## **Eunhye Grace Flavin, Ph.D.**

Curriculum Vitae

Senior Research Scientist (Research Faculty Member)
Georgia Institute of Technology
Center for Education Integrating Science, Mathematics, and Computing
eflavin@gatech.edu | https://flavineducationlab.com

#### RESEARCH EXPERTISE

Mathematics Education, Learning Science, Technology-mediated Learning (Augmented reality, Artificial intelligence), Immigrant Family, and Mixed Methods

**OVERALL AIM:** Developing and implementing technology and tools as pedagogical mediations for mathematics education to support historically marginalized populations

#### **EDUCATION**

2017-2021

Ph.D.	<b>Boston</b>	College	Chestnut Hi	11 MA
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Major: Curriculum and Instruction (Specialization: Mathematics and Technology Education)

Dissertation Title: The effects of school mathematics resources on students' intention to study mathematics over other subjects: Multilevel mediation structural equation modeling

M.A. Seoul National University, Seoul, South Korea.

Major: Foundations of Education

B.A. Daegu National University of Education, Daegu, South Korea

Major: Elementary Education

Teaching Certification: Elementary School Teacher

#### PROFESSIONAL APPOINTMENTS

2024–current	Senior Research Scientist, Georgia Institute of Technology, Atlanta, GA. Center for Education Integrating Science, Mathematics, and Computing
2021–2024	Assistant Professor of STEM Education (Tenured-track), Stonehill College, Easton, MA.  - Department of Graduate Teacher Education (2023–2024): Faculty Coordinator for the Graduate Mathematics/Science Teacher Education program  - Department of Education Studies (2021–2023)
2022 July	Instructor, Summer Program: Competition Math (Grades 5–6) Center for Talent Development, Northwestern University, Evanston, IL.

Teaching Fellow (2020–2021), Graduate Assistant (2017–2021)

	Lynch School of Education and Human Development, Boston College, Chestnut Hill, MA.
2016–2017	Associate/Instructional Designer e-Learning Contents Development Division, Seoul National University, Seoul, South Korea.
2015–2016	Associate Researcher Center for Bahrom Character Education, Seoul Women's University, Seoul, South Korea.
2013–2016	Teaching Assistant (2013-2014) & Lecturer (2015-2016) College of Education, Korea National Open University, Seoul, South Korea.
2011–2015	Elementary School Teacher (Grades 1-6, Curriculum development, part-time) The School of Global Sarang, Seoul, South Korea.
2011–2014	Assistant Administrator The Korean Society for the Study of Anthropology of Education, Seoul, South Korea.
FUNDED RI	ESEARCH and RESEARCH EXPERIENCE
Under	Building an AI-assisted Online Course for the College of Liftime Learning
review	Sponsor: Georgia Institute of Technology – Provost Teaching and Learning Initiatives Amount: \$24,885.65
	Role: PI (E. Flavin), Co-PIs (Abeera Rehmat, Jeonghyun Lee)
Under review	Building a Sustainable AI-Assisted Online Calculus Professional Development for Rural Teachers
	Sponsor: William T. Grant Foundation – Reducing inequality in youth outcomes Amount: \$600,000
	Role: PI (E. Flavin), Co-PIs (Dabae Lee, Keisha Simmons)
Under	Place-based CS and AI: Empowering rural communities
review	Sponsor: National Science Foundation (NSF) – CS for All
	Amount: \$999,945
	Role: Co-PI (E. Flavin) and PI (Norman "Storm" Robinson)
Submitted	Bridging the role of AI with student voices in mathematics education
Saominea	Sponsor: The Spencer Foundation – Research Small Grant
	Amount: \$50,000
	Role: PI (E. Flavin) and Co-PI (Nicholas Witt)
2025	Speculative design with mathematical modeling: Children building a new future in an urban mathematics program

Sponsor: American Educational Research Association – Education Research

Service Projects Grant

Amount: \$5,000 Role: PI (E. Flavin)

Collaborator: Horizons at Georgia Tech

#### Submitted A pressing need: Smart haptic clothing for affective STEM learning

Sponsor: National Science Foundation (NSF) – Research on Innovative

Technologies for Enhanced Learning (RITEL)

Amount: \$900,000,000

Role: PI (Matthew T. Flavin), Co-PI (E. Flavin), and Co-PI (Bruce Walker)

#### Submitted "Mathematics as the foundation of artificial intelligence": Co-designing culturally responsive mathematics tasks in the context of AI

Sponsor: National Council of Teachers of Mathematics – Early Career Grant

Amount: \$10,000 Role: PI (E. Flavin)

#### 2024-2025 **Mechatronics and motivation Seed Grant**

Sponsor: Georgia Institute of Technology – Vertically Integrated Projects

Amount: \$5,000

Role: PI (E. Flavin & \*Matthew T. Flavin) \*equal contribution

#### 2024-2027 Fostering mathematical modeling competencies via collaborative learning in large language model-simulated virtual classrooms

Sponsor: National Science Foundation (NSF) – Research on Innovative

Technologies for Enhanced Learning (RITEL)

Amount: \$578,047.00

Role: Senior Personnel (E. Flavin)

#### 2024 Haitian im/migrant caregiver and community engagement in mathematics education

Sponsor: Stonehill College – Research, Writing, & Artistic Production Grant

Amount: \$4,350 Role: PI (E. Flavin)

