusal Matematik Sempozyumu 2013, Diyarbakır, Bildiri özetleri kitabı, pp. 50 (2013).
- 4 İ. K. Öcal, A. Çevik, İ. Cereci, H. Kılıç
Sanal Akış Ağı Ortamında Kontrol Amaçlı Çok Kullanıcılı Bir Prototip Oyun Yazılımı, Otomatik Kontrol Ulusal Toplantısı - (TOK 2008), İstanbul, Nov. 2008, Otomatik Kontrol Ulusal Toplantısı Bildiriler Kitabı, pp. 692-698 (2008).
- 5 M. U. Öney, A. Çevik, N. E. Çağiltay, Ö. Kılıç
Topluluk Zekası Yönetimi ve Optimizasyonu, Akademik Bilişim 2007, Dumlupınar University, Kütahya, Turkey, Jan. 2007, IX. Akademik Bilişim Konferansı Bildiriler Kitabı, pp.333-340 (2007).

Scholarships and Awards

- 2015 Merit award for the 2015 International Conference of Computer Science and Applications (ICCSA 2015), Berkeley, USA. Paper title: *An Infinite Proper Subset of Regular Languages as a State Change Based Coupling of Finite Automata*.
- 2015 Postdoctoral research scholarship, The Scientific and Technological Council of Turkey (TÜBİTAK).

Referred Journals

- 2018 Annals of Pure and Applied Logic, Elsevier
- 2016 Turkish Journal of Mathematics, Scientific and Technological Council of Turkey (TÜBİTAK).

Conference Presentations

- October 2016 *Mini-Workshop in Logic and its Applications*, Boğaziçi University, Istanbul, Turkey.
- Feb 2016 *ASL Southeastern Logic Symposium 2016*, University of Florida, Gainesville, FL, USA.
- Jun 2015 *5th World Congress and School on Universal Logic*, University of Istanbul, Turkey. (Invited keynote speaker)
- Sep 2015 *British Logic Colloquium*, Cambridge University, Cambridge, UK.
- July 2015 *Computability in Europe 2015*, Bucharest, Romania, June 29-July 3 2015.

Presented Lecture Series

The lectures given below have been taught in the award-winning Nesin Mathematics Village of Turkey also as a community service.

| | |
|----------------------|---|
| 8-14 Sep 2014 | <i>A short introduction to recursion theory and Π_1^0 classes</i> , Nesin Mathematics Village, Turkey. |
| 31 Jul-7 Aug 2017 | <i>Unsolvability</i> , Nesin Mathematics Village, Turkey. |
| 5-12 August 2018 | <i>Introduction to Quantum Computing</i> , Nesin Mathematics Village, Turkey. |
| 13-19 August 2018 | <i>Philosophy of Mathematics</i> , Nesin Mathematics Village, Turkey. |
| 17-23 June 2019 | <i>Propositional and Predicate Logic</i> , Nesin Mathematics Village, Turkey. |

Invited Talks

- 2009 Atılım University, Dept. of computer engineering: Crisis in the foundation of mathematics.
- Oct 2009 Atılım University, Dept. of computer engineering: An infinite proper subset of regular languages and abstract power consumption.
- Dec 2009 Atılım University, Dept. of mathematics: Undecidable statements on a functional property of universal models of computation.
- Feb 2011 University of Leeds, School of Mathematics: Consistency strength and higher axioms of ZFC.
- Mar 2011 University of Leeds, School of Mathematics: Degrees of the members of Π_1^0 classes.
- Mar 2011 Ankara University, Department of Mathematics: Introduction to recursion theory and Π_1^0 classes.
- Oct 2011 University of Leeds, School of Mathematics: Formal languages.
- Dec 2011 Atılım University, Department of Mathematics: Degrees of Undecidability.
- Dec 2011 Ankara University, Department of Mathematics: Tutarlılık gücü ve ZFC'nin yüksek belitleri.
- Dec 2011 Middle East Technical University, Department of Mathematics: Degrees of Unsolvability.
- Mar 2012 University of Leeds, School of Mathematics: Infinite time Turing machines.
- May 2012 University of Leeds, School of Mathematics: Computational length of infinite time Turing machines.
- Nov 2012 University of Leeds, School of Mathematics: Antibasis theorems for Π_1^0 classes.
- Apr 2013 Atılım University, Department of Computer Engineering: A concise introduction to recursion theory.
- Apr 2013 Ankara University, Department of Mathematics: Antibasis theorems for Π_1^0 classes.
- Jan 2014 University of Leeds, School of Mathematics: Degree theoretic properties in effectively closed sets.
- Oct 2014 Ankara University, Department of Mathematics: Current trends in theory of unsolvability.
- Oct 2014 Middle East Technical University, Department of Mathematics: Study of unsolvability.
- Nov 2014 Atılım University, Department of Mathematics: Philosophical analysis of the formalization of mathematics.
- Nov 2014 Middle East Technical University, Department of Philosophy: On the formalization of mathematics.
- Mar 2015 Hacettepe University, Department of Mathematics: Algorithmic Unsolvability.
- Feb 2016 University of California at Berkeley, Department of Mathematics: Degree theoretic properties of Π_1^0 classes.
- Mar 2017 Gazi University, Department of Mathematics: What is the Axiom of Choice?
- Mar 2017 Boğaziçi University, Department of Philosophy: On the naturality, or otherwise, of the Axiom of Choice.
- Mar 2017 Mimar Sinan Fine Arts University, Department of Mathematics: Effectively closed sets in recursion theory.
- Apr 2017 Abant İzzet Baysal University, Department of Mathematics: Understanding the Axiom of Choice.
- May 2017 Middle East Technical University, Department of Mathematics: What is computability?
- Nov 2017 Middle East Technical University, Department of Mathematics: Determining the axioms: The Choice Axiom example.
- May 2018 Atılım University, Department of Computer Engineering: Why strong A.I. is not likely to be achieved.
- July 2018 Middle East Technical University, Department of Computer Engineering: Quantum Computing - An Introduction for Computer Scientists.
- August 2018 Nesin Mathematics Village, What is Philosophy of Mathematics?
- November 2018 Hacettepe University, What is Modern Mathematics?
- Feb 2019 Doğuş University, Department of Computer Engineering, How Quantum Algorithms Work.