

Mathematics and Science Education,
Faculty of Education,
Bogazici University,
Bebek, 34342, Istanbul, Turkey
E-mail: fatma.tutak@boun.edu.tr
<https://sced.boun.edu.tr/people/fatma-aslan-tutak>



FATMA ASLAN-TUTAK

EDUCATION

- 01/05 - 12/09** **Ph.D. in Curriculum and Instruction-Mathematics Education (with Minor in Research Methods)**
University of Florida, School of Teaching and Learning, Gainesville, FL, USA.
Title of Doctoral Dissertation: A Study of Geometry Content Knowledge of Elementary Preservice Teachers: The Case of Quadrilaterals (Chair: Prof. Thomasenia L. Adams)
- 09/98 - 07/04** **Integrated BS&MS Program in Teaching Mathematics** (1st Rank, High Honor)
Bogazici University, Faculty of Education, Istanbul, Turkey
- 01/03 - 05/03** **Undergraduate Exchange Student**
State University of New York (SUNY) at Binghamton, College of Liberal Arts and Science, Mathematics Department, Binghamton, NY, USA

EXPERIENCES

- 08/19 - present** **Associate Professor**
Bogazici University, Istanbul, Turkey
- 09/16 - 04/21** **Associate Dean**
Faculty of Education, Bogazici University, Istanbul, Turkey
- 12/12 - 10/18** **Assistant Professor**
Bogazici University, Istanbul, Turkey
- 05/10 - 12/2012** **Instructor**
Bogazici University, Istanbul, Turkey
- 08/09 - 12/09** **Research Assistant**
University of Florida, Gainesville, FL, USA
Exploring African-American School Girls' Achievement in Science and Mathematics Education through Positionality
- 08/08 - 05/09** **Research Assistant**
University of Florida, Gainesville, FL, USA
Florida Fund for Minority Teachers (FFMT)
- 08/08 - 08/09** **Teaching Assistant**
University of Florida, Gainesville, FL, USA

- 08/06 – 08/07 **Teaching Assistant**
University of Florida, Gainesville, FL, USA
- 08/05 – 07/06 **Research Assistant**
University of Florida, Gainesville, FL, USA
Project TALL Math (Teachers as Learners Learning Mathematics)
- 09/04 – 12/04 **Research Assistant**
Bogazici University, Istanbul, Turkey
- 09/03 – 06/04 **Teacher**
Ekrem Batuk Dershanesi, Istanbul, Turkey

PROJECTS

- 2021- **Developing a Model for Area Specialized Effective Mentoring and Implementing Professional Development for Mentors / Etkili Alan Eğitimi Mentörlük Modeli Oluşturulması ve Mentörlük Mesleki Gelişim Programının Geliştirilerek Uygulanması (Project Manager), TÜBİTAK 1001.**
- 2020- **Effective Mentoring in Mathematics Teaching: Exploring Mathematics Preservice Teachers' and Their Mentor Teachers' Perceptions (Project Manager), Bogazici Research Fund, BU-BAP-15961**
- 2017-2019 **An E-Mentoring Model to Improve Novice Mathematics Teachers' Mathematical Knowledge for Teaching. (Turkish: Göreve Yeni Başlayan Öğretmenlerin Matematik Öğretme Bilgilerini Geliştirmeye Yönelik Bir Model Önerisi: E-Mentörlük Uygulaması), Researcher, Karadeniz Technical University Research Fund.**
- 2017-2018 **School and Classroom Based Assessment: Strengthening Teachers Capacity, Mathematics Education Expert, Researcher, UNICEF, Turkey**
- 2017-2018 **Children of Bosphorus Getting to Know City through Sea II (Nature and science summer school for gifted students), TUBİTAK, (Project: 117B083), Researcher.**
- 2016-2017 **Children of Bosphorus Getting to Know City through Sea (Nature and science summer school for gifted students), TUBİTAK (Project: 116B417), Researcher**
- 2012-2015 **FIRSTMATH, The First Five Years of Mathematics Teaching Turkish coordinator of the international comparative project on novice teachers**
- 2014-2016 **FIRSTMATH-Turkey (The First Five Years of Mathematics Teaching) (Project Manager), Bogazici Research Fund, BU-BAP-8624**

- 2014-2016 **Integrating ‘Science, Technology, Engineering, and Mathematics (STEM) Education’ in Pre-service Chemistry and Mathematics Teacher Education**, *Researcher*, Bogazici Research Fund, BU-BAP, 14D03P2
- 2011-2013 **An Investigation on Specialized Content Knowledge of Preservice Secondary School Mathematics Teachers**, *Project Manager*, Bogazici Research Fund BU-BAP, 11D03P3
- 2012-2012 **Baba Beni Okula Gönder: Kız Yurtlarında Gelişim Odaklı Yaşam Alanı Oluşturma.**
(A project on improving accommodation settings of school age girls , funded by a non-profit organization on supporting disadvantaged girls’ schooling), *Researcher*.