### 2023 An international comparative study on elementary preservice teachers' noticing of mathematics groupwork: Focusing on communication, collaboration, and problem-solving competencies (translated to Korean: 수학 그룹 활동에 대한 초등 예비교사의 노티싱 분석: 의사소통, 협력,

문제해결 역량에 대한 국제 비교 연구)

Sponsor: South Korea Ministry of Education – Network Utilizing IDEA Grant of Chuncheon National University of Education

Amount: \$5,000,000

Role: Sunghwan Hwang (PI) and Co-PI (E. Flavin)

2023 ARGeometry: Urban informal mathematics education program for STEM for All Brockton Sponsor: Avanade Tech Grant Amount: 15 laptops (January 2023) Role: PI (E. Flavin) 2023 Augmented reality mathematics manipulatives for equity Sponsor: Stonehill College – Research, Writing, & Artistic Production Grant Amount: \$5,000 Role: PI (E. Flavin) 2022 -GeoComputation: Integrating computational thinking into elementary 2024 geometry lesson Sponsor: Stonehill College – College Start-up Funds Amount: \$5,000 Role: PI (E. Flavin) 2022 Four decades of research of the pedagogical content knowledge of mathematics teachers Sponsor: Stonehill College – Research, Writing, & Artistic Production Grant Amount: \$5,000 Role: PI (E. Flavin) 2021 -Social justice-oriented instructional practices grounded in real-world data 2022 Sponsor: Stonehill College – Research Expense Grant/Start-up Funds Amount: \$2,000 Role: PI (E. Flavin) 2018-2021 Collaborative fellow grant with Potter Rd elementary school in Framingham Sponsor: Boston College Amount: \$105,000 Role: Survey team lead & Research Assistant (E. Flavin) PI: Gabrielle Oliveira 2021 Dissertation grant American Educational Research Association/National Science Foundation Grant (submitted) ETS Harold Gulliksen Psychometric Research Fellowship (*submitted*) 2019–2020 Catholic immigrant networks Sponsor: Boston College Warmenhoven Fellowship Amount: \$45,000 Role: Survey team lead & Research assistant, including field work (E. Flavin) PI: Gabrielle Oliveira

2019–2020 The Hyukshin school innovation movement in Seoul Sponsor: Seoul Metropolitan Office of Education Amount: \$236,000 Role: Graduate student team leader & Research assistant (E. Flavin) PI: Yoonmi Lee, Dennis Shirley, Deoksoon Kim, & Stanton Wortham. 2018-2019 Warmenhoven Fellowship Sponsor: Boston College Rocche Center for Education Amount: \$30,000 Role: Research assistant (E. Flavin) PI: Gabrielle Oliveira 2018 The Lemelson–Massachusetts Institute of Technology junior varsity InventTeams program (Chill Out!) Role: Research assistant (E. Flavin) 2016-2018 A longitudinal study on middle school free-semester program Sponsor: Korean Educational Development Institute Role: Research assistant (E. Flavin) 2015-2016 Measurement of educational effectiveness of the Bahrom character education program Sponsor: Seoul Women's University Role: Associate researcher (E. Flavin) 2014-2015 A study on job development and employment support for immigrant youth Sponsor: Rainbow Youth Center in South Korea Amount: ₩30,000,000 Role: Research assistant (E. Flavin) PI: Deokhee Seo 2014–2015 A study on curriculum and educational contents development for training instructors for multicultural education Sponsor: Korean Healthy Family Support Center Role: Research assistant (E. Flavin) PI: Minseung Jung 2011-2012 A study on curriculum and manual for cultural diversity education (KACES-1240-R024) Sponsor: Korea Arts & Culture Education Service Role: Lesson plan developer (E. Flavin) PI: Cheol-II Lim, Seoul National University 2011-2012 A study on current issues in mathematics education in Korea (Policy Research 2-11-9) Sponsor: South Korean Ministry of Education

Role: Interviewer (E. Flavin)

