

CURRICULUM VITAE

1. **Name Surname:** Elçin Emre Akdoğan
2. **Date of Birth:** 28.07.1982
3. **Title:** Assist. Prof.
4. **Education:** PhD
5. **Organization:** TED University
6. **Contact Information:**
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| Degree | Field | University | Year |
|------------------------------|-----------------------|--------------------------------------------------------------------------------------------------------|-----------|
| Bachelor's Degree | Mathematics Education | Gazi University | 2005 |
| Master's Degree | Mathematics Education | Gazi University | 2008 |
| Visiting Doctoral Researcher | Mathematics Education | University of Massachusetts Dartmouth-Kaput Center for Research and Innovation in STEM Education, USA. | 2012-2013 |
| PhD Degree | Mathematics Education | Gazi University | 2015 |

7. Akademik Titles:

Date of Assistant Professorship: 12.04.2019

8. Administered Master's and PhD Theses:

8.1. Master's Theses:

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8.2. PhD Theses:

- **Sevgi Sarı Arıkan**, Bir Ortaokul Matematik Öğretmeninin Dörtgenler Konusundaki Söylemlerinin Değişiminin İncelenmesi, Hacettepe Üniversitesi (İkinci Danışman)

9. Publications:

9.1. Articles published in international refereed journals (SCI, SSCI, Arts and Humanities):

- **Emre-Akdoğan, E.**, Güçler, B., Argün, Z. (2018) The Development of Two High School Students' Discourses on Geometric Translation in Relation to the Teacher's Discourse in the Classroom. *Eurasia Journal of Mathematics, Science and Technology Education*, 14 (5), 1605-1619. DOI: <https://doi.org/10.29333/ejmste/84885>

9.2. Articles published in other international refereed journals:

- **Emre-Akdoğan, E.**, Yazgan-Sağ, G. (2023). Creative Mathematics Experiences: Defining New Geometric Concepts. *The Australian Mathematics Education Journal*, 5(1), 19-24.
- **Emre-Akdoğan, E.** (2023). Genesis of routines: Mathematical discourses on the Equal Sign and Variable. *Electronic Journal for Research in Science and Mathematics Education*, 27(1), 77-94.
- **Emre-Akdoğan, E.** (2023). Examining mathematical creativity of prospective mathematics teachers through problem posing. *Teaching Mathematics and its Applications: An International Journal of the IMA*, 42(2), 150-169. Doi: 10.1093/teamat/hrac006

- **Emre-Akdoğan, E.,** Yazgan-Sağ, G. (2019). Transformation of theoretical knowledge into instructional practice: A mathematics teacher's journey. *Issues in Educational Research*, 29(1), 55-69.
- Yazgan-Sağ, G., **Emre-Akdoğan, E.** (2017). Analysis of the Changes in Prospective Secondary Mathematics Teachers' Knowledge of Lesson Plan. *Journal of Education and Future*, 12, 157-174.
- **Emre-Akdoğan, E.,** Argün, Z. (2016) Instructional design-based research on Problem Solving Strategies. *Acta Didactica Napocensia*, 9(4), 15-24.
- Yazgan-Sağ, G., **Emre-Akdoğan, E.** (2016). Creativity from two perspectives: Prospective mathematics teachers and mathematician. *Australian Journal of Teacher Education*, 41(12), 25-40.
- Yazgan-Sağ, G., **Emre-Akdoğan, E.,** Argün, Z. (2016). Prospective Secondary Mathematics Teachers' Reflections on Teaching after Their First Teaching Experience. *Acta Didactica Napocensia*, 9(3), 1-10.