PUBLICATIONS

Peer-Reviewed International Journal Articles

- 2020 Ertaş, G*, and **Aslan-Tutak, F.** (2021). Mathematics teacher education in Turkey through the lens of international TEDS-M study. *REDIMAT –Journal of Research in Mathematics Education*,10(2), 152-174.
- 2017 Saraç, A.* & **Aslan-Tutak, F.** (2017) The Relationship of Teacher Efficacy, and Students' Trigonometry Self-Efficacy and Trigonometry Achievement. *International Journal for Mathematics Teaching and Learning*, 18(1), 66-83.
- 2016 Akaygün, S. & **Aslan-Tutak, F.** (2016) STEM Images Revealing STEM Conceptions of Pre-Service Chemistry and Mathematics Teachers. *International Journal of Education in Mathematics, Science and Technology*, 4(1), 56-71.
- 2015 **Aslan-Tutak, F.** & Adams, T.L. (2015) A Study of Geometry Content Knowledge of Elementary Preservice Teachers. *International Electronic Journal of Elementary Education*, 7(3), 301-318.
- 2015 Arici, S.* & **Aslan-Tutak, F.** (2015) The Effect of Origami-Based Geometry Instruction on Spatial Visualization, Geometry Achievement and Geometric Reasoning. *International Journal of Science and Mathematics Education*, 13(1), 179-200. 2011
- 2014 Browning, C. A., Edson, A. J., Kimani, P. M., **Aslan-Tutak, F.** (2014). Mathematical Content Knowledge for Teaching Elementary Mathematics: A Focus on Geometry and Measurement. *The Mathematics Enthusiast*, 11(2), 333-383.
- 2011 **Aslan-Tutak, F.** & Bondy, E. & Adams, T. L. (2011).Critical Pedagogy for Critical Mathematics Education. *International Journal of Mathematical Education in Science and Technology*, 42 (1), 65-74.
- 2008 Adams, T. L. & **Aslan-Tutak, F.** (2008). Venn diagram model for professional development for teachers of mathematics, *Southeastern Regional Association of Teacher Educators (SRATE) Journal*, 17(1), 19-24.

- 2005 Adams, T. L. & **Aslan-Tutak, F.** (2005). Serving up Sierpinski. *Mathematics Teaching in the Middle School*, 11(5): 248-253.

* Graduate Student

International Book Chapters

- 2020 Akaygun, S. & **Aslan-Tutak, F.** Collaboratively learning to teach STEM: A model for learning to integrate STEM education in preservice teacher education. In V. L. Akerson & G. A. Buck (Eds.), *Critical Questions in STEM Education* (pp 147-163). Switzerland: Springer.
- 2009 **Aslan-Tutak, F.** & Ekmekci, A. (2009). Being a Cross-Cultural Mentor: Challenges and Suggestions. In G. Zimmerman, P. Guinee, L. M. Fulmore, E. Murray (Eds.) *Empowering Mentor of the Preservice Mathematics Teacher*, (p. 56). Reston, VA: National Council of Teachers of Mathematics.
- 2009 **Aslan-Tutak, F.** & Ekmekci, A. (2009). Being a Cross-Cultural Mentor: Challenges and Suggestions. In G. Zimmerman, P. Guinee, L. M. Fulmore, E. Murray (Eds.) *Empowering Mentor of the Beginning Mathematics Teacher*, (p. 65). Reston, VA: National Council of Teachers of Mathematics.
- 2009 **Aslan-Tutak, F.** & Ekmekci, A. (2009). Being a Cross-Cultural Mentor: Challenges and Suggestions. In G. Zimmerman, P. Guinee, L. M. Fulmore, E. Murray (Eds.) *Empowering Mentor of the Experienced Mathematics Teachers*, (p. 67). Reston, VA: National Council of Teachers of Mathematics.

Peer-Reviewed National Journal Articles

- 2019 Küçükler, H., Akaygün, S., İmamoğlu, Y., **Aslan-Tutak, F.** & Özel, S. (2019). Deniz ve Kent Yaz Okulunun Özel Yetenekli Ortaokul Öğrencilerinin Deniz ve Kente Yönelik Tutum ve Algularına Etkisi. *Fen Bilimleri Öğretimi Dergisi*, 7(2) 189-223.
- 2018 Tosmur Beyazıt, N., Akaygun, S., Demir K. & **Aslan-Tutak, F.** (2018). Bir STEM Öğretmen Eğitimi Örneği: Yenebilir Arabalar Etkinliğinin Öğretmen Eğitimi Açısından İncelenmesi. *Fen Bilimleri Öğretimi Dergisi*, vol. 6, no. 2, pp. 213-232
- 2017 Ertaş, F.G.* & **Aslan-Tutak, F.** (2017). Matematik Öğretmen Adaylarının Öğretmek için Matematik Bilgilerinin (ÖMB) TEDS-M Maddeleri ile Karşılaştırılması. *İnönü Üniversitesi Eğitim Fakültesi Dergisi*, 18 (3), 86-102.
- 2017 **Aslan-Tutak, F.**, Akaygun, S., & Tezsezen, S.* (2017). İşbirlikli FeTeMM (Fen, Teknoloji, Mühendislik, Matematik) Eğitimi Uygulaması: Kimya ve Matematik Öğretmen Adaylarının FeTeMM

Farkındalıklarının İncelenmesi. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 32(4), 794-816.