PI: Kyung Mi Park

### REFREED JOURNAL PUBLICATIONS

- **Flavin, E.** & Flavin, M. (in press) Speculative design approach to mathematical modeling and belonging. *Mathematics Teacher: Learning and Teaching PK–12*.
- Lee, J. H. & \*Flavin, E. (in press) AI algorithm and mathematics modeling. In press: *Mathematics Teacher: Learning and Teaching PK–12* (equal contribution)
- **Flavin, E.** Chung, M. Hwang, S., & Flavin, M. Augmented reality for area measurement reasoning of elementary students. *Educational Technology Research and Development*. https://doi.org/10.1007/s11423-025-10502-0
- Flavin, E., Hwang, S., & Morales, M. (2025). "Let's Ask the Robot!": Epistemic Stance Between Teacher Candidates Toward AI in Mathematics Lesson Planning. *Journal of Teacher Education*, 76(3), 262-279. https://doi.org/10.1177/00224871251325079
- **Flavin, E.,** \* Hwang, S & Flavin, M.T. (2025). Augmented reality for mathematics achievement: A meta-analysis of main and moderator effects. *International Journal of Science and Mathematics Education*. https://doi.org/10.1007/s10763-025-10546-x (\*equal contribution)
- M. Flavin,\* K. Ha,\* Z. Guo,\* S. Li,\* J. Kim,\* T. Saxena, F. D. Simatos, F. Al-Najjar, Y. Mao, S. Bandapalli, C. Fan, D. Bai, Z. Zhang, Y. Zhang, E. Flavin, K. Madson, Y. Huang, L. Emu, J. Zhao, J. Yoo, M. Park, J. Shin, A. Huang, H. Shin, J. Colgate, Y. Huang, Z. Xie, H. Jiang, J. Rogers. (2024) Bioelastic state recovery for haptic sensory substitution, *Nature*, 635, 345–352. https://doi.org/10.1038/s41586-024-08155-9
- Lee, J., **Flavin, E.**, & Hwang, S. (2024). Open mathematical tasks conceived, designed, and reflected upon by preservice elementary teachers. *Journal of Mathematics Teacher Education*. https://doi.org/10.1007/s10857-024-09661-3
- **Flavin, E.** & \*Lee, J. H., Chamberlin, M., Powers, R. (2024). Artificial intelligence image processing. *Mathematics Teachers: Learning and Teaching PK-12*, *117* (11). 848–852. https://doi.org/10.5951/MTLT.2024.0103 (\*equal contribution)
- **Flavin, E.,** & Flavin, M. (2024). Black feminist thought as a guide for ethical integration of artificial intelligence in mathematics classroom. *Connections*, 34(1), 1–8, https://amte.net/sites/amte.net/files/FlavinFlavin Connections Fall2024.pdf

- Lee, J., **Flavin, E.**, Kim, S, & Hwang, S. (2024). Recording and representing student mathematical thinking: A comparison of preservice teachers in the U.S. and Korea. *Research in Mathematical Education* (Journal of the Korean Society of Mathematical Education Series D), *34*(3), 511–542. https://doi.org/10.29275/jerm.2024.34.3.511
- **Flavin, E.** & Suh, J. (2024). Centering empathy in a mathematics classroom. *Mathematics Teacher: Learning and Teaching PK-12. 117*(5), 361–370. https://doi.org/10.5951/MTLT.2023.0246
- **Flavin, E.**, Lima Becker, M., Hubacz, H., Barbieri, O., & Oliveira, G. (2024). "(Not) the same as it was": Parents' and teachers' perception of the impact of COVID-19 on a bilingual elementary program. *Language and Education*, 1–19. https://doi.org/10.1080/09500782.2024.2343479
- Segel, M., **Flavin, E**., Hubacz, H. & Oliveira, G. (2024). A currency of love: Illuminating motherhood across immigrant, cultural, and socioeconomic lines during Covid–19. *Urban Education*, 00420859241244769, https://doi.org/10.1177/00420859241244769
- **Flavin, E.** & \* Hwang, S. (2024). U.S. and Korean teacher candidates' approaches to mathematics modeling on a social justice issue. *Research in Mathematical Education* (Journal of the Korean Society of Mathematical Education Series D), *27*(1), 25–47. https://doi.org/10.7468/jksmed.2024.27.1.25 (\*equal contribution)
- Hwang, S., **Flavin, E.**, & Lee, J. (2023). Exploring research trends of technology use in mathematics education: A scoping review using topic modeling. *Education and Information Technologies*, 1–28. https://doi.org/10.1007/s10639-023-11603-0
- Oliveira, G., **Flavin, E**., & Hubacz, H. (2023). Teachers and parents at odds: Results from a survey on a dual language program implementation. *Education and Urban Society*. 00131245221141071. https://doi.org/10.1177/00131245221141071
- Hwang, S., **Flavin, E.**, Lee, J. (2023). The use of technology in Korean mathematics education: A systemic review. *Research in Mathematical Education* (Journal of the Korean Society of Mathematical Education Series D), *33*(3), 537–557. https://doi.org/10.29275/jerm.2023.33.3.537
- Hwang, S. & **Flavin, E**. (2023). Understanding a mathematics teacher community through a computational text analysis: Review of *change in mathematics pedagogical lexicons* by Lee & Kim (2022). *Research in Mathematical Education* (Journal of the Korean Society of Mathematical Education Series D), 26 (1), 31–38. https://doi.org/10.7468/jksmed.2023.26.1.31
- **Flavin, E.**, & Hwang, S. (2022). Examining multicultural education research in Korean mathematics education. *Research in Mathematical Education* (Journal of the Korean Society of Mathematical Education Series D), *25* (1), 45–63. https://doi.org/10.7468/jksmed.2022.25.1.45

