

ADEM EKMEKCI

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EDUCATION

- 2013 **Ph.D.** in Mathematics Education, The University of Texas at Austin, Texas, USA
Dissertation Title: *Mathematical Literacy Assessment Design: A Dimensionality Analysis of Programme for International Student Assessment (PISA) Mathematics Framework*
Supervised by Dr. Guadalupe Carmona-Dominguez
- 2004 **Integrated B.S. & M.S.** (without thesis) in Secondary Mathematics Teaching,
Bogazici University, Istanbul, TURKEY

EMPLOYMENT HISTORY

- 2017- *Director of Research and Evaluation*
Rice University School Mathematics Project (RUSMP), Rice University, Houston, TX
- 2017- *Clinical Assistant Professor of Mathematics*
Wiess School of Natural Sciences, Rice University, Houston, TX
- 2016 Fall *Lecturer*
Department of Mathematics, Rice University, Houston, TX
- 2016-2017 *Assistant Director of Research and Evaluation*
Rice University School Mathematics Project (RUSMP), Rice University, Houston, TX
- 2013-2016 *Postdoctoral Research Associate*
Rice University School Mathematics Project (RUSMP), Rice University, Houston, TX
- 2009-2013 *Graduate Research Assistant*
The UTeach Institute, College of Natural Sciences, The University of Texas at Austin
- 2008-2010 *Assistant Instructor*
Department of Curriculum & Instruction, The University of Texas at Austin.
- 2008 Fall *Graduate Research Assistant*
Engineering Education Research Center (EERC), The University of Texas at Austin.
- 2007 Sum *Visiting Instructor*
Summer school, Department of Secondary Science and Mathematics Education,
Bogazici University, Istanbul, TURKEY.
- 2006-2008 *Graduate Teaching Assistant*
Department of Curriculum & Instruction, The University of Texas at Austin.
- 2003-2005 *Mathematics Teacher*
TED Istanbul College (K-12), Istanbul, TURKEY (Courses taught: Algebra,
Geometry, Analytical Geometry, and AP Calculus).

COURSES TAUGHT (*Co-Instructor)

7. MATH 112 (Calculus: Integration and Applications) – Rice University
6. MATH 111 (Calculus: Differentiation and Applications) – Rice University
5. MATH 102 (Single Variable Calculus II) – Rice University
4. *EDC365C (Knowing & Learning in Math and Science) – The University of Texas at Austin
3. EDC370E (Elementary Mathematics Methods) – The University of Texas at Austin
2. *EDC370E (Elementary Science Methods) – The University of Texas at Austin
1. SCED 408 (Textbook Analysis in Science and Math Education) – Bogazici University

PEER-REVIEWED PUBLICATIONS**JOURNALS**

- J13. Aqazade, M., **Ekmekci, A.**, & Papakonstantinou, A. (*submitted*). Developing mathematics teachers into leaders for high-need urban schools. *Journal of Mathematics Education Leadership*.
- J12. **Ekmekci, A.**, & Serrano, D. M. (2022). The impact of teacher quality on student motivation, achievement, and persistence in science and mathematics. *Education Sciences*, 12(10), 1–21. DOI: [10.3390/educsci12100649](https://doi.org/10.3390/educsci12100649)
- J11. White, C., Papakonstantinou, A., **Ekmekci, A.**, & Ward, R. (2021). Lessons learned in 2020 as mathematics professional development for teachers transitioned to remote learning. *Academia Letters* (Article 3614), 1–7. DOI: [10.20935/AL3614](https://doi.org/10.20935/AL3614)
- J10. Serrano Corkin, D., **Ekmekci, A.**, & Fisher, A. (2020). Weaving culture, art, and mathematics to enhance computer science motivation among underrepresented minority students: An intervention. *The Urban Review: Issues and Ideas in Public Education*, 52, 950–969. DOI: [10.1007/s11256-020-00586-8](https://doi.org/10.1007/s11256-020-00586-8)
- J9. **Ekmekci, A.**, Corkin, D., & Fan, W. (2019). A multilevel analysis of the impact of teachers' beliefs and mathematical knowledge for teaching on students' mathematics achievement. *Australian Journal of Teacher Education*, 44(12), 57–80. DOI: [10.14221/ajte.2019v44n12.4](https://doi.org/10.14221/ajte.2019v44n12.4)
- J8. Serrano Corkin, D., Coleman, S., & **Ekmekci, A.** (2019). Navigating the challenges of student-centered mathematics teaching in an urban context. *The Urban Review: Issues and Ideas in Public Education*, 51(3), 370–403. DOI: [10.1007/s11256-018-0485-6](https://doi.org/10.1007/s11256-018-0485-6)
- J7. Corkin, D., **Ekmekci, A.**, & Parr, R. (2018). The effects of the school-work environment on mathematics teachers' motivation for teaching: A self-determination theoretical perspective. *Australian Journal of Teacher Education*, 43(6), 50–66. DOI: [10.14221/ajte.2018v43n6.4](https://doi.org/10.14221/ajte.2018v43n6.4)
- J6. **Ekmekci, A.**, Sahin, A., Gulacar, O., & Almus, K. (2018). High school students' semantic networks of scientific method in an international science Olympiad context. *Eurasia Journal of Mathematics, Science & Technology Education*, 1–20. DOI: [10.29333/ejmste/93677](https://doi.org/10.29333/ejmste/93677)
- J5. Sahin, A., **Ekmekci, A.**, & Waxman, H. (2017). Characteristics of students who majored in STEM fields. *International Journal of Science Education*, 39(11), 1549–1572. DOI: [10.1080/09500693.2017.1341067](https://doi.org/10.1080/09500693.2017.1341067)
- J4. Sahin, A., **Ekmekci, A.**, & Waxman, H. (2017). Collective effects of individual, behavioral, and contextual factors on high school students' future STEM career plans. *International Journal of Science and Mathematics Education*, 1–21. DOI: [10.1007/s10763-017-9847-x](https://doi.org/10.1007/s10763-017-9847-x)