- 2017 Karataş, F.I.* & **Aslan-Tutak, F.** (2017). Lise Matematik Öğretmenlerinin Teknolojik Pedagojik Alan Bilgileri Ve Teknolojiyi Bütünleştirme Öz-Yeterlilikleri. *Mustafa Kemal Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 14(37), 180-198.
- 2014 Kılıç,H., **Aslan-Tutak, F.** & Ertuş, F.G.* (2014). TIMSS Merceğiyle Ortaokul Matematik Öğretim Programındaki Değişiklikler. *Mersin Üniversitesi Eğitim Fakültesi Dergisi*, 10(2), 129-141.

National Book Chapters

- 2020 Dede, Y., Dogan, M.F. & **Aslan-Tutak, F.** (2020) Matematik Eğitiminde Etkinlikler ve Uygulamaları (Edited Book), Ankara: PEGEM Akademi
- 2020 Dede, Y., Dogan, M.F. & **Aslan-Tutak, F.** (2020) Matematik Eğitiminde Etkinliklere Genel Bakış. In Y. Dede, M. F. Doğan & F. Aslan-Tutak (Ed.s) *Matematik Eğitiminde Etkinlikler ve Uygulamaları*, Ankara: PEGEM Akademi
- 2020 **Aslan-Tutak, F.** (2020) Disiplinlerarası Matematik Eğitimi. In Y. Dede, M. F. Doğan & F. Aslan-Tutak (Ed.s) *Matematik Eğitiminde Etkinlikler ve Uygulamaları*, Ankara: PEGEM Akademi
- 2019 **Aslan-Tutak, F.**, Akaygun, S. (2019). Fen Bilimleri Eğitiminde Mühendislik Uygulamaları. D. Akgündüz (Ed.) *Fen ve Matematik Eğitiminde Teknolojik Yaklaşımlar* (551-564). Ankara: Anı Yayıncılık.
- 2017 Akaygün, S. & **Aslan Tutak, F.** (2017). FeTeMM (Fen, Teknoloji, Mühendislik, Matematik) Eğitimi Yaklaşımı. Mustafa Ergun (ed.) *Fen Bilimleri Öğretiminde Yeni Yaklaşımlar* (1-34), Nobel Akademik Yayıncılık (This book chapter introduces Integrated STEM education model for Turkish audience and address how to implement it)
- 2016 **Aslan-Tutak, F.** & Köklü, O. * (2016). Öğretmek İçin Matematik Bilgisi, İ. Ö. Zembat, E. Bingölbali, S. Arslan (Ed.) *Matematik Eğitiminde Teoriler*. PEGEM, Ankara. (This book chapter explains Mathematical Knowledge for Teaching, MKT, model for Turkish audience)
- 2013 **Aslan-Tutak, F.** (2013). Tarihi ve Uygulama Alanları ile Logaritma Fonksiyonu. İ. Ö. Zembat, M. F. Özmentar, E. Bingölbali, H. Şandır & A. Delice (Ed.) *Tanımları ve Tarihsel Gelişimleriyle Matematiksel Kavramlar* (400-414), PEGEM, Ankara. (This book is collection of chapters written for teachers to deepen their content knowledge. This chapter is about history and applications of Logarithm Function)

* Graduate Student

PRESENTATIONS**International**

- 07/21** Semercioglu-Kapcak, B* & **Aslan-Tutak, F.** (2021-online attendance). Mathematical Quality of Geometry Instruction of a Novice High School Teacher In Terms Of Richness Of Mathematics. *14th Conference of International Congress on Mathematics Education (ICME-14)*, Shanghai, China.
- 07/21** Pehlivan, Z* & **Aslan-Tutak, F.** (2021-online attendance). Investigation of Preservice Mathematics Teachers' Translations Among Multiple Representations. *14th Conference of International Congress on Mathematics Education (ICME-14)*, Shanghai, China.
- 07/21** Kaya,A* & **Aslan-Tutak, F.** (2021-online attendance). Teaching Functions Using RME Approach to Improve Students' Perceptions of Mathematics Learning and Learning of Functions. *14th Conference of International Congress on Mathematics Education (ICME-14)*, Shanghai, China.
- 07/21** Senger, E.* & **Aslan-Tutak, F.** (2021-online attendance). Instruction on Altitude Enriched with Sociomathematical Norms and Technology Integration (Poster Presentation). *14th Conference of International Congress on Mathematics Education (ICME-14)*, Shanghai, China.
- 04/21** Civan, B. S.* & **Aslan-Tutak, F.** (2021). Turkish Mathematics Mentor Teachers' Perceptions of Mentoring Practices in the Context of Teacher Certification Programs. *Annual Meeting of American Education Research Association (AERA)*, Virtual Meeting.
- 04/20** Civan, B. S.* & **Aslan-Tutak, F.** (2020). Turkish Mathematics Mentor Teachers' Exemplars of Effective Mentoring Practices. *13th annual International Conference of Education, Research and Innovation Online Conference*.
- 08/19** Durak, T.* & **Aslan-Tutak, F.** (2019). Comparison of gifted and mainstream 9th grade students' statistical reasoning types. *11th International Conference on Mathematical Creativity and Giftedness* , 22-24 August 2019, Hamburg, Germany .
- 02/19** Pehlivan Z.* & Aslan-Tutak, F. (2019). A Look into Turkish Preservice Teachers' Translation Skills: Case for Model Representations. *11th Congress of the European Society for Research in Mathematics Education (CERME 10)*, 6-10 February, 2019, Utrecht, Netherlands.
- 04/18** Pehlivan Z.* & **Aslan-Tutak, F.** (2018). Investigation on Preservice Mathematics Teachers' Translation Between Representations: From Graph to Model. *Annual Meeting of American Education Research Association (AERA)*, New York City, USA.