9.3. Paper presentations presented at international conferences and published at conference proceedings:

- **Emre-Akdoğan, E.,** Gürbüz, F. N. (2023). Explorative Participation of Prospective Mathematics Teachers within the context of Equation and Inequality. The European Conference on Educational Research (ECER), Glasgow, UK.
- **Emre-Akdoğan, E.,** Gürbüz, F. N. (2023). Explorative participation in the context of a classroom discourse. In A. Schüler-Meyer, J. Ingram, and K. Erath (Eds.), *Proceedings of the Twelfth ERME Topic Conference on Language in the Mathematics Classroom* (pp. 30– 37). ERME / HAL Archive. Oxford University, UK.
- Çelebi İlhan E.G., Toker Z., Alkaş-Ulusoy Ç., **Emre-Akdoğan E.,** Balcı E., Güzeller G. (2022). Improving teaching by problem solving in lesson Study. 22nd Conference on Problem Solving in Mathematics Education (ProMath), Thessaloniki, Greece.
- Çelebi İlhan E.G., Toker Z., Alkaş-Ulusoy Ç., **Emre-Akdoğan E.,** Güzeller G., Balcı E. (2021). An Investigation of the Planning Phase of a Lesson Study Conducted with Teachers Teaching Mathematics at Different Grade Levels (Farklı Sınıf Düzeylerinde Matematik Öğreten Öğretmenler ile Yürütülen Bir Ders Araştırmasının Planlama Aşamasının İncelenmesi). 5th International Symposium of Turkish Computer and Mathematics Education, Alanya, Antalya.
- **Emre-Akdoğan, E.,** Güçler, B., Argün, Z. (2020). Discursive development of Eda on the concept of reflection. ETC7-Seventh ERME Topic Conference: Language in the Mathematics Classroom. Montpellier University, France.
- **Emre-Akdoğan, E.** (2019). High School Students' Mathematical Discourses on the Equal Sign and Variable through Commognitive Perspective. 4th International Symposium of Turkish Computer and Mathematics Education, İzmir.
- **Emre-Akdoğan, E.** (2019). Problem Posing in the Context of Photo-Math Project. 21st Conference on Problem Solving in Mathematics Education (ProMath), Ljubljana, Slovenia.
- **Emre-Akdoğan, E.,** Güçler, B., Argün, Z. (2019). One High School Student's Discursive Development on Reflection in Relation to Instruction from a Commognitive Perspective. The 1st International Commognitive Workshop, Haifa, Israel.

- **Emre-Akdoğan, E.,** Güçler, B., Argün, Z. (2018). One Student's Discursive Development on Rotation in Relation to Instruction from a Commognitive Perspective. In E. Bergqvist, M. Österholm, C. Granberg, & L. Sumpter (Eds.). Proceedings of the 42nd Conference of the International Group for the Psychology of Mathematics Education (Vol. 2, pp. 403-410). Umeå, Sweden: PME. [Research Report]
- Yakıcı-Topbaş, E. S., **Emre-Akdoğan, E.,** Aktaş, F.N., Yazgan-Sağ, G., Argün, Z. (2017). Proof Evaluation: Mathematicians and Prospective Mathematics Teachers' Perspectives. 6th International Eurasian Conference on Mathematical Sciences and Applications (IECMSA), Budapest, Hungary.
- Aktaş, F.N., Yazgan-Sağ, G., Yakıcı-Topbaş, E.S., **Emre-Akdoğan, E.,** Argün, Z. (2017). What Makes A Proof, Convincing Proof? International Conference on Education in Mathematics, Science and Technology (ICEMST), Kusadasi, Turkey.
- Aktaş, F.N., Yazgan-Sağ, G., Yakıcı-Topbaş, E.S., **Emre-Akdoğan, E.,** Argün, Z. (2016). Is this mathematical proof convincing or not?, XVIII. International AMSE-AMCE-WAER Congress, Eskişehir, Turkey.
- **Emre-Akdoğan, E.,** Yazgan-Sağ, G. (2015). An Investigation of Prospective Mathematics Teachers' Pedagogical Content Knowledge in the Beginning of their Profession. The European Conference on Educational Research (ECER), Budapest, Hungary.
- **Emre-Akdoğan, E.,** Yazgan-Sağ, G. (2015). Prospective Teachers' Views of Creativity in School Mathematics. The 9th International Mathematical Creativity and Giftedness (MCG-9) Conference. Sinaia, Romania.
- **Emre-Akdoğan, E.,** Yazgan-Sağ, G. (2015). Prospective Secondary Mathematics Teachers' Reflections on Teaching after their First Teaching Experience, II nd International Eurasian Educational Research Congress. Hacettepe University, Ankara, Turkey.
- **Emre, E.,** Argün, Z. (2014). Instructional design-based research on Problem Solving Strategies. Problem Solving in Mathematics Education (ProMath), University of Helsinki, Helsinki, Finland.
- **Emre, E.,** Güçler, B., Argün, Z. (2013). One High School Student's Development of Mathematical Discourse on Translation. In Martinez, M. & Castro Superfine, A (Eds.), Proceedings of the 35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. (pp. 207-210). Chicago, IL: University of Illinois at Chicago. [Brief Research Report]
- **Emre, E.,** Argün, Z. (2012). Talking about Mathematics: Quadratic Equations. Procedia - Social and Behavioral Sciences, 46 (5306-5310). [Index ISI Web of Science, ScienceDirect, Scopus] [paper presented at the World Conference on Educational Sciences (WCES), Barcelona, Spain.]
- Yazgan, G., Argün, Z., **Emre, E.** (2009). Teacher sceneries related to Angle Concept: Turkey case. Procedia - Social and Behavioral Sciences, 1(1), (285-290). [Index ISI Web of Science, ScienceDirect, Scopus] [paper presented at the World Conference on Educational Sciences (WCES), Kyrenia, Cyprus.]
- **Emre, E.,** Argün, Z. (2009). On Choosing Skills of High School Students at Problem Solving Strategies. Frontiers in Science Education Research (FISER), An International Conference on Science and Mathematics Education Research, Famagusta, Cyprus.
- **Emre, E.,** Argün, Z., Yazgan, G. (2009). "Teacher Sceneries Related to "Length, Area, and Volume Concept": Turkey Case. The 5th International Balkan Education and Science Congress, Edirne, Turkey.