- J3. Corkin, D., **Ekmekci, A.**, & Papakonstantinou, A. (2015). Antecedents of teachers' educational beliefs about mathematics and mathematical knowledge for teaching among in-service teachers in high poverty urban schools. *Australian Journal of Teacher Education*, 40(9), 31-62. DOI: [10.14221/ajte.2015v40n9.3](https://doi.org/10.14221/ajte.2015v40n9.3)
- J2. **Ekmekci, A.**, & Gulacar, O. (2015). A case study for comparing the effectiveness of a computer simulation and a hands-on activity on learning electric circuits. *Eurasia Journal of Mathematics, Science & Technology Education*, 11(4), 765-775.
- J1. **Ekmekci, A.** (2013). Models and modeling in mathematics education: Making learners' mathematical thinking, knowledge and skills visible. *Mediterranean Journal for Research in Mathematics Education*, 12(1-2), 57-76.

BOOK CHAPTERS & SECTIONS

- B3. **Ekmekci, A.**, Papakonstantinou, A., Parr, R., & Shah, M. (2019). Knowledge, beliefs, and perceptions about the mathematics and mathematics teaching: How do they relate to teachers' technological pedagogical content knowledge? In M. L. Niess, H. Gillow-Wiles, & C. Angeli (Eds.), *Handbook of research on TPACK in the digital age*, (pp. 1–23). Hershey, PA: IGI Global. DOI: [10.4018/978-1-5225-7001-1](https://doi.org/10.4018/978-1-5225-7001-1)
- B2. **Ekmekci, A.**, Sahin, A., & Waxman, H. (2019). Factors affecting students' STEM choice and persistence: A synthesis of research and findings from the second year of a longitudinal high school STEM tracking study. In A. Sahin & M. Mohr-Schroeder (Eds.), *STEM Education 2.0: Myths and Truths: What has years of K-12 STEM education research taught us?* (pp. 279–304). The Netherlands: Brill.
- B1. Aslan-Tutak, F., & **Ekmekci, A.** (2009). Challenges and suggestions for cross-cultural mentors. In Zimmermann, G (Ed.), *Empowering the Mentor of the Mathematics Teacher - Book Series* (pp. 67-68). Reston, VA: National Council of Teachers of Mathematics.

CONFERENCE PROCEEDINGS

- C17. **Ekmekci, A.**, Aqazade, M., Callard, C., Gibson, D., Rushton, G., & McGraw, R. (accepted). The role of self-efficacy, leadership, school-work environment, diversity beliefs, and social network in teacher retention. *Proceedings of the 44th Conference of the North American Chapter of the Psychology of Mathematics Education*. Philadelphia, PA: PME.
- C16. Aqazade, M., **Ekmekci, A.**, & Papakonstantinou, A. (accepted). Master teaching fellows' perceptions of teacher leadership. *Proceedings of the 44th Conference of the North American Chapter of the Psychology of Mathematics Education*. Philadelphia, PA: PME.
- C15. **Ekmekci, A.**, Aqazade, M., Papakonstantinou, A., Orcan-Ekmekci, B., Catanese, J., Callard, C., Cerosaletti, C., Daley, M., Rushton, G., Reid, J., Gibson, D., Renzaglia, K., McGraw, R., Sheppard, P., Head, M., Harel, G. & Soto, O. (2022). The associations of social and motivational factors to science and mathematics teacher retention. In E. Langran (Ed.), *Proceedings of 2022 Society for Information Technology & Teacher Education International Conference* (pp. 914–920). San Diego, CA: Association for the Advancement of Computing in Education. Available at <https://learntechlib.org/pv/220830/>
- C14. **Ekmekci, A.**, Papakonstantinou, A., Varner, P. & Aqazade, M. (2022). Teachers' use of educational technology and Web Adventures: innovative interactive digital media for