- Hwang, S., & **Cho**, **E**. (2021). Exploring latent topics and research trends in mathematics teachers' knowledge using topic modeling: A systematic review. *Mathematics*, 9, 2956. https://doi.org/10.3390/math9222956
- Oliveira, G., Cho, E., & Barbieri, O. (2021). Latino family engagement in a network of Catholic bilingual schools. *Journal of Catholic Education*, 24(1), 183–203. http://dx.doi.org/10.15365/joce.2401102021
- **Cho, E.**, Albert., L, & Hwang, S. (2021). Exploring white preservice mathematic teachers' racial identity and culturally relevant teaching practices. *Research in Mathematical Education* (Journal of the Korean Society of Mathematical Education Series D), 24(1). 29–47. http://doi.org/10.7468/jksmed.2021.24.1.29
- Hwang, S., **Cho, E.**, & Albert, L. (2020). Examining mathematics teachers' perception toward multicultural education: Teachers' noticing of multicultural contents in mathematics textbooks. *Research in Mathematical Education* (Journal of the Korean Society of Mathematical Education Series D), 23 (2), 93–111. https://doi.org/10.7468/jksmed.2020.23.2.93
- Oliveira, G., Chang-Bacon, C. K., **Cho, E.**, & Baez-Cruz, M. (2020). Parent and teacher perceptions of a Brazilian Portuguese two-way immersion program. *Bilingual Research Journal*, 43(2), 212–231. https://doi.org/10.1080/15235882.2020.1773961
- Kim, D., **Cho, E.**, Stephanie, C., & Barnett, M. (2019). Culturally relevant science: Incorporating visualizations and home culture in an invention-oriented middle school science curriculum. *Technology & Innovation*, 20, 251–266. https://doi.org/10.21300/20.3.2019.251
- **Cho, E.** & Hwang, S. (2019). Exploring changes in multi-ethnic students' mathematics achievement motivation: A longitudinal study using expectancy-value theory. *The Mathematical Education (Journal of the Korean Society of Mathematical Education Series A)*, 58(1), 101–120. https://doi.org/10.7468/mathedu.2019.58.1.101
- Seo, D. & Cho, E. (2017). An exploratory research on career dispositions of immigrant youths and their ecological conditions. *Journal of Education and Culture, 23*(1), 217–247. https://doi.org/10.24159/joec.2017.23.1.217

#### JOURNAL ARTICLES UNDER REVIEW / IN PREPARATION

**Flavin, E.**, Hwang, S., & Flavin, M. Lekòl, Legliz, Lakay: Haitian immigrant parental engagement in mathematics education. Reviewed and in revision: *Educational Studies in Mathematics*, 2024.

- Hwang, S., Lee, J.E., **Flavin, E.**, & Kang, Y. Analysis of generative AI's diagnostic and feedback capabilities regarding fraction multiplication errors: Focusing on ChatGPT, Gemini, and DeepSeek. Under review: *Journal of Educational Research in Mathematics*.
- **Flavin, E.**, Chung, M., & Flavin, MAugmented reality—based intervention package on children's construction of a volume measurement. Under review.

#### REFREED CONFERENCE PROCEEDINGS

- Flavin, E., Witt, N., Suh, J., Panorkou, N., Chandler, K., Joseph, M., Mauntel, M., Jegede, K., & Shojaei, L., Year 3 of TechQuity Working Group. Under review: *Proceedings of the 47<sup>th</sup> Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (October 26-29, 2025). PA, United States.
- Witt, N., Jogede, K., **Flavin, E.**, Panorkou, N., Chandler, K., McCulloch, A., Suh, J., Joseph, M., & Mauntel, M. Report from year 2 of the TechQuity Working Group. Under review: *Proceedings of the 47<sup>th</sup> Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (October 26-29, 2025). PA, United States.
- Flavin, E., & Flavin, M. (2024). Developing an augmented reality system for embodied mathematics learning. In Kosko, K. W., Caniglia, J., Courtney, S., Zolfaghari, M., & Morris, G. A., (2024). Proceedings of the forty-sixth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (pp. 1985–1989). Kent State University.
- Witt, N., Chandler, K., **Flavin, E.**, Suh, J., Panorkou, N., McCulloch, A., Hollebrands, K., & Joseph, M. Working group proposal (Year 2): Conceptualizing the role of technology in equitable mathematics classrooms (Math TechQuity). In Kosko, K. W., Caniglia, J., Courtney, S., Zolfaghari, M., & Morris, G. A., (2024). Proceedings of the forty-sixth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (pp. 1985–1989). Kent State University.
- Chandler, K., Witt, N., Suh, J., Hollebrands, K., McCulloch, A., Flavin, E., Panorkou, N., Joseph, M., Yao, X. Working group report (Year 1): Conceptualizing the role of technology in equitable mathematics classrooms (Math TechQuity). In Kosko, K. W., Caniglia, J., Courtney, S., Zolfaghari, M., & Morris, G. A., (2024). Proceedings of the forty-sixth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (pp. 2126–2135). Kent State University.
- **Flavin, E.** (2024). The role of artificial intelligence for equitable mathematics teaching. *Proceedings of the Korean Society of Educational Studies in Mathematics* (pp. 2195–2197). Incheon, South Korea.

- Hwang, S. & **Flavin**, E. (2024). The impact of augmented reality on mathematics performance: A meta-analysis. *Proceedings of the Korean Society of Educational Studies in Mathematics* (pp. 180–182). Incheon, South Korea.
- Hwang, S., Lee, J., & **Flavin, E.** (2024). Analysis of preservice teachers' perception of open mathematical tasks (개방형 수학 과제에 대한 예비교사들의 인식 분석). Proceedings of the Korean Society of Elementary Mathematics Education 2024 Annual Conference. (pp. 75–78). Seoul, South Korea.