- 02/17 **Aslan-Tutak, F. & Durak, T.*** (2017). A Novice High School Teacher's Perception on The Effect of Content Course Taken as Preservice. *10th Congress of the European Society for Research in Mathematics Education (CERME 10)*, Dublin, Ireland.
- 07/16 **Aslan-Tutak, F. & Akaygun** (2016). Preservice mathematics teachers interdisciplinary work for STEM education. S. *13th Conference of International Congress on Mathematics Education (ICME-13)*, Hamburg, Germany.
- 07/16 Karataş, F.I* & **Aslan-Tutak, F.** (2016). Examining Turkish secondary mathematics teachers technological pedagogical content knowledge. *13th Conference of International Congress on Mathematics Education (ICME-13)*, Hamburg, Germany.
- 02/15 F. G. Ertaş * & **Aslan-Tutak, F.,** (2015). Secondary mathematics teacher candidates' pedagogical content knowledge and the challenges to measure. *9th Congress of the European Society for Research in Mathematics Education (CERME 9)*, Prague, Czech Republic.
- 02/15 F. İclal Karataş * & **Aslan-Tutak, F.,** (2015). An examination of secondary mathematics teachers' technological pedagogical content knowledge. *9th Congress of the European Society for Research in Mathematics Education (CERME 9)*, Prag, Czech Republic.
- 02/15 Köklü, O. * & **Aslan-Tutak, F.,** (2015). Responding to student ideas' as an indicator of a teacher's mathematical knowledge in teaching. *9th Congress of the European Society for Research in Mathematics Education (CERME 9)*, Prag, Czech Republic.
- 04/15 Köklü, O. * & **Aslan-Tutak, F.** (2015). Shifting Focus from What You Say to What You Hear. *Annual conference of National Council of Teachers of Mathematics (NCTM)*, Boston, USA.
- 05/15 **Aslan-Tutak, F. & Akaygun, S.** (2015). Preservice Chemistry and Mathematics Teachers' Interdisciplinary Work in STEM Education. *2nd International Conference On New Trends In Education. STEM Education: Establishing A Bridge Across Contexts*, İstanbul.
- 05/15 Akaygun, S., **Aslan-Tutak, F.** & Bayazit, N., Demir, K. & Kesner, J. E. (2015). STEM Education in a Nutshell: A Two-Day Workshop for Teachers and Their Students. *2nd International Conference On New Trends In Education. STEM Education: Establishing A Bridge Across Contexts*, İstanbul.
- 05/15 Tezsezen, S.* & **Aslan-Tutak, F.** (2015). Investigating Preservice Physics, Chemistry, and Mathematics Teachers Description of Science, Technology, Engineering and Mathematics in STEM Related Topics. *2nd International Conference On New Trends In Education. STEM Education: Establishing A Bridge Across Contexts*, İstanbul.

- 04/14 Karatas, F.I.* & **Aslan-Tutak, F.** (2014). Adaptation Of Technological Pedagogical Content Knowledge (TPACK) And Technology Integration Self-efficacy Scale (TISE) Into Turkish. *International Conference on Education in Mathematics, Science & Technology (ICESMT)*, Konya.
- 02/13 **Aslan-Tutak, F** & F. G. Ertas. * (2013). Practice to Enhance Preservice Secondary Teachers' Specialized Content Knowledge. B. Ubuz, C. Haser, M.A. Mariotti (Ed.) *8th Congress of the European Society for Research in Mathematics Education (CERME 8) Proceedings*, 2917-2926.
- 02/13 Sarac, A.* & **Aslan-Tutak, F.** (2013). Investigating Teachers' Trigonometry Teaching Efficacy. B. Ubuz, C. Haser, M.A. Mariotti (Ed.) *8th Congress of the European Society for Research in Mathematics Education (CERME 8) Proceedings*, 1419-1428.
- 02/13 Arici, S.*, **Aslan-Tutak, F.** (2013). Using Origami to Enhance Geometric Reasoning and Achivement. B. Ubuz, C. Haser, M.A. Mariotti (Ed.) *8th Congress of the European Society for Research in Mathematics Education (CERME 8) Proceedings*, 585-594.
- 07/12 **Aslan-Tutak, F.** (2012). Preservice Secondary School Mathematics Teachers' Specialized Content Knowledge of Complex Numbers. *12th conference of International Congress on Mathematics Education (ICME-12)*, Seoul, Korea.
- 07/12 Sarac, A.*, **Aslan-Tutak, F.** (2012). The relation of teacher efficacy to students' Trigonometry self-efficacy and trigonometry achievement. *12th conference of International Congress on Mathematics Education (ICME-12)*, Seoul, Korea.
- 07/12 Arici, S.*, **Aslan-Tutak, F.** (2012). Origami based geometry instruction on high school level: Its effect on spatial visualization, geometry achievement and geometric reasoning (Poster). *12th conference of International Congress on Mathematics Education (ICME-12)*, Seoul, Korea.
- 07/12 Ertas, G.*, **Aslan-Tutak, F.** (2012). The Preservice Teachers' Perception of Rationality and Irrationality (Poster). *12th conference of International Congress on Mathematics Education (ICME-12)*, Seoul, Korea.
- 10/11 Browning, C. A., Edson, A. J., Kimani, P. M., **Aslan-Tutak, F.** (2011). Geometry and Measurement Content Knowledge of Preservice K-8 Mathematics Teachers: A Synthesis of Research. *Annual Conference of Psychology of Mathematics Education-North America (PME-NA)*, Reno, USA.
- 07/11 **Aslan-Tutak, F.** (2011). Addressing Preservice Teachers' Needs of Geometry Content Knowledge: A Qualitative Study to Transform

Theory into Practice. *Annual Conference of Psychology of Mathematics Education (PME-35)*, Ankara, Turkey.

- 02/11** **Aslan-Tutak, F.** (2011). Preservice Elementary Teachers' Geometry Content Knowledge in Methods Course. *7th Congress of the European Society for Research in Mathematics Education (CERME)*, Rzeszow, Poland.
- 11/10** **Aslan-Tutak, F.** (2010). Mixed Research on Preservice Elementary Teachers' Geometry Content Knowledge. *International Conference on New Trends in Education and Their Implications (ICONTE)*, Antalya, Turkey.
- 09/09** **Aslan-Tutak, F.** (2009). Analysis of Geometry Learning Stories of Elementary School Preservice Teachers. *Annual Conference of Psychology of Mathematics Education-North America (PME-NA)*, Atlanta, USA.
- 02/09** **Aslan-Tutak, F.** (2009). What is your story? Geometry Learning Stories of Preservice Elementary School Teachers. *Annual Conference of Association of Mathematics Teacher Educators (AMTE)*, Orlando, USA.
- 02/09** Adams, T. L., **Aslan-Tutak, F.**, Peterek, E. & LaFramenta, J. (2009). Qualitative Research Methods in Mathematics Education. *Annual Conference of Association of Mathematics Teacher Educators (AMTE)*, Orlando, USA.
- 11/06** **Aslan-Tutak, F.**, Adams, T. (2006). Pre-service Teachers' Perceptions of the Achievement Gap: Implications for Mathematics Teacher Education (Poster). *Closing the Achievement Gap Through Partnerships University of Florida College of Education Centennial Conference*, St. Petersburg, USA
- 11/06** Adams, T., **Aslan-Tutak**, LaFramenta, J & Peterek, E. (2006). Teachers of Mathematics on the Frontline. *Closing the Achievement Gap Through Partnerships University of Florida College of Education Centennial Conference*, St. Petersburg, USA.
- 01/06** **Aslan-Tutak, F.** & Adams, T. L. (2006). Project EMERGE: Establishing a Mathematics Education Research Group Endeavor (Poster). *Annual Conference of Association of Mathematics Teacher Educators (AMTE)*, 2006, Tampa, USA.

National Presentations (Turkey)

- 05/19** Arıcı, S.* & Aslan-Tutak, F. (2019). The Effect Of Origami-Based Geometry Education On Spatial Visualization. *4. Uluslararası Türk Bilgisayar ve Matematik Eğitimi (BİLMAT-4) Sempozyumu*, 26-28 Eylül 2019, İzmir, Türkiye.
- 05/19** Pehlivan, Z.* & Aslan-Tutak, F. (2019). A Study On Preservice Teachers' Evaluation Of Functions In Graphical Representation. *4.*

Uluslararası Türk Bilgisayar ve Matematik Eğitimi (BİLMAT-4) Sempozyumu, 26-28 Eylül 2019, İzmir, Türkiye.

- 05/19 Senger, E.* & Aslan-Tutak, F. (2019). The Effect Of Sociomathematical Norms And Technology Integrated Instruction To Eliminate The Misconception Of The "disregard Of The Length" For The Concept of Altitude. 4. *Uluslararası Türk Bilgisayar ve Matematik Eğitimi (BİLMAT-4) Sempozyumu, 26-28 Eylül 2019, İzmir, Türkiye.*
- 05/17 Kaya, A.* & **Aslan-Tutak, F.** (2017). Bir Eylem Araştırması: Fonksiyon Öğretiminde Gerçekçi Matematik Eğitimi. *Üçüncü Türk Bilgisayar ve Matematik Eğitimi Sempozyumu (BİLMAT), Afyon, Türkiye.*
- 05/17 Tezsezen, S. *, **Aslan-Tutak, F.** (2017). Matematik Öğretmen Adaylarının FeTeMM'e İlişkin Günlük Hayat Örneğinde FeTeMM Alanlarına İlişkin Algıları. *Üçüncü Türk Bilgisayar ve Matematik Eğitimi Sempozyumu (BİLMAT), Afyon, Türkiye.*
- 05/15 **Aslan-Tutak, F.,** Akaygun, S. (2015). Kimya ve Ortaöğretim Matematik Öğretmen Adaylarının FeTeMM'deki Matematik Üzerine Algıları. *İkinci Türk Bilgisayar ve Matematik Eğitimi Sempozyumu (BİLMAT), Adıyaman, Türkiye.*
- 05/15 Tezsezen, S. *, **Aslan-Tutak, F.** (2015). Matematik ve Kimya Öğretmen Adaylarının Fetemm Alanlarına İlişkin Tutumları ve Mühendislik, Tasarım, Teknoloji (MTT) Alanlarına İlişkin Algıları. *İkinci Türk Bilgisayar ve Matematik Eğitimi Sempozyumu (BİLMAT), Adıyaman.*
- 05/15 Ertas, F. G. *, **Aslan-Tutak, F.** (2015). İlköğretim Matematik Öğretmen Adaylarının Öğretme İçin Matematiksel Bilgilerinin Uluslararası TEDS-M Çalışması Kapsamında Değerlendirilmesi. *İkinci Türk Bilgisayar ve Matematik Eğitimi Sempozyumu (BİLMAT), 2015, Adıyaman.*
- 05/15 Akaygün,S., Akcan, S., **Aslan-Tutak, F.,** Mercan F. (2015). 21. Yüzyıl Öğrenme Ortamlarını Oluşturan Öğretmenler. *Türkiye Özel Okullar Birliği Derneği, 14. Geleneksel Eğitim Sempozyumu "Geleceğin Öğretmeni", Antalya.*
- 09/14 Ertaş, F. G. * , **Aslan-Tutak, F.** (2014). Son Sınıf Matematik Öğretmenliği ve Matematik Bölümü Öğrencilerinin TEDS-M Testinden Aldıkları Puanlara Göre Öğretme İçin Matematiksel Bilgilerinin Karşılaştırılması. *Onbirinci Ulusal Fen Bilimleri ve Matematik Eğitimi Kongresi (UFBMEK), Adana.*
- 06/13 **Aslan-Tutak, F.** (2013). Matematik Öğretme Bilgisi Ölçekleri Çalıştayı. *Birinci Türk Bilgisayar ve Matematik Eğitimi Sempozyumu (BİLMAT), Trabzon.*

- 06/13 **Aslan-Tutak, F.**, Kılıç, H., Ertaş, F. G. * (2013). Öğretmenlerin Matematik Öğretme Bilgisi Üzerine Uluslar Arası Bir Çalışma: FIRSTMATH. *Birinci Türk Bilgisayar ve Matematik Eğitimi Sempozyumu (BİLMAT)*, Trabzon.
- 06/13 Ertaş, F. G.* , **Aslan-Tutak, F.** (2013). TEDS-M Öğretmenlerin Matematik Alan ve Matematik Öğretme Bilgisi Ölçeğinin Türkçeleştirilmesi ve Değerlendirilmesi. *Birinci Türk Bilgisayar ve Matematik Eğitimi Sempozyumu (BİLMAT)*, Trabzon.
- 06/13 Köklü, O. * , **Aslan-Tutak, F.** (2013). Tahmin Edilemeyen Alan İçerikli Ders Durumları Karşısında Matematiği Öğretme Bilgisi. *Birinci Türk Bilgisayar ve Matematik Eğitimi Sempozyumu (BİLMAT)*, Trabzon.
- 09/12 **Aslan-Tutak, F.** (2012). Matematik Tarihinin Logaritma Fonksiyonunun Anlatılmasında Kullanılması. *11. Matematik Sempozyumu of Matematikçiler Derneği (MAT-DER)*, Samsun
- 09/12 **Aslan-Tutak, F.** (2012). Lise Öğretmen Adaylarının Karmaşık Sayılar Konusunda Uzmanlaşmış Alan Bilgisi. *11. Matematik Sempozyumu of Matematikçiler Derneği (MAT-DER)*, Samsun
- 09/12 Arııcı, S.* , **Aslan-Tutak, F.** (2012). Origami Odaklı Geometri Öğretiminin Uzamsal Görselleştirme ve Geometri Başarısı Üzerine Etkisi. *11. Matematik Sempozyumu of Matematikçiler Derneği (MAT-DER)*, Samsun
- 09/12 Saraç, A.* , **Aslan-Tutak, F.** (2012). Öğretmen Trigonometri Öz-yeterliliği ile Öğrenci Trigonometri Öz-yeterliliği ve Trigonometri Başarısı. *11. Matematik Sempozyumu of Matematikçiler Derneği (MAT-DER)*, Samsun
- 07/11 **Aslan-Tutak, F.** (2011). Öğretmen Adaylarının Geometrik Kavram Yanılgıları: Simetri ve Eşlik. *1. Matematik Öğretimine Çağdaş Yaklaşımlar Sempozyumu*, Denizli.
- State Presentations (FL, USA)**
- 09/07 Adams, T. L. & **Aslan-Tutak, F.** (2007). Teachers of Mathematics: Impacting Knowledge, Supporting Growth. *Annual conference of Florida Association of Teacher Educators (FATE)*, Orlando, USA.
- 10/06 **Aslan-Tutak, F.** (2006). Open-Ended Mathematics Problems to Enhance Student Learning. *Annual Conference of Florida Council of Teachers of Mathematics (FCTM)*, Orlando, USA.
- 10/06 Adams, T. L. & **Aslan-Tutak, F.** (2006). Making Math Theorems Accessible to Students. *Annual Conference of Florida Council of Teachers of Mathematics (FCTM)*, Orlando, USA.
- 09/06 Adams, T. L., **Aslan-Tutak, F.**, Peterek, E. & LaFramenta, J. (2006). A Study of Teachers (Re)Learning Mathematics. *Annual conference of Florida Association of Teacher Educators (FATE)*, Orlando, USA.

CITATIONS (as of September 2021)

Google Scholar:

Total Citations: 661

h-index: 10

OTHER PROFESSIONAL EXPERIENCES

- 2020-** Leader of CERME 12 (Twelveth Congress of European Research in Mathematics Education) *TWG 20 Mathematics Teachers Knowledge, Beliefs and Identity.*
- 2019-** Commission member of National Mathematics Curriculum Development Expert Team, *National Ministry of Education.*
- 2020** Invited panelist for *ERG Eğitim İzleme Raporu 2019'un Yansımaları*, Boğaziçi Üniversitesi, İstanbul, Turkey
- 2019** Invited panelist for Women and STEM, *Women and Science VI, Association for Turkish Women Math*, Balıkesir, Turkey
- 2019** Invited panelist for STEM Eğitimi, Adıyaman Üniversitesi, Adıyaman, Turkey
- 2018** Invited panelist for Kuram ve Uygulama Bütünlüğünde Matematik Eğitimi, *Bahçeşehir Üniversitesi 21. Yüzyılda Matematik Eğitimi Konferansı*, İstanbul, Türkiye.
- 2018** Invited Author for Journal Column, *Zorbalık Dedikleri, Boğaziçi Mezunlar Derneği Dergisi.*
- 2018-2020** Coleader of CERME 11 (Eleventh Congress of European Research in Mathematics Education) *TWG 20 Mathematics Teachers Knowledge, Beliefs and Identity.*
- 2018** Professional development team for STEM Education, Akaygün, S., **Aslan-Tutak, F.**, Kartal, G. BILFEN Private High School Schools, İstanbul, Turkey.
- 2018** Member of the *Committee of Developing Mathematics Activities for Turkish Science Centers*, TÜBİTAK.
- 2016-2018** Coleader of CERME 10 (Tenth Congress of European Research in Mathematics Education) *TWG 20 Mathematics Teachers Knowledge, Beliefs and Identity.*
- 2017** Professional Development on Mathematical Modelling in High School, Uğur Okulları İstanbul, Turkey
- 2017** Professional Development on Assessment in Elementary School, Hisar Education Foundation Schools, İstanbul, Turkey

- 2016 Professional development for STEM education: Two-day Workshops with High school teachers and students, Akaygün, S., **Aslan-Tutak, F.**, Bogazici University, Istanbul, Turkey
- 2014-2016 Coleader of CERME 9 (Nineth Congress of European Research in Mathematics Education) *TWG 20 Mathematics Teachers Knowledge, Beliefs and Identity*.
- 2012-2015 Member of the Committee of Elementary (Grades 1-4) Mathematics Curriculum Development, TUBİTAK.
- 2015 Member of professional development team for STEM education: Two-day Workshops with High school teachers and students, Akaygün, S., **Aslan-Tutak, F.**, Bogazici University, Istanbul, Turkey
- 2014 Professional Development on Assessment in Class, Uğur Koleji Istanbul, Turkey
- 2014 Member of professional development team for STEM education, Akaygün, S., **Aslan-Tutak, F.**, & Mercan, F., FMV Nişantaşı Işık Foundation Schools, Istanbul, Turkey

THESIS SUPERVISED

- 02/21 **Hatice Gamze Inan:** *Exploring Critical Mathematics Awareness of Undergraduate Voluntaries Teaching Mathematics*. Thesis for Master of Science, Mathematics and Science Education, Institute of Graduate Studies in Science and Engineering, Bogazici University.
- 09/20 **Berna Sena Civan:** *Examining Mathematics Mentor Teachers' Practices in The Context of Pre-Service Mathematics Teacher Education*. Thesis for Master of Science, Mathematics and Science Education, Institute of Graduate Studies in Science and Engineering, Bogazici University.
- 10/18 **Büşra Sümeyye Kurutaş:** *Exploration of effective professional development characteristics from the perspective of Integrated Teaching Project's coordinator, facilitator, and participants*. Thesis for Master of Science, Secondary School Science and Mathematics Education, Institute for Graduate Studies in Sciences and Engineering, Bogazici University. (Co-advisor)
- 08/19 **Merve Özcan:** *Assessment conceptions of Turkish mathematics teachers of international middle years programme (MYP)*. Thesis for Master of Science, Secondary School Science and Mathematics Education, Institute of Graduate Studies in Science and Engineering, Bogazici University.
- 05/19 **Buket Semercioğlu Kapçak:** *Mathematical quality of geometry instruction of a novice high school teacher*. Thesis for Master of Science, Secondary School Science and Mathematics Education, Institute of Graduate Studies in Science and Engineering, Bogazici University.
- 03/19 **Ezgi Senger:** *The effect of sociomathematical norms and technology integrated instruction on 6th grade students' understanding of*