9.4. Articles published in national refereed journals:

- **Emre-Akdoğan, E.,** Güçler, B., Argün, Z. (2019). Lise Öğrencilerinin Yansıma Dönüşümü Hakkındaki Matematiksel Söylemlerinin Öğretim Bağlamında Gelişimi. *Uludağ Üniversitesi Eğitim Fakültesi Dergisi*, 32(2), 467-496.
- **Emre-Akdoğan, E.,** Yazgan-Sağ, G. (2018). An Investigation on How Prospective Mathematics Teachers Design a Lesson Plan. *Ondokuz Mayıs Üniversitesi Eğitim Fakültesi Dergisi*, 37(1), 81-96.
- **Emre-Akdoğan, E.,** Yazgan-Sağ, G. (2018). Lise Matematik Öğretmen Adaylarının Öğretmenlik Deneyimleri: Teoriden Uygulamaya Geçiş. *Kastamonu Üniversitesi Eğitim Fakültesi Dergisi*, 26(1), 93-99.

9.5. Paper presentations presented at national conferences and published at conference proceedings:

- **Emre, E.,** Argün, Z., Güçler, B. (2014). Lise Matematik Öğretmenin Öteleme İle İlgili Matematiksel Söylemleri. XI. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, Adana, Türkiye.
- Yazgan-Sağ, G., Güllük, H., **Emre, E.,** Argün, Z. (2010). Matematik Öğretmen Adaylarının Matematiksel Problem Durumlarında Kullandıkları Öz düzenleme Stratejileri IX. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, İzmir, Türkiye.
- **Emre, E.,** Yazgan-Sağ, G., Güllük, H., Argün, Z. (2010). Matematik Öğretmen Adaylarının Matematiksel Dil Kullanımları IX. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, İzmir, Türkiye.
- Güllük, H., **Emre, E.,** Yazgan-Sağ, G., Argün, Z. (2010). Matematik Öğretmen Adaylarının İspat Yaparken Karşılaştıkları Güçlükler. IX. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, İzmir, Türkiye.
- Yazgan-Sağ, G., Güllük, H., **Emre, E.** (2010). Matematiksel Kavramların Öğretiminde Alternatif bir Yaklaşım: Hareketli Matematiksel Modeller. IX. Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi, İzmir, Türkiye.
- **Emre, E.,** Argün, Z. (2008). Lise Öğrencilerinin Uygun Matematiksel Problem Çözme Stratejilerini Kullanabilme Becerileri. *Matematikçiler Derneği, VII. Matematik Sempozyumu*, İzmir.

