

Tugba Ayer
Academic Professional
H. Milton Stewart School of Industrial and Systems Engineering

I. Education and Training

- Ph.D. Learning Sciences, with a focus on Instructional Technology and Statistics, Georgia State University, Atlanta, Georgia, 2015-2018. Dissertation, the Relationship between Computational Thinking and Learner Characteristics in Two Different Contexts (Chair, Jonathan Cohen).
- M.A. Educational Studies, Edgewood College, Madison, Wisconsin, 2011-2012.
- B.S. Computer Science, Istanbul Bilgi University, Istanbul, Turkey, 2004-2008.
- B.A. Business Administration, Istanbul Bilgi University, Istanbul, Turkey, 2003-2007.

II. Research and Professional Experience

- 2018 -Present Faculty and Director of Diversity, Inclusion, and K-12 Student Engagement, Industrial and Systems Engineering, Georgia Institute of Technology, Atlanta, Georgia.
- 2016 Data Scientist, Learning Technologies Division, College of Education and Human Development, Georgia State University, Atlanta, Georgia
- 2016 Instructor, Learning Technologies Division, College of Education and Human Development, Georgia State University, Atlanta, Georgia
- 2015 Research Assistant for NSF-funded project for Curriculum Development and Project Management, Learning Technologies Division, College of Education and Human Development, Georgia State University, Atlanta, Georgia

III. Honors and Awards

- 2020 Outstanding Empirical Journal Award
- 2019 Outstanding Dissertation Award
- 2018 Outstanding Ph.D. Student Award
- 2013 Teacher of the Month at Fulton Science Academy
- 2011 Cum laude, Master's in education at Edgewood College
- 2002 Full Scholarship, Istanbul Bilgi University
- 1999 Merit scholarship from Private Asfa High School with a tuition waiver

IV. Mentoring and Teaching

A. Courses Taught

Fall, 2025	Engineering Economics	74
Fall 2018 – Spring 2025	Applications of Probability and Statistics	1050

B. Academic and Career Advising and Guidance Responsibilities

- Fall 2022 – Present Black Engineering Student Association
- Spring 2022 – Present Hispanic Student Association
- Spring 2019 – Present STEMpower Student Organization Faculty Advisor

Fall 2021 – Present	Career Counseling for K-12 Students
Fall 2019 – Present	Academic Advising for Federal Work Study Students
Fall 2018 – Present	Career Grant Advising for ISyE Faculty

V. Research and Publications

- Sapirstein, A., Steimle, L. N., **Ketenci, T.**, Williams, K., & Williams, L. (2025, Major Revision) Teaching Statistics Using Facility Location Modeling: A Course-based Undergraduate Research Experience. *INFORMS Transactions on Education*.
- Serban, N., **Ketenci, T.**, & Sokel, J. (2025, Major Revision). Students' Use of Generative AI tools in Multiple Choice Exams. *INFORMS Transactions on Education*.
- Ketenci, T.**, Calandra, B., Cohen, J., Renken, M., & Chonoeva, N. (2023). An examination of middle school student learner characteristics as related to the reuse and remixing of code in two different computer science learning contexts. *Journal of research on Technology in educaTion*, 55(6), 986-1002.
- ***Ketenci, T** (major revision submitted). Impact of Sequence of Lessons and Practices in Explicit Instruction on Middle School Students' Performance in a Programming Context. *ACM Transactions on Computing Education*
- ***Ketenci, T.**, Calandra, B. & Cohen, J. (2022). An Examination of Middle School Student Learner Characteristics and Remixing Practices in Two Different CS Learning Contexts. *Journal of Research on Technology Education*.
- ***Ketenci, T.**, & Dwortz, C. (2022). Online Computing Summer Camp with Non-Verbal Students with Autism Speaker Disorder. *Proceedings of Association of Educational Communications and Technology (AECT)*. Las Vegas, Nevada.
- Calandra, B., Renken, M., Cohen, J. D., Hicks, T., & ***Ketenci, T.** (2021). An Examination of a Group of Middle School Students' Engagement during a Series of Afterschool Computing Activities in an Urban School District. *TechTrends*, 65(1), 17-25.
- ***Ketenci, T.**, Leroux, A. & Renken, M. (2020). Beyond student factors: The impact of student and school factors on attaining STEM careers. *Journal of STEM Education*.
- *Kim, M. K., Wang, Y., & **Ketenci, T.** (2020). Who are online learning leaders? Piloting a leader identification method (LIM). *Computers in Human Behavior*, 105, 106205.
- *Kim, M. K., & **Ketenci, T.** (2020). The role of expressed emotions in online discussions. *Journal of Research on Technology in Education*, 52(1), 95-112.
- ***Ketenci, T.**, Kumar, K. & Kim, M. (2020). Emotion Analysis for Discussion Board Posts. In D. Schmidt-Crawford (Ed.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 777-783). Online: Association for the of Computing in Education .
- ***Ketenci, T.**, Calandra, B., Margulieux, L., & Cohen, J. (2019). The Relationship between Learner Characteristics and Student Outcomes in a Middle School Computing Course: An Exploratory Analysis Using Structural Equation Modeling. *Journal of Research on Technology in Education*.
- *Margulieux, L., **Ketenci, T.** & Decker, A. (2019). Review of Measurements Used in Computing Education Research and Suggestions for Increasing Standardization. *Computer Science Education*.
- *Kim, M. K., & **Ketenci, T.** (2019). Learner participation profiles in an asynchronous collaboration context. *The Internet and Higher Education*, 41, 62-76.
- ***Ketenci, T.**, Erkan, B. (2019). The Relationship between Young Students' Attitudes toward Collaboration and Team Satisfaction In a STEAM-based Program. 14th

International Conference on Computer Supported Collaborative Learning Conference. Lion, France.

Renken, M., Cohen, J. D., **Ayer Ketenci**, T., Calandra, B., Fuqua, A. (2017, June). Who signs up and who stays? Attraction and retention in an after-school computer-supported program. In B. K. Smith, M. Borge, E. Mercier, & K. Y. Lim (Eds.), *Making a Difference: Prioritizing Equity and Access in CSCL. 12th International Conference on Computer Supported Collaborative Learning Conference Proceedings Volume 1*. (pp. 359-366). Philadelphia, PA: ISLS.

VI. Service

A. Professional Contributions

INFORMS, Co-chair for Education Division, 2025- Present
IISE Conference, Track Chair for Education Division, 2019 – 2024
Frontiers in Education, Review Editor, 2022 – Present
National Science Foundation Reviewer, 2019 – Present
Society for Science Judge/Reviewer, 2022
Reviewer for Journal of Computing Education, 2019 – Present
Board Member of Banneker High School, 2022 -- Present

B. Institution Contributions

Community Council Chair for the College of Engineering, 2024 – Present
DEI Council Member for the College of Engineering, 2022 – Present
FairTech Competition Organizer, College of Engineering, 2022 -- Present
Poster Judge, Review Editor