- altitude*. Thesis for Master of Science, Secondary School Science and Mathematics Education, Institute of Graduate Studies in Science and Engineering, Bogazici University.
- 10/18 **Sena Simay Tün:** *An investigation of mathematics preservice teachers' noticing skills*. Thesis for Master of Science, Secondary School Science and Mathematics Education, Institute for Graduate Studies in Sciences and Engineering, Bogazici University. (Co-advisor)
- 04/18 **Ayşe Kaya:** *Teaching functions to 9th grade students using realistic mathematics education approach: An action research*. Thesis for Master of Science, Secondary School Science and Mathematics Education, Institute for Graduate Studies in Sciences and Engineering, Bogazici University.
- 05/18 **Zeynep Pehlivan:** *Investigation of Preservice Mathematics Teachers' Algebraic Thinking Through Translations Among Multiple Representations*. Thesis for Master of Science, Secondary School Science and Mathematics Education, Institute for Graduate Studies in Sciences and Engineering, Bogazici University.
- 06/18 **Büşra Türker:** *Determinants of High Achieving Students' Career Choices in STEM Fields*. Thesis for Master of Science, Secondary School Science and Mathematics Education, Institute for Graduate Studies in Sciences and Engineering, Bogazici University.
- 12/16 **Seçil Tezsezen:** *An Investigation of Preservice Teachers' STEM Awareness Through Definitions And Relationships of STEM Areas*. Thesis for Master of Science, Secondary School Science and Mathematics Education, Institute for Graduate Studies in Sciences and Engineering, Bogazici University.
- 08/14 **F. İclal Karataş:** *An Examination of In-Service Secondary Mathematics Teachers' Technological Pedagogical Content Knowledge and Their Technology Integration Self-Efficacy*. Thesis for Master of Science, Secondary School Science and Mathematics Education, Institute for Graduate Studies in Sciences and Engineering, Bogazici University.
- 08/14 **Şeyma Akkurt Ünal :** *Work Personality Types and Pre-Service Mathematics Teachers' Reasons for Choosing Mathematics Teaching*. Thesis for Master of Science, Secondary School Science and Mathematics Education, Institute for Graduate Studies in Sciences and Engineering, Bogazici University.
- 06/14 **F. Güneş Ertaş:** *A Way to Compare Mathematics Teacher Candidates' Mathematical Knowledge for Teaching: TEDS-M Released Tests*. Thesis for Master of Science, Secondary School Science and Mathematics Education, Institute for Graduate Studies in Sciences and Engineering, Bogazici University.
- 12/12 **Oğuz Köklü:** *Teachers' Content Knowledge in Teaching Slope of A Line*. Thesis for Master of Science, Secondary School Science and Mathematics Education, Institute for Graduate Studies in Sciences and Engineering, Bogazici University.
- 01/12 **Sevil Arıcı:** *The Effect of Origami-Based Instruction on Spatial Visualization, Geometry Achievement and Geometric Reasoning of Tenth Grade Students*. Thesis for Master of Science, Secondary School Science and Mathematics Education, Institute for Graduate Studies in Sciences and Engineering, Bogazici University.

01/12

Ayşe Saraç: *The Relation of Teacher Efficacy to Students' Trigonometry Self-Efficacy and Trigonometry Achievement.* Thesis for Master of Science, Secondary School Science and Mathematics Education, Institute for Graduate Studies in Sciences and Engineering, Bogazici University.

COURSES OFFERED

Bogazici University, Istanbul, Turkey (2010 –present)

Undergraduate:

- Sced 103: Orientation to Science and Mathematics Eductaion
- Sced 120: Academic Orientation to Mathematics and Science Education
- Sced 340: Science Technology and Society
- Sced 370: Assessment and Evaluation of Learning in Science and Mathematics
- Sced 404: Research Methods in Science and Mathematics Education
- Sced 420: Teaching Methods in Science and Mathematics
- Sced 450: School Experience in Science and Mathematics Education
- Sced 432: Practice Teaching in Mathematics
- Sced 48C: Special Topics: Selected Geometry Topics for Teaching**
- Sced 48F/SCED 352: Special Topics: Teaching Secondary School Mathematics**
- Sced 431: Teaching Methods in Mathematics
- Sced 416: Seminar on Practice Teaching in Mathematics

Graduate:

- Sced 571: Quantitative Methods in Experimental Research
- Sced 570: Research in Science Education
- Sced 58F: Special Topics: Research in Science and Mathematics Teacher Education**
- Sced 652: Research in Science and Mathematics Teacher Education**
- Sced 653: Mathematics Teacher Learning**

** Courses developed

University of Florida, Florida, USA (2006-2009)

Undergraduate:

- MAE 4310: Teaching Mathematics in the Inclusive Elementary Classroom
- CLAST-Math: Remediation Mathematics Course for College Level Academic Skills Test (CLAST)

AWARDS/ SCHOLARSHIP

- 2016, 2015, 2014,2013 Academic Incentive Award,**
Bogazici University Foundation (BUVAK)
- 2004-2009 Higher Education Institute (Yüksek Öğretim Kurulu) Doctoral Scholarship**
- 2007 Outstanding International Student Award,**
University of Florida, FL, USA.
- 2006 Elizabeth and William F. Leonard Scholarship**
College of Education, University of Florida, FL, USA.

- 2004 High Honor Degree for Graduation**
Bogazici University, Istanbul, Turkey.
- 2004 1st Rank in Graduation for Secondary School Science and Mathematics Education Department (Chemistry, Physics and Mathematics Teaching Programs)**
Bogazici University, Istanbul, Turkey.
- 2001-2002 Prof. Dr. Hikmet Sebüktekin Scholarship (Faculty of Education, Dean's Scholarship)**
Bogazici University, Istanbul, Turkey.
- 1998-2000 Achievement Scholarship**
Boğaziçi University, Istanbul, Turkey
Entered Bogazici University Integrated BS&MS Program in Teaching Mathematics as the third ranking student and awarded with scholarship, Istanbul, Turkey.