9.6. Books and chapters published by national/international publishers:

- Yazgan-Sağ, G., **Emre-Akdoğan, E.** (2023). Geometri Öğretiminde Yaratıcılık (Bölüm 11). In Akkuş, R., Toluk-Uçar, Z., Duatepe-Paksu, A., Boz-Yaman, B., E. Bulut, S., (Eds.), *Geometri Öğretiminde Bilişsel Süreçler*. (pp. 347-369) Vizetek Yayıncılık: Ankara, Türkiye.
- **Emre-Akdoğan, E.,** Gürbüz F. N. (2022). Dönüşüm Geometrisi ve Simetrisinin Öğretimi (Bölüm 13). In Boz-Yaman, B., E. Bulut, S., Duatepe-Paksu, A., Akkuş, R., Toluk-Uçar, Z. (Eds.), *Geometri Öğretim Bilgisi*. (pp.419-447). Pegem Yayınevi: Ankara, Türkiye.
- **Emre-Akdoğan, E.,** Yazgan-Sağ, G. (2018). Ancient School without Walls: Collective Creativity in Mathematics Village (Chapter 16). In Freiman, V. & Tassell, J. (Eds.), *Creativity and Technology in Mathematics Education*. Vol. 10, (pp.413-437). Springer.
- Yazgan-Sağ, G., **Emre-Akdoğan, E.** (2016). Geometrik Yer ve Çizimler (Chapter 48). In A. N. Elçi, E. Bukova Güzel, B. Cantürk Taşdan and E. E. Çimen (Eds.), *Temel Matematiksel Kavramlar ve Uygulamaları*. (pp. 581-588). Pegem Yayınevi: Ankara, Türkiye.

9.7. Other publications:

- **Emre, E. (2014).** Seventh European Summer School in Mathematics Education Research (YESS 7), Kassel, Germany.

10. Projects:

- TED University, Undergraduate Research Fund, (21.Nisan.2021-24.Haziran.2022) "Co-Design of STEM+A Education Module by Using MBot, Arduino, and Mblock" Project code: 202190063. Project Team: Sena Ölçer, Aleyanur Akbaba, Beyza Çakır, Edanur Şahin, Burak Katı.
- "Design Skills Labs Material and Content Development" (Ref: EDU/TURA/2019-13 (LRPS-2019- 9153504). UNICEF-Ministry of National Education. (May,2020, April, 2021) Position: Science and Technology Expert (in mathematics)
- Gazi University, Projects of Scientific Investigations, (2012- 2015) Project code: 04/2012-09 Title of the project: Development of High School Students' Mathematical Discourse on Geometric Transformations. Coordinator: Prof. Dr. Ziya Argün (2012) Gazi University-BAP.

11. Administrative Duties /Organizational and Professional Services:

| | | |
|------|---------|-------------------------------------------------------------------------------------------------------------------|
| 2022 | Referee | Gazi Journal of Educational Science |
| 2022 | Referee | The Proceedings of the ERME Topic Conference, ETC12: Language in the Mathematics Classroom (Oxford, UK) |
| 2020 | Referee | International Journal of Mathematical Education in Science and Technology (WoS) |
| 2020 | Referee | Center for Educational Policy Studies Journal |
| 2020 | Referee | Milli Eğitim Dergisi |
| 2020 | Referee | Ankara University Journal of Faculty of Educational Sciences |
| 2020 | Referee | On Dokuz Mayıs University Journal of Educational Faculty |
| 2019 | Referee | III. International Teacher Education and Accreditation Congress |
| 2019 | Referee | The Proceedings of the ERME Topic Conference, ETC7: Language in the Mathematics Classroom (Montpellier, France) |
| 2019 | Referee | On Dokuz Mayıs University Journal of Educational Faculty |
| 2019 | Referee | Journal of Mathematical Behavior |
| 2018 | Referee | Journal of Mathematical Behavior |
| 2018 | Referee | The Proceedings of the ERME Topic Conference, Mathematics Education in the Digital Age |
| 2018 | Referee | The Proceedings of the 42nd annual meeting of the International Group for the Psychology of Mathematics Education |
| 2018 | Referee | Eurasia Journal of Mathematics Science and Technology Education (SSCI) |
| 2017 | Referee | School Science and Mathematics Journal (Web of Science) |
| 2017 | Referee | Eurasian Journal of Physics and Chemistry Education |