### SCHOLARLY CONFERENCE PRESENTATION (\*Research with a mentoring student)

- **Flavin, E.** (2024, December 6–7). *The role of artificial intelligence for equitable mathematics teaching* [Paper presentation]. The Korean Society of Educational Studies in Mathematics 2024 62nd Annual Conference (December 5, 2024), Incheon, South Korea.
- **Flavin, E., &** Flavin, M. (2024, November 7–10). *Developing augmented reality system for embodied mathematics learning* [Brief report presentation]. North American Chapter of the International Group for the Psychology of Mathematics Education (PME–NA) 2024 46th Annual Conference. Cleveland, Ohio, United States.
- Hwang, S., Lee, J., & **Flavin, E.** (2024, November 1–2. A study on the characteristics of open mathematical tasks developed by preservice teachers (예비교사들이 개발한 개방형 수학 과제의 특성 연구) [Paper presentation]. The Korean Society of Mathematical Education Fall Academic Conference. Suwon, South Korea.
- Flavin, E., Flavin, M, & Hwang, S. (2024, September 25–28). Augmented reality: Integrating real-world into math classroom [Paper presentation]. National Council of Teachers of Mathematics [NCTM] 2024 Annual Meeting & Exposition. Chicago, IL, United States.
- Hwang, S., Lee, J., & **Flavin, E.** (2024, August 9). Analysis of preservice teachers' perception of open mathematical tasks (개방형 수학 과제에 대한 예비교사들의 인식 분석)
  [Paper presentation]. Korean Society of Elementary Mathematics Education 2024 Annual Conference. Seoul, South Korea.
- Hwang, S. & **Flavin**, E. (2024, April 5–6). *International comparative study of mathematical modeling strategies* (수학적 모델링 전략 국제비교 연구) [Paper presentation]. 2024 Spring conference for the Korean Society of Mathematical Education. Busan, South Korea.
- **Flavin, E.,** Flavin, M., Chung, M., Simeon, M., Marie, R.\*, & Solari, M.\* (2024, February 8–10). *Teaching mathematics at a Black immigrant church: Implications for mathematics teacher education* [Paper presentation]. Association of Mathematics Teacher Educators [AMTE] 2024 28th Annual Conference. Orlando, FL, United States.

- **Flavin, E.**, Lee, J., & Hwang, S. (2023, October 1–4). *Technology in mathematics education research: Analysis of the past four decades* [Poster presentation]. North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA) 2023 45th Annual Conference. Reno, NV, United States.
- **Flavin, E.** & Hwang, S. (2023, April 13–16). *A systemic review on mathematics education and technology* [Paper presentation]. American Educational Research Association [AERA] Annual Meeting. Chicago, IL, United States.
- **Flavin, E.** (2023, February 24–26). *Racialized identities and mathematics teacher education: White preservice teachers' teaching practices* [Paper presentation]. American Association of Colleges for Teacher Education (AACTE) 2023 75<sup>th</sup> Annual Conference. Indiana, MN, United States.
- **Flavin, E.** & Hwang, S. (2022, November 17–20). What knowledge is needed for teaching mathematics? Using topic modeling [Poster presentation]. North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA) 2022 44th Annual Conference. Nashville, TN, United States.
- **Flavin, E.** (2022, September 28–October 1). *Rich mathematical and computational tasks for grade 4-6 geometry: Using a language, Scratch* [Paper presentation]. National Councils of Teachers of Mathematics [NCTM] 2022 Annual Meeting & Exposition. Los Angeles, CA, United States.
- Segel, M., Cho, E., Hubacz, H., & Oliveira, G. (2022, April 21–26). From gratitude to frustration: Two-way immersion parents' perceptions of school supports during COVID-19 [Paper presentation]. American Educational Research Association [AERA] Annual Meeting. San Diego, CA, United States.
- Cho, E., Hwang, S., & Herosian, G.\* (2022, April 6–8). *Three decades of research in mathematics teacher knowledge: Using text network modeling* [Paper presentation]. New England Educational Research Organization [NEERO] Annual Meeting. Portsmouth, NH, United States.
- Cho, E. (2022, February 10–12). Multilevel mediation structural modeling to assess whether attending a mathematics school can predict students' intention to pursue a mathematics-related field [Manuscript Review Group]. Association of Mathematics Teacher Educators [AMTE] Annual Meeting. Henderson, NV, United States.
- **Cho, E.**, Hwang, S., & Herosian, G.\* (2022, January 7). *Exploratory analysis on research in mathematics teacher knowledge* [Paper presentation]. National Councils of Teachers of Mathematics [NCTM] Research Conference. Virtual Meeting.
- **Cho, E.**, Hubacz, H., Oliveira, G. (2021, Apr 8–12). *School community members at odds in dual language program implementation* [Paper presentation]. American Educational Research Association [AERA] Annual Meeting, Virtual Meeting.

- Oliveira, G., Cho, E., et al. (2021, Feb 26–27). *Im/migrant children and families' experiences in dual language education in Massachusetts* [Paper presentation]. 2021 Ethnography in Education Research Forum, Virtual meeting.
- **Cho, E.** (2020, Dec 12) *Understanding the development of multi-ethnic students' mathematics achievement motivation* [Paper presentation]. 2020 International Conference of the Korean Society of Mathematical Education, Virtual meeting.
- **Cho, E.**, Hwang, H., & Albert, L. (2020, Dec 12) *Understanding mathematics teachers'* perception toward multicultural education [Paper presentation]. 2020 International Conference of the Korean Society of Mathematical Education, Virtual meeting.
- Chang-Bacon, C., Cho, E., & Oliveira, G. (2020, Dec 2) *Community consciousness: Parallel parent and teacher perceptions of a two-way dual language immersion program* [Paper presentation]. Literacy Research Association (LRA) 70<sup>th</sup> Annual Conference, Virtual meeting.
- **Cho, E.**, Jeon, A. & Oliveira, G. (2020, Apr 17–21) *Promoting Latino family engagement in Catholic bilingual school* [Roundtable presentation]. AERA Annual Meeting. San Francisco, CA, United States. http://tinyurl.com/vpcyu4f
- Chang-Chris, B., Cho, E., & Cruz, M, & Oliveira, G., (2020, Apr 17-21) Parallel perceptions of two way immersion program implementation: How parents and teachers understand its merits [Paper presentation]. AERA Annual Meeting San Francisco, CA, United States.
- Cho, E & Hwang, S. (2019, April 25) Why do multiethnic students in South Korea choose (not) to study mathematics over time? [Paper presentation]. Lynch School of Education, Boston College, Chestnut Hill, MA, United States.
- Hwang, S & Cho, E. (2019, April 5) Exploring changes in multi-ethnic students' achievement motivation: A longitudinal study using expectancy-value theory [Conference presentation]. Korean-American Educational Researchers Associations Annual Conference. Toronto, Canada.
- **Cho, E.**, & Hwang, S (2019, April 5) *Mathematics preservice teachers' culturally sustaining teaching strategies* [Conference presentation]. Korean-American Educational Researchers Associations Annual Conference. Toronto, Canada.
- Kim, D., **Cho, E**., & Kim, S (2019, March 31–April) *Leveraging youth's diverse backgrounds to broaden participation in STEM through invention education* [Paper presentation]. NARST Annual International Conference. Baltimore, MD, United States.
- Barnett, M., Kim, D., Cho, E., & Kim, S (2019, March 3) *Culturally relevant science: An invention program for middle school English Language Learners* [Paper presentation].

- The American Association for Applied Linguistics [AAAL] Conference. Atlanta, GA, United States.
- Kim, D., Cho, E., & Kim, S (2018, Oct 19) Inventing the future: Leveraging cultural assets to create young STEM inventors (Culturally Relevant Science: English Language Learners' Experiences in a Modified Invention Science Curriculum) [Paper presentation]. Diversity Challenge (The Institute for the Study and Promotion of Race and Culture), Chestnut Hill, MA, United States.
- Kim, D., Cho, E., Mannion, P., Long, Y., & Zhou, S. (2018, April 25) Fostering English Language Learner's reflection through multimodal digital storytelling [Paper presentation]. Graduate Research Symposium, Lynch School of Education, Boston College, Chestnut Hill, MA, United States. [Awarded the 1st Best Student Presentation]
- Kim, D., Mannion, P., Long, Y., Zhou, S., & Cho, E. (2018, March 24). *Middle school English Language Learner's multimodal digital storytelling* [Paper presentation]. The American Association for Applied Linguistics Conference. Chicago, Illinois, United States.
- **Cho, E.** & Won, M. (2015, December 23). An Analysis on Bahrom Character Education III Learning outcomes related OECD key Competency. [Paper presentation]. Seoul Women's University, Seoul, Korea

#### RESEARCH REPORT

- Oliveira, G., Becker, M., Cho, E., Segel., M., Haylea, H., Barbieri, O., and Alex, V. (2020). Report on school climate survey — Potter Rd. Elementary School — Framingham Public Schools. The Framingham multilingual education department. Presented at Potter Rd. Elementary School teacher meeting Jan 27, 2020.
- Shirley, D., Kim, D., Wortham, S., **Cho, E**., Lee, J., Kang, Y., Agostinelli, A., Kim, H., Yang, S., & Pu, M. (2019). *Hyukshin schools in Seoul, South Korea: An interim report*. Seoul Metropolitan Office of Education.
- Seo, D., Kim, E., Cho, E., & Lim., K. (2016). A study on job development and employment support for immigrant youth. Rainbow Youth Center. Retrieved from http://m.rainbowyouth.or.kr/bbs/board3/11024

#### OTHER ARTICLES

- Cho, E. (2015). A study on current status and feature of a multicultural alternative school in Korea (국내 다문화 대안학교 현황과 특징에 관한 소고). *Korean Journal of Education Review*, 35, 227–253.
- **Cho, E.** (2015). Sadang Dong +25: Poverty, culture, and research. *Korean Anthropology of Education Newsletter*, 21(4), 1–4.

**Cho, E.** (2014). Niki de Saintpale: Creative healing of suffering. *Korean Anthropology of Education Newsletter*, 20(1), 3–9.

#### INVITED TALKS

- Supporting immigrant students in schools and communities: Technology-integrated STEM Education. Johns Hopkins University, School of Education, December 4, 2023.
- Korea's innovative (Hyukshin) School movement and curriculum. Deokseong women's university (Prof. So Yoon Kim), Oct 13 & Oct 15, 2020.
- Current status of multiculturalism in Korea and understanding of multiculturalism. Seoul Women's University (Prof. Teresa Pyeon), May 11, 2017.
- Research Project on Immigrant Education in South Korea. Seoul Women's University (Prof. Soo-Young Kim), May 17, 2016.

#### **TEACHING EXPERIENCE**

### **Georgia Institute of Technology**

#### Senior Research Scientist

Mechatronics and Motivation (In-person) (Undergraduate and graduate, Spring 2025)

### **Stonehill College**

#### Assistant Professor

### **Graduate Courses**

- EDU 609 (In-Person) Educational Equity and Inclusivity (Graduate, Spring/Summer 2024)
- EDU 610 (In-Person) Contemporary Issues in Education (Graduate, Spring/Summer 2024)
- EDU 621 (In-Person) Teaching Math to Students with Disabilities (Graduate, Fall 2023)
- EDU 623 (In-Person) Teaching Content Math to Middle & High School Students with Disabilities (Graduate, Fall 2023)
- EDU 655 (In-Person) Mathematics Teaching and Learning in the Middle School
- EDU 644 (In-person) EDU 644: Graduate Practicum: GEMS (Math/Science 5–8) (Spring 2024) \**Note*: As a program supervisor

#### **Undergraduate Courses**

- EDU 301 (In-Person) Assessment and Analysis in Education (Undergraduate, Fall 2021, Spring/Fall 2022, Spring/Fall 2023)
- MTH 143 (In-Person) Mathematical Reasoning for Education (Undergraduate, Spring/Fall 2022, Spring 2023)
- EDU 320 (In-Person) Teaching Mathematics, Science, and Technology (Undergraduate, Fall 2021, Spring/Fall 2022)
- EDU 315 (In-Person) Curriculum and Instruction (Undergraduate, Fall 2021)

EDU 435 (In-person) – Practicum: Elementary Education 1-6 (Undergraduate, Spring 2021) \**Note*: As a program supervisor

Directed Study (In-person) – Data Science in Education (Undergraduate, Fall 2022)

Directed Study (In-person) – Teaching Mathematics, Science, and Technology [Secondary Education] (Undergraduate, Fall 2022)

### **Supervising**

EDU 644 (In-person) – Graduate Practicum: GEMS (Math/Science 5–8)

EDU 435 (In-person) – Practicum: Elementary Education 1–6

### **Syllabus Development** (\* Course number is under review)

EDU 624: Mathematics Teaching & Learning in the Elementary Grades

EDU 625: Number and Operations

EDU 626: Functions and Algebra

EDU 627: Geometry and Measurement

EDU 628: Probability, Statistics, and Data Analysis

### **Boston College**

#### Instructor

EDUC 7520 (Hybrid) – Mathematics and Technology: Teaching, Learning, Curriculum in the Elementary School (Graduate, Spring 2021)

EDUC 7301 (Online) – Teaching, Curriculum, and Learning Environments (Graduate, Fall 2020)

EDUC 7305 (Online) – Globalization, Migration, and Education (Graduate, Summer 2021)

#### Teaching Assistant

EDUC 7301 (Online) – Teaching, Curriculum, and Learning Environments (Graduate, 2018)

EDUC 9819 (In-person) – Educational Change: Communication of Innovations (Graduate, 2018)

Supervising Practicums (In-person) – Using a mixed-reality simulation program (Graduate, Fall 2017)

### **Korea National Open University**

#### Lecturer

Life Development and Education (Undergraduate, 2015, 2016; Department of Lifelong learning \*Lecture per one semester and mid-term exam evaluator)

#### PROFESSIONAL DEVELOPMENT

- 2019 Results from a survey on parental and teacher perception of Portuguese-English bilingual program. Potter Road Elementary School, Framingham, Massachusetts
- 2017 Collaborative coaching and learning program. Epiphany Middle School, Dorchester, Massachusetts

### **MENTORING and ADVISING**

<b>Mentoring Recognition</b>	
2024	Mentor nominee, 2024 Tri-Alpha inaugural induction ceremony and reception at Stonehill (Inductee, Marissa Solari)
2023	Supporting a mentee (RA) for the NCTM scholarship Link Selected mentor honoree, 2023 Senior class gift honoree at Stonehill Link Mentor nominee, 2023 Tri-Alpha inaugural induction ceremony and
Academic Advisor	reception at Stonehill (Inductee, Gina Herosian)
2023 Fall – 2024 Spring	4 graduate advisees (Graduate Math/Science program) & all graduate students in grad teacher education program at Stonehill
2022 Fall – 2023 Spring	36 undergraduate advisees, Stonehill College
2021 Fall – 2022 Spring	19 undergraduate advisees, Stonehill College
Research Mentoring	
2022–2023	2 research assistants and 2 teaching assistants, Stonehill College
2021-2022	2 research assistants, Stonehill College
2020-2021	Doctoral student mentor (1 doctoral student), Boston College
2019–2020	4 doctoral students and 3 undergraduate students for the Hyukshin school research project, Boston College
	1 graduate student in the survey team of G. Oliveira's research project

### UNIVERSITY SERVICE

Stonehill College	
2023-Present	Led development of two new mathematics education programs for
	teacher licensure in Massachusetts (Mathematics $1-6$ ,
	Mathematics $5-8$ )
2023-Present	Diversity, Equity, and Inclusion Com
2021-Present	Affiliated Faculty, Faculty of Color Association
2022-Present	Faculty Advisor, Stonehill College Dance Club
2022-2023	Assistant Director of Accreditation and Assessment Search
	Committee, Education Studies Department
2022	Affiliated Faculty, Book Talk (Whistling Vivaldi: How stereotypes
	affect us and what we can do)

### SERVICE TO THE PROFESSION

**Committee** 

2024–2027 Research Committee, The Association of Mathematics Teacher

Educators

**Ad-Hoc Journal** 

Reviewer

2025 Digital Experiences in Mathematics Education

2022–Present Mathematics Teacher: Learning and Teaching PK-12

2022–Present Education and Information Technologies

2022 Asia Pacific Journal of Education 2022 Research in Mathematical Education

2021 – Present Journal of Educational Research in Mathematics

**Ad-Hoc Conference** 

**Proposal Reviewer** 

2025 STEAM leadership conference 2025

The Association of Mathematics Teacher Educators

**Others** 

2024-2025 Lead, AI Subgroup, Math TechQuity Working Group at the PME-

2018–2019 NA

Chairperson, Boston College Korean Graduate Student

2008–2009 Association

Chairperson, Multicultural Education Club (Activity: Tutoring and

mentoring immigrant children), Daegu National University

of Education

### HONOR, AWARD, & SCHOLARSHIP

2023, 2024	Awarded as an Early Career BIPOC Faculty Mentee, The
	Association of Mathematics Teacher Educators
2022	Selected Mentee, Manuscript Review Group, The Association of
	Mathematics Teacher Educators
2022 (March)	The "Professor of the Month" Award, National Residence Hall
	Honorary, Stonehill College, Easton, MA.
2018	The Best Student Presentation Award, Graduate Research
	Symposium, Lynch School of Education, Boston College,
	Chestnut Hill, MA
2017–2021	Fully Funded Ph.D. Scholarship — Stipend and Tuition Waiver,
	Boston College.
2018–2020	Travel Grants at Boston College
	(a) Lynch Doctoral Student Travel Grant 2020 (\$500); 2019
	(\$500); 2018 (\$400)
	(b) Boston College Graduate Student Association (GSA) 2021

(\$130);

	(c) Boston College Graduate Education Association (GEA) 2021
2011–2012	(\$125); 2018 (\$120)
2011–2012	Superior Academic Performance, Seoul National University
2009–2010	Lecture & Research Scholarship, Seoul National University
	Superior Academic Performance Scholarship, Daegu National
	University of Education
CERTIFICATES	
2021 (Jun 24–30)	Certificate of Achievement, Computer Science Crash Course 2021, Krause Center for Innovation at Foothill College
2020 (Feb 6–8)	Selected Attendee, 2020 National Assessment of Education
	Progress (NAEP) Data Training Workshop, American
	Institutes for Research (AIR)
2007	Teaching Certifications: Elementary School Teacher License,
	South Korea
PROFESSIONAL AF	FILIATIONS
PROFESSIONAL AF 2022–Present	North American Chapter of the International Group for the Psychology of Mathematics Education [PME–NA] Note. Affiliated working group: Conceptualizing the role of technology in equitable mathematics classrooms (Math TechQuity)
	North American Chapter of the International Group for the Psychology of Mathematics Education [PME–NA] Note. Affiliated working group: Conceptualizing the role of technology in equitable mathematics classrooms (Math TechQuity)  American Association of Colleges for Teacher Education
2022–Present	North American Chapter of the International Group for the Psychology of Mathematics Education [PME–NA] Note. Affiliated working group: Conceptualizing the role of technology in equitable mathematics classrooms (Math TechQuity)
2022–Present 2022–2024	North American Chapter of the International Group for the Psychology of Mathematics Education [PME–NA] Note. Affiliated working group: Conceptualizing the role of technology in equitable mathematics classrooms (Math TechQuity)  American Association of Colleges for Teacher Education [AACTE]
2022–Present  2022–2024  2021–Present	North American Chapter of the International Group for the Psychology of Mathematics Education [PME–NA] Note. Affiliated working group: Conceptualizing the role of technology in equitable mathematics classrooms (Math TechQuity)  American Association of Colleges for Teacher Education [AACTE] The Association of Mathematics Teacher Educators [AMTE]
2022–Present  2022–2024  2021–Present 2021–Present	North American Chapter of the International Group for the Psychology of Mathematics Education [PME–NA] Note. Affiliated working group: Conceptualizing the role of technology in equitable mathematics classrooms (Math TechQuity)  American Association of Colleges for Teacher Education [AACTE] The Association of Mathematics Teacher Educators [AMTE] National Council of Teachers of Mathematics [NCTM]
2022–Present  2022–2024  2021–Present 2021–Present 2021–Present	North American Chapter of the International Group for the Psychology of Mathematics Education [PME–NA] Note. Affiliated working group: Conceptualizing the role of technology in equitable mathematics classrooms (Math TechQuity)  American Association of Colleges for Teacher Education [AACTE] The Association of Mathematics Teacher Educators [AMTE] National Council of Teachers of Mathematics [NCTM] Faculty of Color Association [FOCA], Stonehill College