- learning science. In E. Langran (Ed.), *Proceedings of 2022 Society for Information Technology & Teacher Education International Conference* (pp. 502–507). San Diego, CA: Association for the Advancement of Computing in Education. Available at <https://learntechlib.org/pv/220769/>
- C13. **Ekmekci, A.**, & Papakonstantinou, A. (2020). Being research-based and research-minded in helping K-12 mathematics education. In B. Acu, D. Danielli, M. Lewicka, A. Pati, S. RV, & M. Teboh-Ewungkem (Eds.), *Advances in Mathematical Sciences, Association for Women in Mathematics Series, 21*, 351–360. Springer. DOI: [10.1007/978-3-030-42687-3_23](https://doi.org/10.1007/978-3-030-42687-3_23)
- C12. Papakonstantinou, A., & **Ekmekci, A.** (2020). The Rice University School Mathematics Project: Supporting excellence in K-16 mathematics since 1987. In B. Acu, D. Danielli, M. Lewicka, A. Pati, S. RV, & M. Teboh-Ewungkem (Eds.), *Advances in Mathematical Sciences, Association for Women in Mathematics Series, 21*, 361–369. Springer. DOI: [10.1007/978-3-030-42687-3_24](https://doi.org/10.1007/978-3-030-42687-3_24)
- C11. Corkin, D., & **Ekmekci, A.** (2019). The impact of mathematics teachers on student learning and motivation. In A. Redmond-Sanogo & J. Cribbs (Eds.), *Proceedings of the 46th Annual Meeting of the Research Council on Mathematics Learning*, (pp. 34–41). Charlotte, NC: Research Council on Mathematics Learning.
- C10. **Ekmekci, A.**, & Corkin, D. (2019). The influence of science teachers on high school students' science motivation: An analysis using a nationally representative large-scale data set. In K. Graziano (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference (ISBN 978-1-939797-37-7)*, (pp. 2267-2272). Las Vegas, NV: Association for the Advancement of Computing in Education. Available at <https://www.learntechlib.org/primary/p/207964/>
- C9. **Ekmekci, A.**, Parr, R., & Fisher, A. (2018). Results from a computer science teaching collaborative: Serving teachers with different needs through variety of pathways. In E. Langran & J. Borup (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference (ISBN 978-1-939797-32-2)*, (pp. 2025-2030). Washington, DC: Association for the Advancement of Computing in Education. Available at <https://www.learntechlib.org/primary/p/182806/>
- C8. Corkin, D., **Ekmekci, A.**, & Coleman, S. L. (2017). Barriers to implementation of constructivist teaching in a high-poverty urban school district. In T. A. Olson & L. Venenciano (Eds.), *Proceedings of the 44th Annual Meeting of the Research Council on Mathematics Learning*, (pp. 57–64). Fort Worth, TX.
- C7. Corkin, D., **Ekmekci, A.**, White, C., & Fisher, A. (2016). Teachers' self-efficacy and knowledge for the integration of technology in mathematics instruction at urban schools. In K. V. Adolphson & T. M. Olson (Eds.), *Proceedings of the 43rd Annual Meeting of the Research Council on Mathematics Learning*, (pp. 101-108). Orlando, FL.
- C6. **Ekmekci, A.**, Corkin, D., & Papakonstantinou, A. (2015). The collective effects of teachers' educational beliefs and mathematical knowledge on students' mathematics achievement. In T. G. Bartell, K. N. Bieda, R. T. Putnam, K. Bradfield, & H. Dominguez, (Eds.), *Proceedings of the 37th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, (pp. 884-887). East Lansing, MI: Michigan State University.

- C5. **Ekmekci, A.**, Corkin, D., & Papakonstantinou, A. (2015). The relationship between teacher related factors and mathematics teachers' educational beliefs about mathematics. In S. M. Che, & K. A. Adolphson (Eds.), *Proceedings of the 42nd Annual Meeting of the Research Council on Mathematics Learning*, (pp. 140-148). Las Vegas, NV.
- C4. **Ekmekci, A.**, & Carmona, G. (2014). Studying mathematical literacy through the lens of PISA's assessment framework. In C. Nicol, P. Liljedahl, S. Oesterle, & D. Allan (Eds.), *Proceedings of the 38th Conference of the International Group for the Psychology of Mathematics Education (PME) and the 36th Conference of the North American Chapter of the PME - Vol. 2* (pp. 441-448). Vancouver, Canada: PME.
- C3. Papakonstantinou, A., **Ekmekci, A.**, & Parr, R., (2014). Mathematics teacher leadership: A sustainable approach to improve mathematics education. In S. Oesterle, C. Nicol, P. Liljedahl, & D. Allan (Eds.), *Proceedings of the 38th Conference of the International Group for the Psychology of Mathematics Education (PME) and the 36th Conference of the North American Chapter of the PME - Vol. 6* (p. 379). Vancouver, Canada: PME.
- C2. **Ekmekci, A.**, & Carmona, G. (2012). Mathematical literacy assessment design: A multivariate analysis of PISA 2003 mathematics items in the U.S. In L. R. Van Zoest, J.-J. Lo, & J. L. Kratky (Eds.), *Proceedings of the 34th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education*, (p. 390). Kalamazoo, MI: Western Michigan University.
- C1. **Ekmekci, A.**, & Dominguez, A. (2007) College Level Students' Reasoning of an Optimization Problem: Historic Hotel MEA (Model-Eliciting Activity). In T. Lamberg, & L. R. Wiest (Eds.), *Proceedings of the 29th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 133-134). Stateline (Lake Tahoe), NV: University of Nevada, Reno.

PAPERS IN PREPARATION

AWARDED GRANTS

9. **National Science Foundation**, Robert Noyce Scholarship Grant #2230997, **\$4,235,810**, 2022-2025. Rebar, B., Husman, J., Salomone, S., **Ekmekci, A.**, & Ross, D. *Western Regional Noyce Network*. University of Oregon, University of Portland, Rice University, & San Diego State University.
8. **National Science Foundation**, [ITEST-EAGER Grant #2041426](#), **\$299,997**, 2020-2022. **Ekmekci, A.**, Papakonstantinou, A., & Varner, P. *EAGER: Web Adventures Interactive: Innovative Online Activities as Effective Tools for Broadening Participation in Science*. Rice University School Mathematics Project.
7. **National Science Foundation**, [Noyce Track 4 Grant #1950019](#), **\$710,277**, 2020-2023. **Ekmekci, A.**, & Papakonstantinou, A., Orcan-Ekmekci, B. & Catanese, D. J. *Collaborative Research: Exploring the Impact of Noyce Master Teaching Fellowship Programs on Teacher Retention: The Role of Motivation, Leadership, and School-Work Environment*. Rice University (lead institution on this multi-institutional grant with a total budget of **\$1,389,537**).
6. **Longaker Foundation**, **\$40,000**, & **Taub Foundation**, **\$25,000**, 2019-2020.

- Ekmekci, A.** *Evaluation and Impact Study for the College of Health Care Professionals*. Rice University School Mathematics Project.
5. **Spencer Foundation**, [Grant # 201800021](#), \$34,805, 2017-2019.
Ekmekci, A., & Corkin, D. *The Nexus of Teacher Quality and Students' Social Cognitive Career Outcomes in Science, Technology, Engineering, and Mathematics (STEM)*. Rice University & University of Houston-Downtown.
 4. **The University of Texas at Austin**, [Grant #18-000333](#), \$29,992, 2018-2019.
Parr, R., & **Ekmekci, A.** *Rice University School Mathematics Project's Texas Teacher Externship Program*. Rice University School Mathematics Project.
 3. **The University of Texas at Austin**, [Grant #3204](#), \$117,932, 2017-2018.
Parr, R., **Ekmekci, A.**, & Troutman, S. *Rice University School Mathematics Project WeTeach_CS Collaborative*. Rice University School Mathematics Project.
 2. **The University of Texas at Austin**, [Grant #3065](#), \$99,987, 2016-2017.
Parr, R., Fisher A., & **Ekmekci, A.** *Rice University School Mathematics Project WeTeach_CS Collaborative*. Rice University School Mathematics Project.
 1. **National Science Foundation**, [Noyce Track 3 Grant #1556006](#), \$1,484,025, 2016-2021.
Papakonstantinou, A., Tapia, R. A., Radigan, J., & **Ekmekci, A.** *The Rice University Robert Noyce Master Teaching Fellowship Program (RU-MTF)*. Rice University School Mathematics Project, Glasscock School of Continuing Studies, & Department of Computational and Applied Mathematics.

GRANT PROPOSALS UNDER REVIEW

- National Science Foundation**, \$1.5 M. Noyce Track 3, 2022. Papakonstantinou, A., White, C., **Ekmekci, A.**, & Orcan-Ekmekci, B. *The Rice University/Spring ISD Robert Noyce Master Teaching Fellowship Program (RUSP)*. Rice University School Mathematics Project & Spring ISD.

GRANT PROPOSALS IN PREPARATION

CONFERENCE PAPERS

23. Aqazade, M., & **Ekmekci, A.** (*submitted*). Voices from the field: Teachers' perceptions of who teacher leaders are and what they do. *American Educational Research Association Annual Meeting*. Chicago, IL.
22. **Ekmekci, A.**, Aqazade, M., & McGraw, R. (*submitted*). Science and mathematics teacher retention: A collective analysis and comparison between Master Teachers and other teachers. *American Educational Research Association Annual Meeting*. Chicago, IL.
21. **Ekmekci, A.**, Boddie Wright, K., Keese, J., & Waxman, H. (*submitted*). The impact of professional development-focused STEM program on elementary student achievement: A randomized control trial. *American Educational Research Association Annual Meeting*. Chicago, IL.
20. Odemis, A., & **Ekmekci, A.** (*submitted*). Allied health care colleges: Mitigating higher education's failure to retain Hispanic students. *American Educational Research Association Annual Meeting*. Chicago, IL.

19. **Ekmekci, A.**, & Corkin D. (2019, April). *The role of high school students' motivation and course-taking on their STEM career plans*. Paper presented at the 2019 Annual Meeting of American Educational Research Association. Toronto, Canada.
18. **Ekmekci, A.**, & Sahin, A. (2019, April). *A longitudinal study on high school students' STEM college-major intentions: Results from the third year*. Paper presented at the 2019 Annual Meeting of American Educational Research Association. Toronto, Canada.
17. Sahin, A., & **Ekmekci, A.** (2019, April). *Developing a self-reported measure for high school students' 21st century skills*. Paper presented at the 2019 Annual Meeting of American Educational Research Association. Toronto, Canada.
16. Corkin, D., Coleman, S., & **Ekmekci, A.** (2018, April). *Self-regulatory teaching strategies and motivation among mathematics teachers working in high-poverty urban schools*. Paper presented at the 2018 Annual Meeting of American Educational Research Association. New York, NY.
15. **Ekmekci, A.**, & Sahin, A. (2018, April). *The development and validation of a 21st century skills instrument: Measuring secondary school students' skills*. Paper presented at the 2018 Annual Meeting of American Educational Research Association. New York, NY.
14. Sahin, A., **Ekmekci, A.**, & Waxman, H. (2018, April). *A longitudinal study of factors impacting high school students' STEM-majoring intentions*. Paper presented at the 2018 Annual Meeting of American Educational Research Association. New York, NY.
13. Sahin, A., **Ekmekci, A.**, & Waxman, H. (2018, March). *A social cognitive career lens onto 10th grade students' STEM college major plans*. Paper presented at the annual meeting of the National Association for Research in Science Teaching (NARST). Atlanta, GA.
12. Corkin, D., **Ekmekci, A.**, & Fisher, A. (2017, April). *The effects of a culturally relevant intervention on computer science motivation among underrepresented minority students in high school geometry*. Paper presented at the 2017 Annual Meeting of American Educational Research Association. San Antonio, TX.
11. Sahin, A., **Ekmekci, A.**, & Waxman, H. (2017, April). *Investigating high school students' individual, environment, and Pygmalion effects variables on college major selection*. Paper presented at the 2017 Annual Meeting of American Educational Research Association. San Antonio, TX.
10. Corkin, D., **Ekmekci, A.**, & Papakonstantinou, A. (2016, April). *Mathematics teachers' motivational beliefs: The effects of the school-work environment*. Paper presented at the 2016 Annual Meeting of American Educational Research Association. Washington, DC.
9. **Ekmekci, A.**, & Cavlazoglu, B. (2016, April). *Student persistence in science: Do science teacher credentials matter?* Paper presented at the 2016 Annual International Conference for National Association of Research in Science Teaching. Baltimore, MD.
8. Sahin, A., **Ekmekci, A.**, Almus, K., & Gulacar, O. (2016, April). *High school students' understanding of the scientific method: Does participation in science project Olympiads matter?* Paper presented at the 2016 Annual Meeting of American Educational Research Association. Washington, DC.
7. **Ekmekci, A.** (2015, April). *Are we measuring it accurately: mathematical literacy in the PISA context?* Paper presented at the 2015 Annual Meeting of American Educational Research Association. Chicago, IL.

6. **Ekmekci, A.**, Corkin, D., & Papakonstantinou, A. (2015, April). *Technology using habits of mathematics teachers*. Paper presented at the 2015 Annual Meeting of American Educational Research Association. Chicago, IL.
5. **Ekmekci, A.**, & Ayar, M. C. (2012, September). *Fen bilimleri ogretiminde ogrenci merkezli deneysel ve bilgisayar destekli etkinliklerin karsilastirilmesi [Student-centered teaching of science concepts: Affordances of experimental and computer-supported learning environments]*. Paper presented at the 21. Ulusal Egitim Bilimleri Kongresi. Marmara Univ., Istanbul, Turkey.
4. Carmona, G., Krause, G., Monroy, M., Lima, C., Ávila, A., & **Ekmekci, A.** (2011, April). *A longitudinal study to investigate changes in students' mathematics scores in Texas*. Paper presented at the 2011 Annual Meeting of American Educational Research Association, New Orleans, LA.
3. Dominguez, A., Carmona, G., & **Ekmekci, A.** (2011, August). *Pre-service teachers work on electric circuits concepts: computer simulations vs. real equipment*. Paper presented at International Conference on Physics Education 2011 Mexico: "Training Physics Teachers and Academic Networks", Mexico City, Mexico.
2. **Ekmekci, A.**, & Yildirim, Y. (2009, February). *Effect of doing a science fair project on students' perception of science*. Paper presented at the annual meeting of the Southwest Educational Research Association, San Antonio, TX.
1. Dominguez, A., & **Ekmekci, A.** (2007, July). *Pre-service teachers work on electric circuits concepts: hands-on and computer-based approach*. Paper presented at 2007 American Association of Physics Teachers Summer Meeting, Greensboro, NC.

REPORTS

13. Aqazade, M., & **Ekmekci, A.** (2022, May). [Evaluation report for RUSMP 2021 Summer Campus Program for teachers \(Virtual\)](https://rusmp.rice.edu/research/papers) (RUSMP DN: 22-01). Houston, TX, Rice University. Available at <https://rusmp.rice.edu/research/papers>
12. **Ekmekci, A.**, & Odemis, A. (2021, August). [The College of Health Care Professions: Impact Study on Hispanic Students](https://rusmp.rice.edu/research/papers). Houston, TX: School Mathematics Project (RUSMP), Rice University. Available at <https://rusmp.rice.edu/research/papers>
11. Wright, K. B., Waxman, H., **Ekmekci, A.**, Keese, J., McIntush, K., & Stillisano, J. (2021, August). *HPS launching Elementary Academic Foundations to STEM (LEAF to STEM): Year three evaluation*. College Station, TX: The Texas A&M University Education Research Center.
10. **Ekmekci, A.** (2018). *Evaluation report for RUSMP 2018 summer STEM component for MECA Sunburst Summer Arts Camp* (RUSMP DN: 18-01). Houston, TX: Rice University.
9. **Ekmekci, A.** & Shah, M. (2018). *Evaluation report for RUSMP 2018 student summer camps* (RUSMP DN: 18-03). Houston, TX, Rice University.
8. **Ekmekci, A.** & Shah, M. (2018). *Evaluation report for RUSMP 2018 Summer Campus Program for teachers* (RUSMP DN: 18-02). Houston, TX, Rice University.
7. **Ekmekci, A.**, Loh, L., & Obijiofor, C. (2017). *Evaluation report for 2017 Summer Campus Program: The summer component of the 2017-18 RUSMP Teacher Quality Program for K-12 teachers* (RUSMP DN: 17-01). Houston, TX: Rice University.

6. Corkin, D., **Ekmekci, A.** & Brehm, C. (2016). *2016 Summer Campus Program: RUSMP Teacher Quality Program for K-12 Teachers* (RUSMP DN: 16-01). Houston, TX: Rice University.
5. Corkin, D., **Ekmekci, A.**, & Fan, W. (2016). [The significance of teachers' mathematical knowledge for teaching and their math background on students' math achievement. Research Brief for the Houston Independent School District](#), 4(6), 1–6. Houston, TX: Houston Education Research Consortium, Rice Kinder Institute for Urban Research. Available at <https://kinder.rice.edu/research>
4. Sahin, A., **Ekmekci, A.**, & Waxman, H. (2016). *Tracking Class of 2019: How do 9th graders choose their (STEM) majors? Effects of school, out of school, and Pygmalion effect variables on students' STEM career selection*. Houston, TX.
3. Corkin, D., **Ekmekci, A.**, & Zhou, J. (2015). *2015 Summer Campus Program: RUSMP Teacher Quality Program for K-12 Teachers* (RUSMP DN: 15-01). Houston, TX: Rice University School Mathematics Project.
2. **Ekmekci, A.**, Anderson, H., & Papakonstantinou, A. (2014). *2014 Summer Campus Program: RUSMP Teacher Quality Program for K-12 Teachers* (RUSMP DN: 14-03). Houston, TX: Rice University School Mathematics Project.
1. Papakonstantinou, A., Kubena, K., & **Ekmekci, A.**, (2014). *The Rice University/Project GRAD Advanced Mathematics Institute Funded by Shell Oil Company: 2014 Report* (RUSMP DN: 14-02). Houston, TX: Rice University School Mathematics Project.