12. Affiliations:

- National Council of Teachers of Mathematics (2020-...)
- The North American Chapter of the Psychology of Mathematics Education (PME-NA)(2013-2014)
- School Science and Mathematics Association (SSMA) (2014-2015)
- Mathematical Creativity and Giftedness (MCG) (2015-...)

- International Group for the Psychology of Mathematics Education (IGPME) (2018-2019)

13. Awards:

- Tubitak BIDEB 2224A, Travel grant for PME 42 in Umea, Sweden, 2018.
- Tubitak BIDEB 2224, Travel grant for PME-NA in Chicago, IL, USA, 2013.
- Tubitak BIDEB 2214/A, International Scholarship Program for PhD students, studying for one year in Department of STEM, University of Massachusetts Dartmouth-Kaput Center for Research and Innovation in STEM Education, Massachusetts, USA, 2012

14. Fill in the table below for the courses taught in undergraduate and graduate levels in the last two years.

| Academic Year | Semester | Course | Course Hour | Number of Students |
|---------------|----------|---------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| 2018-2019 | Fall | MATE 103 Calculus I | 2 | 6 |
| | | MATH 205 Calculus I | 5 | 4 |
| 2018-2019 | Spring | MATE 104 Calculus II | 2 | 11 |
| | | MATH206 Calculus II | 5 | 3 |
| | | MATH208 Basic Algebraic Structures | 4 | 3 |
| 2019-2020 | Fall | MATE 103 Calculus-I | 2 | 29 |
| | | MATE203 Linear Algebra-I | 2 | 11 |
| | | MATE205 Analytic Geometry | 2 | 9 |
| | | MATE207 Calculus-III | 2 | 6 |
| | Spring | MATE 104 Calculus-II | 2 | 31 |
| | | MATE204 Linear Algebra-II | 2 | 11 |
| | | MATE206 Algorithm and Programming EME302 Technology in Mathematics Education | 2 2 | 6 3 |
| 2020-2021 | Fall | MATE103 Calculus-I | 2 | 37 |
| | | MATE207 Calculus -III | 2 | 29 |
| | | MATE303 Teaching of Geometry and Measurement | 3 | 8 |
| | Spring | MATE104 Calculus -II | 2 | 34 |
| | | MATE204 Linear Algebra-II | 2 | 30 |
| | | MATE206 Algorithm and Programming | 2 | 32 |
| | | MATE353 Communications in Mathematics Classrooms GPC484 Field Practice in School Counseling Services | 2 3 | 33 7 |
| 2021-2022 | Fall | EMT103/MATE103 Calculus-I | 4 | 31 |
| | | MATE207 Calculus-III | 2 | 35 |
| | | MATE303 Teaching of Geometry and Measurement | 3 | 27 |
| | | MATE405 Logical Reasoning | 2 | 14 |
| | Spring | EMT108/MATE105 History of Mathematics | 2 | 39 14 |
| | | EMT102_02 Practicum | 1 | 34 |
| | | MATE206 Algorithm and Programming | 2 | 25 |

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|--|--|-----------------------------------|---|--|
| | | MATE402 Philosophy of Mathematics | 2 | |
|--|--|-----------------------------------|---|--|

15. Professional Development Services:

16. Other Work Experience (Education, Industry etc.):

| | |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| September, 2018- April, 2019 | Part-time Instructor, TED University, Department of Mathematics and Science Education - Mathematics Education. |
| 2007-2016 | Research & Teaching Assistant, Gazi University, Gazi Education Faculty, Mathematics Education. |
| 2012-2013 | Visiting Doctoral Researcher, STEM Education Department, University of Massachusetts Dartmouth- Kaput Center for Research and Innovation in STEM Education, USA. |

17. Consultancies, Patents etc.: