

AARON T WILSON

Assistant Professor of Mathematics Education

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EDUCATION

2013	Ph.D.	Mathematics Education Department of Mathematics Texas State University – San Marcos
2005	B.S.	Mathematics Texas State University – San Marcos
2005	B.A.	Spanish Texas State University – San Marcos

PROFESSIONAL EXPERIENCE

2013 – Present	Assistant Professor of Mathematics Education School of Mathematical and Statistical Sciences The University of Texas Rio Grande Valley (est. 2015, formerly University of Texas Pan American) Edinburg, Texas
2009 – 2013	Doctoral Teaching/Research Assistant, Department of Mathematics, Texas State University San Marcos, Texas
2006 – 2009	High School Mathematics Teacher (Grades 8-12), Hays Consolidated Independent School District Kyle, Texas

GRANTS FUNDED/PENDING

National Science Foundation (NSF), “CAREER: Motivating Career Choices in Mathematics through Near-peer MathShows and Social Media”, Principal Investigator: Aaron T Wilson. \$462,844. Pending.

UTRGV College of Science (COS) Research Enhancement Seed Grants Program, (Feb 2017 – May 2018). “Broadening participation in mathematics through near-peer interventions and social media”, Principal Investigator: Aaron T Wilson, co-PI: Sergey Grigorian. \$23,200. Funded.

UTRGV College of Science (COS) Research Enhancement Seed Grants Program, (Feb 2017 – May 2018). “Elementary Statistics Instructors’ Attitudes toward Confidence Intervals”, co-PI with Principal Investigator: Hyung Kim. \$13,850. Funded.

UTPA Undergraduate Research Initiative (URI) Grant with student Aaron Cavazos, (2015, Fall). “Strategies for teaching English Language Learners with learning disabilities”, \$2,000. Funded.

UTPA Get in Gear Grant, (2015, Summer). Junior Faculty Support Program, \$500. Funded.

UTPA Faculty Development Council, Faculty Development Funding Program, (2014, Summer). “STaR 2014 – Service, Teaching, and Research”, \$1,300. Funded.

UTPA Vice Provost for Faculty Affairs, (2013, Spring). Junior Faculty Travel Support Program, \$500. Funded.

National Science Foundation (NSF), Mathematical Instruction for English Language Learners, 2011—2016, Principal Investigator: M. A. Sorto. Doctoral Research Assistant: Aaron T Wilson. \$679,000. Funded.

Texas Education Agency, TSUS MELL Initiative, 2004-2005, Principal Investigator: Joyce Fischer. Undergraduate Research Assistant: Aaron T Wilson. \$284,060. Funded.

GRANTS SUBMITTED BUT NOT FUNDED

UTRGV Vice Provost for Faculty Affairs and Diversity, (2017, Summer). Faculty Travel Support Program, Funding to attend 2017 Geometry Labs United Conference, Seattle, WA, \$1,000. (not funded).

Greater Texas Foundation (GTF), Faculty Fellows Program, (2017, February.) “A Garden and a Pipeline: Promoting Entry and Retention in Collegiate Math Studies”, Principal Investigator: Aaron T Wilson, \$90,000. (not funded).

UTRGV Vice Provost for Faculty Affairs and Diversity, Faculty Travel Support Program, (2016, Fall.) Funding to attend 2017 Joint Mathematics Meetings, Atlanta, GA, \$600. (not funded).

National Science Foundation (NSF), Broadening participation in mathematics through near-peer mentoring and social media, \$835,172.00, Sergey Grigorian-PI, Aaron T Wilson-CoPI (submitted August 2016, not funded)

National Science Foundation (NSF), Building an Informal Mathematics Learning Pipeline from High School to College, \$297,664.00, Aaron T Wilson-PI, Sergey Grigorian-CoPI (submitted November 2015, not funded)

SCHOLARLY WRITINGS

REFEREED JOURNAL ARTICLES

Wilson, A. T., Kim, H., Sorto, M. A. (Under review). Revealing and building pre-service teachers' beliefs and knowledge about teaching mathematics to Emergent Bilinguals through a test item-writing task, *Mathematics Teacher Educator*.

Sorto, M. A., Marshall, J. H., Wilson, A. T., Bower, R. S. G., & White, A. (In Preparation). What matters for Emergent Bilinguals' mathematics achievement? Exploring the effects of teachers' knowledge, and quality of instruction. *Journal of Research in Mathematics Education*.

Wilson, A. T. (2016). Knowledge for equitable mathematics teaching: the case of Latino ELLs. *The Mathematics Enthusiast*. 13(1&2), 111–129.

Sorto, M. A., Mejía Colindres, C. A., & Wilson, A. T. (Sept., 2014). Uncovering and Eliciting Mathematical Perceptions in Linguistically Diverse Classrooms. *Mathematics Teaching in the Middle School*. 20(2), 72–77.

EDITED BOOK CHAPTERS

Sorto, M.A., Wilson, A., & White, A. (2017). Teacher knowledge and teaching practices in linguistically diverse classrooms. In J. Moschkovich, D. Wagner, A. Bose, J. Rodrigues, & M. Schütte (Eds.) *Language and communication in mathematics education, international perspectives*, (pp. 12). Dordrecht: Springer.

BOOKS

Sorto, M. A., Wilson, A. T., & Mejia Colindres, C. A. (2011). *A Guide to Mathematics Instruction for English Language Learners*, professional development resource book produced for Meadows Foundation.

PRESENTATIONS

Cardenas, D., Campuzano, O., & Wilson, A.T. (2017). *EAGL Presentations Changing High School Students' Attitudes towards Mathematics*, Undergraduate research poster presented at 2017 Geometry Labs United Conference. Seattle, WA.

Wilson, A.T. (2017). *Measuring the Impacts of Mathematics Outreach on K-12 and College Students*, 2017 Geometry Labs United Conference. Atlanta, GA.

Wilson, A.T. (2017). *A near-peer mathematical mentoring pipe-line from the secondary mathematics classroom to graduate studies in mathematics*. AMS Special Session on Public School Districts and Higher Education Mathematics Partnerships, AMS-MAA Joint Mathematics Meeting, Atlanta, GA.

Wilson, A.T. (2016). *If you don't ask, then you already have the "No"*. Texas-Pre Freshman Engineering Program (TEX PREP), University of Texas Rio Grande Valley, Edinburg, TX.

Wilson, A.T. (2016). *Pre- and In-service teachers as psychometricians: a Challenge-based Inquiry (CBI) project in mathematics education aimed at developing knowledge for equitable mathematics teaching*. Challenge-Based Instruction Conference, Edinburg, TX.

Sorto, M.A., Wilson, A.T., & White, A. (2016). *Teacher knowledge and teaching practices in linguistically diverse classrooms*. Paper presented at the 13th International Congress on Mathematics Education (ICME-13). Hamburg, Germany.

Wilson, A.T., & Cavazos, A. (2015, June). *Analogous mathematics instruction: One strategy to teach all?* Conference for the Advancement of Mathematics Teaching (CAMT), Houston, TX.

Wilson, A.T., & Cavazos, A. (2015, June). *Strategies for teaching English Language Learners with disabilities*. Mathematics Education Seminar, the University of Texas-Pan American.

Wilson, A.T., & Grigorian, S. (2014, October; 2015, February, March, April). *Your teachers are lying to you?* Mathematical Outreach Presentation, Donna ISD, Pharr – San Juan – Alamo ISD, Rio Grande Valley, TX.

Wilson, A.T. (2014, October). *From Disserting to Professing: "Does a research agenda come with this PhD?"* Invited Keynote address: Texas State University-San Marcos, Mathematics Education Seminar.

Wilson, A.T. (2014, April). *Knowledge for Teaching Special Populations – the Case of Latino English Language Learners in Math Classes*. Paper presented at the Annual Meeting of the American Educational Research Association (AERA), Philadelphia, Pennsylvania.

Sorto, M. A., Mejía, C. A., & Wilson, A. T. (2014, April). *Learning to prepare mathematics teachers of English language learners*. "Gallery Workshop" presented at the Annual Meeting and Exposition of the National Council of Teachers of Mathematics (NCTM), New Orleans, Louisiana.

Wilson, A. T. & Kotsikorou, E. (2014, February). *Summer Undergraduate Research Experience Workshop*, February 2014, the University of Texas-Pan American.

Wilson, A. T. & Sorto, M. A. (2014, February). *Knowledge for teaching mathematics to ELLs: How is it measured and how does it grow?* Paper presented at the Annual Conference of the Association of Mathematics Teacher Educators (AMTE), Irvine, California.

Wilson, A. T., (October 2013). In No Sense Opposed, Yet Neither Identical: Mathematical Knowledge for teaching ELs. Paper presented at the 9th Annual Texas Undergraduate Mathematics Conference (TUMC), St. Mary's University, San Antonio.

Sorto, M. A., Wilson, A. T., Mejía, C. A. (2013, May). *Excelling in Mathematics: The Case of English Learners Living in Poverty*. Paper presented at the Annual Meeting of the American Educational Research Association (AERA), San Francisco, California.

Sorto, M. A., Wilson, A. T., Mejía, C. A. (2013, April). *Do You See What I See? English Language Learners' Justifications*. Paper presented at the Annual Meeting and Exposition of the National Council of Teachers of Mathematics (NCTM), Denver, Colorado.

Sorto, M. A., Wilson, A. T., Mejía, C. A. (2012, November). *Español + English = Espanglish!* Paper presented at the regional conference and exposition of the National Council of Teachers of Mathematics (NCTM), Chicago, Illinois.

Sorto, M. A. & Wilson, A. T. (2012, October). *Español + English = Espanglish!* Paper presented at the regional conference and exposition of the National Council of Teachers of Mathematics (NCTM), Dallas, Texas.

Wilson, A.T. (2012, October) *Measuring KT-MELL: Knowledge for teaching mathematics to English Language Learners*. Poster presented at Students' Corner, Graduate Mathematics Open House, Texas State University - San Marcos, Texas.

Wilson, A.T. (2012, October). *Texas State Graduate Mathematics Panel Discussion: Q&A with master's and Ph.D. students*. Texas State University – San Marcos, Texas.

Sorto, M. A., Wilson, A. T., Mejía, C. A. (2012, July). *Español + English = Espanglish!* Paper presented at the annual meeting of the Conference for the Advancement of Mathematics Teaching (CAMT). Houston, Texas.

Wilson, A.T. (2012, January). *Defining and measuring the dimensions of mathematics teachers' knowledge for teaching English Language Learners*. Presentation at the Mathematics Education Seminar, Texas State University - San Marcos, Texas.

Wilson, A.T. (2011, October) *Developing measures of teachers' mathematical knowledge for teaching English Language Learners*. Poster presented at Students' Corner, Graduate Mathematics Open House, Texas State University - San Marcos, Texas.

Wilson, A.T. (2011, February). *Texas State Graduate Mathematics Panel Discussion: Q&A with master's and Ph.D. students*. Texas State University – San Marcos, Texas.

Warshauer, M., McCabe, T., Warshauer, H., Brown, S., Barrones, C., Stein, S., & Wilson, A.T., (2005, April). *Math Inquiry Groups*. Paper presented at the Annual Meeting and Exposition of the National Council of Teachers of Mathematics (NCTM), Anaheim, California.

COURSES TAUGHT

The University of Texas
Rio Grande Valley
2015–

- MATH 1350 Fundamentals of Mathematics I
A first course for pre-service elementary and middle school teachers.
- MATH 1351 Fundamentals of Mathematics II
A second course for pre-service middle school math teachers.
- MATE 3304 Fundamentals of Algebraic Structures
A course in abstract algebra for pre-service middle school math teachers.
- MATE 3307 Fundamentals of Problem Solving
A course for pre-service middle school math teachers.
- MATE 3311 Fundamentals of Discrete Mathematics
A course for pre-service middle school math teachers.
- MATE 4329 Research Methods in Secondary Mathematics (UTeach)
A course pre-service high school math teachers.
- MATH 6310 Mathematics Teaching and Learning
A graduate course for practicing and future secondary math teachers.

The University of Texas-
Pan American
2013–2015

- EMAT 2306 Foundations of Mathematics 1
A course for Pre-Service Elementary and Middle School Math Teachers.
- EMAT 2307 Foundations of Mathematics 2
A course for Pre-Service Elementary and Middle School Math Teachers
- MMAT 3313 Basics of Algebraic Structures
A course for pre-service middle school math teachers.
- MMAT 3317 Basics of Discrete Mathematics
A course for pre-service middle school math teachers.
- MMAT 3318 Basics of Number Theory

A course for pre-service middle school math teachers.

- MATH 6391 Mathematics Project Course
A masters'-level research course.
- MATH 2312 INFORMAL GEOMETRY
A course for Pre-Service Elementary and Middle School Teachers

Texas State University
2009—2011

Recitation Session Instructor:

- MATH 2471 CALCULUS I
- MATH 1311 BASIC MATHEMATICS
(A Developmental Mathematics Course)

Hays Consolidated Independent
School District
2006—2009

Public High School Mathematics Teacher:

- PRECALCULUS
- ALGEBRA II
- CREDIT RECOVERY (Algebra I, Geometry,
Algebra II, Mathematical Modeling)

PROFESSIONAL DEVELOPMENT (PD) EXPERIENCE

2016, June. Professional Development Partnerships for Advanced Math and Science Courses, *Mercedes Independent School District, Mercedes, Texas*. Developed mathematics educational materials and activities for high school mathematics teachers at Mercedes High School.

2016, July. TRS Mathematics Institute, *Region One Educational Service Center (ESC 1), Edinburg, Texas*. Developed educational materials and activities for middle school mathematics teachers in the Rio Grande Valley.

2015, July. TRS Mathematics Institute, *Region One Educational Service Center (ESC 1), Edinburg, Texas*. Developed educational materials and activities for middle school mathematics teachers in the Rio Grande Valley.

2013, Summer. *Bilingual Mathematics Institute, Brownsville Independent School District, Brownsville, Texas*. Developed educational materials and research instruments for, and participated in conducting professional development activities for twenty middle school mathematics teachers. This project was funded by the National Science Foundation (DRL-1055067).

2012-2013. *Meeting the Needs of All Students: Mathematical Instruction of English Language Learners*. Texas State University, San Marcos Consolidated Independent School District, and the Brownsville, Texas Independent School District. Prepared educational materials, including print resources packet and online resources/collaboration website. Created online recruitment site, planned and conducted four successive continuing-education sessions with practicing middle school mathematics teachers.

PROFESSIONAL ACTIVITIES

2016 – present. *Equity and Mathematical Knowledge for Teaching*, a recurrent workshop convened at the University of Michigan (Ann Arbor), composed of a nationally representative group of scholars aimed at defining and operationalizing equity and diversity issues in mathematics education.

2014, March. *Critical Issues in Mathematics Education 2014: The role of the mathematics department in the mathematical preparation of teachers*, Mathematical Sciences Research Institute (MSRI).

2013, November. *Challenge-Based Instruction*, The University of Texas-Pan American. Developed curriculum materials for implementation of the Challenge-Based Instructional Method in Mathematics courses. Challenge-Based Instruction has a tradition in Engineering Instruction and is based upon research completed by the National Research Council.

2013, June. *Exploring the Possibility for a Common Core Mathematics Licensure Examination for Entry into Teaching*, University of Michigan, School of Education.

CURRENT PROJECTS

Wilson, A.T. & Grigorian, S. (2014-present). *UTRGV Experimental Algebra and Geometry Lab (EAGL): Mathematics Outreach*. Mathematics enrichment/outreach activities presented to local high schools. More than 400 high school students served each year.

Kim, H., & Wilson, A. T. (2016 – present). *Statistics instructors' perceptions on the relative value of the usage of confidence intervals and p-values in doing inferential statistics*. This is an ongoing survey study aimed at gathering evidence regarding perceptions and pedagogical habits of statistics instructors, with the goal of informing improvements in statistics education practices.

Wilson, A.T. (2013-present). *PSTs Testing ISTs: Are You Smart Enough to Teach An ELL?* This is a challenge-based instruction (CBI) project, created for usage with university students who are in training to be teachers, developed for the dual purposes of exposing pre-service teachers (PSTs) to linguistic issues encountered in mathematics teaching and also investigating applications of my research in teachers' knowledge domains.

MEASURES DEVELOPMENT

2016 – 2017. Collaborated in developing, pilot-testing, validating 30-item survey instrument for measuring statistics instructors perceptions of confidence intervals.

2016 – 2017. Directed development, piloting, validation of 50-item survey instrument for measuring mathematics pre-service teacher self-efficacy instrument.

2011 – 2013. Developed, pilot-tested, validated 32-item survey measuring Pedagogical Content Knowledge for teaching Mathematics to English Language Learners (PCK-MELL). This construct is thought to be related to the quality of mathematics instruction and to student achievement. Factor Analysis (EFA and CFA) and Item Response Theory (IRT) were employed in the analysis of psychometric properties of the items.

2011 – 2013. Developed and validated classroom observation protocol codes useful for rating quality of mathematics instruction among students who are English Language Learners.

SERVICE (REFEREE)

2017-present	Journal Reviewer for <i>Mathematics Teacher</i>
2016-present	National Council of Teachers of Mathematics (NCTM) Research Conference proposal reviewer
2016-present	Journal Reviewer for SpringerPlus journal.
2015	Reviewer of conference proposals for annual Research Conference of the <i>National Council of Teachers of Mathematics</i> (NCTM)
2014 – present	Reviewer of conference proposals for the <i>American Educational Research Association</i> (AERA), and for the <i>Association of Mathematics Teacher Educators</i> (AMTE)
2013 – present	Journal Reviewer for <i>Mathematics Teaching in the Middle School</i>
2013 – present	Journal Reviewer for <i>Teaching for Excellence and Equity in Mathematics</i>

SERVICE (OTHER)

2016-17	Co-organizer of AMS Special Session on Public School Districts and Higher Education Mathematics Partnerships, AMS-MAA Joint Mathematics Meeting, January 4 - 7, 2017.
2016, 2017	JSTEM Project-based Learning Summer Internship Mentor
2015 – present	Vaquero RoundUP presenter – annual start-of-year freshmen orientation event
2014, 2015, 2016	University Interscholastic League (UIL), Rio Grande Valley school districts, Middle School Competition Judge
2015, 2016	Mathematics Education Search Committee
2014 – present	Experimental Algebra & Geometry Lab (EAGL), Director of Outreach

2014, 2015	Recruitment and Outreach Committee, Chair
2014	Mathematics Education Majors' Assessment Committee
2014	College Council College of Science and Mathematics
2013 – present	Faculty Advisor Christians at Pan Am, Registered Student Organization
2013 – present	Mathematics Education Course Committee
2013 – present	Faculty Mentor of Student Research
2013-14	Undergraduate Curriculum Committee
2013-14	Student Retention Committee University of Texas-Pan American
2012	Undergraduate Mathematics Student Mentor Texas State University – San Marcos
2009	Algebra II Curriculum Committee Hays CISD, Kyle, Texas
2007 – 2009	Algebra II Subject Instructional Team Leader Hays High School, Kyle, Texas

AFFILIATIONS

- American Mathematical Society (AMS)
American Educational Research Association (AERA)
- Association of Mathematics Teacher Educators (AMTE)
- National Council of Teachers of Mathematics (NCTM)
- TODOS: Mathematics for All
- Texas Council of Teachers of Mathematics (TCTM)

AWARDS

2015	Excellent Mentorship Award, UTPA College of Science and Mathematics
2012 – 2013	Graduate College Scholarship, Texas State University, \$2500
2012 – 2013	Associated Student Government Scholarship, Texas State University, \$2000
2004	Texas State Study Abroad Scholarship, Tec de Monterrey, Monterrey, Nuevo León, \$1500
2004	Robert D. Galván Academic Scholarship. Texas State University, \$1000

DISTINCTIONS

2014-2015 STaR (Service, Teaching, and Research) Fellow, funded by the National Science Foundation

2013-2015 Mathematical Association of America, Project NExT Fellow

2002 – 2005 Dean’s List, Texas State University – San Marcos, All Semesters

PROFESSIONAL LICENCES

Texas Mathematics Teacher Certification, Grades 8 – 12

SOFTWARE

- R-statistics
- SPSS
- AMOS
- Qualtrics (Survey Software)
- Geometer’s Sketchpad
- Fathom
- Acrobat
- Microsoft Office Suite

LANGUAGES

Fluent in Spanish

OTHER INTERESTS AND TRAINING

- Fine Arts: music theory and performance
- Guitarist, pianist, vocalist
- Piano tuner/technician

PROFESSIONAL REFERENCES

Available upon request