PRESENTATIONS

<i>Excludes presentations for conference proceedings & conference papers that are listed above</i>
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16. Ekmekci, A., Callard, C., Daley, M., McGraw R., Gibson, D., Renzaglia, K., & Rushton, G. (accepted). *How do Self-efficacy, leadership, teacher-school fit, and diversity dispositions relate to retention?* Poster to be presented at the 2022 Annual Noyce Summit, Washington, D.C.
15. **Ekmekci, A.**, Aqazade, M., Catanese, D., & Soto, O. (2022, March). *Factors impacting science and mathematics teacher retention*. Paper presented at 2022 Western Noyce Regional Conference, San Diego, CA.
14. **Ekmekci, A.**, Aqazade, M., Callard, C., Gibson, D., Rushton, G., McGraw, R., Catanese, D., Cerosaletti, C., Daley, M., Harel, G., Head, M., Orcan-Ekmekci, B., Papakonstantinou, A., Reid, J., Renzaglia, K., Sheppard, P., & Soto, O. (2022, February). *Teacher retention: The role of self-efficacy, leadership, and network*. Poster presented at 2022 Midwest Noyce Regional Conference, Cave City, KY.
13. **Ekmekci, A.**, Papakonstantinou, A., & Varner, P. (2021, September). *Web Adventures Interactive: Innovative online games as effective tools for broadening participation in science*. 2021 Annual NSF ITEST PI meeting (virtual). <https://vimeo.com/592932018>
12. Papakonstantinou, A., **Ekmekci, A.**, Tapia, R., & Radigan, J. (2020, August). [The Rice University Robert Noyce Master Teaching Fellowship Program \(RU-MTF\)](#). 2020 Virtual Noyce Summit: Centering equity to humanize the process of coming back together.
11. **Ekmekci, A.**, McMorris, P., Parr, R., & Papakonstantinou, A. (2019, July). *Developing mathematics teacher leaders to meet the needs of urban schools – Lessons from the Rice University*

- Robert Noyce Master Teaching Fellowship Program*. Poster presented at 2019 Noyce Summit, Washington, DC.
10. **Ekmekeci, A.**, Papakonstantinou, A., & Parr, R. (2019, July). *The Rice University Master Teaching Fellowship Program midpoint results: Progress in development of teacher leaders in high-need urban schools*. Poster presented at 2019 Noyce Summit, Washington, DC.
 9. **Ekmekeci, A.** (2019, April). *Being research-based and research-minded in helping K-12 mathematics education*. In session: *Education partnerships: University mathematics faculty and K-12 mathematics teachers*, 2019 Association for Women in Mathematics Research Symposium, Houston, TX.
 8. **Ekmekeci, A.**, Papakonstantinou, A., & Parr, R. (2018, July). [*The Rice University Noyce Master Teaching Fellowship Program \(DUE # 1556006\): Evaluation update for year 1 and year 2*](#). Poster presented at 2018 Noyce Summit, Washington, DC.
 7. **Ekmekeci, A.**, Sheppard, P., Papakonstantinou, A., & Parr, R. (2018, July). [*Lessons learned from a unique collaboration opportunity between two Noyce programs at two different universities \(Rice-ULL\)*](#). 2018 Noyce Summit, Washington, DC.
 6. **Ekmekeci, A.**, Sheppard, P., Papakonstantinou, A., & Parr, R. (2018, July). [*Noyce teacher noticing when observing other Noyce and non-Noyce teachers*](#). Poster presented at 2018 Noyce Summit, Washington, DC.
 5. Sahin, A., **Ekmekeci, A.**, & Waxman, H. (2017, February). *Effects of school, out of school, and Pygmalion effect variables on students' STEM career selection*. The 10th Annual Texas STEM Conference. Addison, TX.
 4. **Ekmekeci, A.**, & Corkin, D. (2016, April). *The relation between teacher-related factors and student mathematics achievement*. The Spring School at the University of Wurzburg: Perspectives on Research in Mathematics Education in the Next Decade. Bavaria, Germany.
 3. **Ekmekeci, A.** (2011, May). *Model-Eliciting Activities: A Hands-on Demonstration of Generative Activities for Educators of New Generation of Science and Mathematics Teachers*. Hands-on Workshop Session. The 5th Annual UTeach Institute-NMSI Conference. Austin, TX, USA.
 2. Fortney, B., Costello, C., & **Ekmekeci, A.** (2010, May). *Technology-Based Step Demonstration Lesson Using the TI-Navigator System*. Hands-on Workshop Session. 4th Annual UTeach Institute-NMSI Conference. Austin, TX, USA.
 1. Carmona, G., & **Ekmekeci, A.** (2007). *Mathematical Modeling and Assessment*. Learning Environments of the Future: A Collaboration with the Learning Sciences. Laboratory of Singapore, Singapore.

INVITED TALKS

9. **Ekmekeci, A.**, & McCoy, A. (2021, October). *Research and evaluation results from Rice University Master Teacher Fellowship program*. RUSMP 2021 Virtual Fall Networking Conference, Houston, TX.
8. **Ekmekeci, A.** (2020, February). [*Critical issues in STEM education: Research on effective STEM teachers and teaching*](#). RUSMP 2020 Spring Networking Conference (Keynote Talk), Houston, TX.

7. **Ekmekci, A.**, Burrus, C., Hamilton, G., & Wu, L. (2018, June). *Discussion about effective teaching: Noyce Lafayette visit at Rice*. Summer 2 program for Rice University Robert Noyce Master Teaching Fellowship program. Houston, TX.
6. **Ekmekci, A.** (2018, June). *Evaluation update: Years 1 and 2*. Summer 2 program for Rice University Robert Noyce Master Teaching Fellowship program. Houston, TX.
5. Corkin, D. M., & **Ekmekci, A.** (2016, March). *RUSMP's research and evaluation of the Summer Campus Program*. Teacher Quality Grants: Project Directors' Meeting, Texas Higher Education Coordinating Board. Fort Worth, TX, USA.
4. **Ekmekci, A.** (2015, September). *Basics of Qualtrics: An Online Data Collection & Analysis Tool*. Guest Speaker, PSYC 340: Research Methods (Instructor: Dr. Danya Corkin), Rice University, Houston, TX, USA.
3. **Ekmekci, A.** (2015, April). *Mathematical Literacy Assessment Design: A Dimensionality Analysis of Programme for International Student Assessment Mathematics Framework*. (Honorable mention dissertation award presentation). Advanced Studies of National Databases SIG, Annual Meeting of American Educational Research Association. Chicago, IL, USA.
2. **Ekmekci, A.** (2010, November). *Model-Eliciting Activities: The Team Ranking Problem*. UTeach Institute Knowing & Learning in Math & Science Course Workshop, The University of Texas at Austin. Austin, TX, USA.
1. Carmona, G., & **Ekmekci, A.** (2008, August). *Models and Modeling in Science and Mathematics Classroom*. Annual HSA-Austin Teacher Training Workshop, Engineering Education Research Center, The University of Texas at Austin. Austin, TX, USA.

OTHER PRODUCTS

8. **Ekmekci, A.**, Aqazade, M., & Papakonstantinou, A. (2022, May 10-17). Web Adventures: Digital Games in Science and Health. 2022 STEM For All Video Showcase: Access, Inclusion, and Equity. <http://videohall.com/p/2550>
7. Papakonstantinou, A., **Ekmekci, A.**, & Aqazade, M. (2022, May 10-17). Development of Teacher Leaders in High-Need Urban Schools. 2022 STEM For All Video Showcase: Access, Inclusion, and Equity. <http://videohall.com/p/2295>
6. **Ekmekci, A.** (2021, Fall). [Web Adventures Continues to Serve Teachers and Students](#). *Rice at Large*, 45, p. 8.
5. **Ekmekci, A.**, Papakonstantinou, A., & Varner, P. (2021, September). Web Adventures Interactive: Innovative online games as effective tools for broadening participation in science. Virtual Poster and Video during the 2021 Annual NSF ITEST PI meeting (virtual). <https://vimeo.com/592932018> and <https://kistorm.com/DOF7rcYEJdhGq638f1pm/1aaljtFCXIdIY63mMrWz>
4. Papakonstantinou, A., **Ekmekci, A.**, & White, C. (2021, May 11-18). Noyce Master Teaching Fellows take charge during COVID-19. 2021 STEM For All Video Showcase: COVID, Equity, & Social Justice. <http://videohall.com/p/1947>
3. Papakonstantinou, A., **Ekmekci, A.**, Tapia, R., & Radigan, J. (2020, August). [The Rice University Robert Noyce Master Teaching Fellowship Program \(RU-MTF\)](#). 2020 Virtual Noyce Summit: Centering equity to humanize the process of coming back together.

<https://www.noycevirtualsummit.com/poster-sessions/apapakonstantinou> and
<https://www.youtube.com/watch?v=-IBLfwLEXdA>

2. Ekmekci, A. (2020, March 17). [RUSMP represents Houston and Rice U.](#) *Village News*, 35(41), pp. 1, 12.
1. Aydin, I. & Peken, M. (2006). Geometry I. In Ekmekci, A., Salman M., Bas, H., Kesen, E., & Mert, U. (Eds.), *Geometry for high school*. Istanbul, Turkey: Orient Press.

EXTERNAL EVALUATION AND CONSULTING SERVICES

External Evaluation Team Member – *LEAF to STEM—Launching Elementary Academic Foundations to STEM*. Education Innovation and Research Grant, Office of Innovation and Improvement, U.S. Department of Education. \$7,859,427. Grant #U411B180014 (2018-2023).
 Consulting as Mathematics Education Researcher – *Building Capacity: Improving STEM Graduation Rates through Engaged Learning*. NSF, HSI (HRD #1928622), \$2,499,930 (2019-2024).

AWARDS & HONORS

8. Travel award for 2018 *National Assessment of Educational Progress (NAEP) Training Workshop* (NCES-IES-Funded Training) – *with travel award* – June 18-20, 2018. Washington, DC: American Institutes for Research
7. Travel Award for *Specialized Content Knowledge Institute: Developing Tasks for Teaching and Assessing Mathematical Knowledge for Teaching* (NSF-Funded Workshop; November 10-13, 2016). University of Michigan, Ann Arbor.
6. Travel Award for *AERA 2016 Institute on Statistical Analysis for Education Policy: Using Large-Scale Data to Study Mathematics Education and Outcomes*. (May 10-13, 2016). AERA Grants Program, Washington, DC.
5. Travel Award for *the Spring School at the University of Würzburg: Perspectives on Research in Mathematics Education Research in the Next Decade*. (April 4-9, 2016). Julius Maximilian University of Würzburg, Bavaria, Germany.
4. Travel Award for *High School Longitudinal Study (HSL: 09) Workshop*. (July 22-23, 2014). Arlington, VA: George Mason University.
3. Dissertation Award - Honorable Mention. (February, 2014). *Advanced Studies of National Database SIG of the American Education Research Association (AERA)*.
2. Faculty-Student Collaboration Award (*support for attending conferences to present*; Spring 2008; Spring 2011; & Fall 2012). College of Education, The University of Texas at Austin.
1. Travel Award for *the 2011 International Database Training*. (May, 2011). National Center for Education Statistics, Institute of Education Sciences, and U.S. Department of Education.

SERVICE & SYNERGISTIC ACTIVITIES

23. Reviewer. (2020 – current). *American Educational Research Journal*
22. Reviewer. (2020 – current). *Science Education*.
21. NSF Review Panel Member. (2019). Innovative Technology Experiences for Students and Teachers (ITEST), National Science Foundation.

20. *NSF Review Panel Member*. (2019). Discovery Research PreK-12 (DRK-12), National Science Foundation.
19. *External Evaluation Committee Member*. (2018). Five-year Center Evaluation for Education Research Center, College of Education & Human Development, Texas A&M University.
28. *Editorial Board Member*. (2014 – current). *SAGE Open* (math education area).
<http://sgo.sagepub.com>.
17. *Reviewer*. (2018 – current). *Eurasia Journal of Mathematics, Science & Technology Education*.
<http://www.ejmste.com>.
16. *Reviewer*. (2018 – current). *Journal of Mathematical Behavior*.
<https://www.journals.elsevier.com/the-journal-of-mathematical-behavior>
15. *Reviewer*. (2019 – current). *Investigations in Mathematics Learning*.
<https://www.tandfonline.com/toc/uiml20/current>
14. *Reviewer*. (2015). *International Journal of Education in Mathematics, Science and Technology*.
<http://www.ijemst.com>.
13. *Reviewer*. (2015). *Technology, Knowledge, & Learning* - <http://link.springer.com/journal/10758>
12. *Reviewer*. (2015). Proceedings of the 43rd Annual Meeting of the Research Council on Mathematics Learning.
11. *Session Chair*. (2014). *Students' use of gesture and posture mimicry in developing mutual understanding*. The Joint Meeting of PME 38 & PME-NA 36, Vancouver, Canada.
10. *Reviewer*. (2014). Advanced Studies of National Databases SIG, American Educational Research Association. (Reviewed 10 research paper and session proposals).
9. *Reviewer*. (2013). National Competition for Replication of UTeach Secondary STEM Teacher Preparation Program. *National Math + Science Initiative, The UTeach Institute, Howard Hughes Medical Institute* (RFP for awards up to \$1,450,000 over 5 years).
8. *Session Presider*. (2012). The 34th annual meeting the North American Chapter of International Group for the Psychology of Mathematics Education, Kalamazoo, MI.
7. *Reviewer*. (2011). Division K – Teaching & Teacher Education, Section 1: STEM, American Educational Research Association (Reviewed 20+ research papers & session proposals).
6. *Executive Committee Member*. (2008-2009). Turkish University Students Association, The University of Texas at Austin.
5. *Science Fair Judge*. (2009, 2010, 2014, & 2016). International Sustainable World Energy Engineering Environment Project Olympiad, Houston, TX.
4. *Science Fair Judge*. (2006, 2007, & 2008). Austin ISD Science Fairs, TX. (Reviewed and provided feedback for more than 50 science, mathematics, and engineering projects at middle and high school level).
3. *Graduate Student Representative*. (2007, Fall). Graduate Student Association, The University of Texas at Austin.
2. *Volunteer Residential Supervisor and Counselor*. (2003-2005). TED Istanbul College (Private K-12 school), Turkey. (Coached and supervised 60+ residential 4th-10th grade students with full scholarship in both academic and non-academic manner).
1. *Volunteer Mathematics Tutor*. (2003). Summer camp for high-need students at Orgeneral Kami ve Saadet Guzey IOO, Istanbul, Turkey. (Coached and tutored 15 6th-7th grade students).

CERTIFICATIONS AND TRAINING

13. *NSF S-STEM Capacity Building Workshop* – February 1-2, 2019. Houston, TX: Rice University.
12. *2018 National Assessment of Educational Progress (NAEP) Training Workshop (NCES-IES-Funded Training)* – with travel award – June 18-20, 2018. Washington, DC: American Institutes for Research
11. *Specialized Content Knowledge Institute: Developing Tasks for Teaching and Assessing Mathematical Knowledge for Teaching (NSF-Funded Workshop)* – with travel award – November 10-13, 2016. Ann Arbor: MI: University of Michigan, Ann Arbor.
10. *AERA Institute on Statistical Analysis for Education Policy: Using Large-Scale Data to Study Mathematics Education and Outcomes* – with travel award – May 10-13, 2016. Washington, DC: American Educational Research Association (AERA).
9. *The Spring School at the University of Würzburg: Perspectives on Research in Mathematics Education Research in the Next Decade.* (April 4-9, 2016). Julius Maximilian University of Würzburg, Bavaria, Germany.
8. *High School Longitudinal Study (HSL: 09) Workshop.* (July, 2014). Arlington, VA: George Mason University. – with travel award.
7. *Learning Mathematics for Teaching (LMT) and Teacher Knowledge Assessment System (TKAS) Training.* (March, 2014). University of Michigan (Online training).
6. *UTeach Institute Classroom Interactions Workshop.* (April, 18-19, 2013). Houston, TX: teachHOUSTON, University of Houston.
5. *Short Course on Making Sense of Multivariate Data.* (May, 2012). Austin, TX: Summer Statistics Institute, Division of Statistics & Scientific Computation, The University of Texas-Austin.
4. *International Database Training.* (May, 2011). Bethesda, Maryland: National Center for Education Statistics, Institute of Education Sciences, and U.S. Department of Education.
3. *NSF Chautauqua Short Course Program for College Teachers.* (June 8-9, 2009). *Models and Modeling in the Science and Mathematics Classroom – Making Learning Visible through Multi-Tier Interaction.* Austin, TX: Center for Science and Mathematics Education, The University of Texas at Austin.
2. *NSF Chautauqua Short Course Program for College Teachers.* (May 29-31, 2007). *Models and Modeling in the Science and Mathematics Classroom – A Window into Students' Ways of Thinking.* Center for Science and Mathematics Education, The University of Texas-Austin.
1. *ASPECTS Professional Development Series: Certification on Assessment.* (Spring, 2006). Austin, TX: The University of Texas at Austin. (Completed 6 sessions on Assessment).

COMPUTER SKILLS

SPSS, STATA, HLM, R, Mplus, NVivo, Express Scribe, Qualtrics, SurveyMonkey, Zotero, EndNote, Adobe Acrobat Pro, NetLogo, TI-Navigator system, Online collaboration tools (Google drive, Google docs, Dropbox), Microsoft Office (Word, Excel, PowerPoint).