TEXAS STATE VITA

I. Academic/Professional Background

A. Name and Title

Name: Haley R. King Title: Program Faculty

B. Educational Background

Degree	*Year*	*University*	*Major*	*Thesis/Dissertation*
MS	2017	Texas State University	Mathematics	
BS	2014	University of Texas at Austin	Mathematics: Pure Mathematics	

C. University Experience

Position	*University*	*Comments*	*Dates*
Assistant Professor of Instruction, Mathematics Department	Texas State University. San Marcos, TX, United States		September 1, 2024 - Present
Lecturer, Mathematics	Texas State University	I am was employed as a Lecturer and Technology Assistant for the Mathematics Department at Texas State University	September 1, 2017 - September 1, 2024
TEACHING & LABORATORY ASSISTANT	AUSTIN COMMUNITY COLLEGE	□ Assisted professors and students both in classrooms and laboratory instruction. □ Specialized in Physical & Historical Geology □ Assistant to the head of the department	August 2010 - December 2011

D. Relevant Professional Experience

Position	*Entity*	*Comments*	*Dates*
MATH TUTOR	TEXAS STATE UNIVERSITY	Tutor for the mathematics department specializing in all	September 2014 - April 2015

Position	*Entity*	*Comments*	*Dates*
		undergraduate courses and most graduate courses.	

II. TEACHING

A. Teaching Honors and Awards:

Award / Honor Nominee: Excellence in Teaching Lecturer Level (Nomination), Mathematics Department.
October 25, 2024 - December 6, 2024
nomination_teaching_award24-1.pdf
KING_NOMINATION_24-1.pdf
October 25, 2023 - December 6, 2023
king_teaching_nom_f23_submit-1.pdf
nomination2-1.pdf
October 25, 2019 - December 6, 2019
nomination1-1.pdf
King_narrative-1-2.pdf

B. Courses Taught:

Texas State University:

MATH 1300 - ELEMENTARY ALGEBRA

MATH 1311 - INTRMED ALGEBRA

MATH 1315 - COLL ALGEBRA

MATH 1315 - COLLEGE ALGEBRA

MATH 1316 - SURV CONTEMP MATH

MATH 1316 - SURVEY OF CONTEMPORARY MATH

MATH 1319 - MATH BUS & ECO I

MATH 1329 - MATH BUS & ECO II

MATH 1329 - MATH FOR BUSINESS & ECO II

MATH 2321 - CALC LIFE SCI I

MATH 2321 - CALCULUS FOR LIFE SCIENCES I

MATH 2417 - PRE-CALCULUS MATH

MATH 2417 - PRE-CALCULUS MATHEMATICS

MATH 2472 - CALCULUS II

F. Other:

Guest Lecture, Teaching Demonstration: Interactive Desmos Activities, College Algebra Teaching Forum. San Marcos, TX. 20. (April 11, 2025).

Additional Comments: This was a teaching demonstration for the College Algebra Teaching Forum. The purpose was to showcase various interactive technology activities that support College Algebra topics. One example is the Marble Slide Exponential Function game, where you must transform the function correctly to slide marbles through all the stars on the screen. These activities and many more were later adapted to become part of a larger program to support the course.

Guest Lecture, Fall 2019 Tutor Training, Math CATS. San Marcos, TX. (August 23, 2019).

Additional Comments: I was asked to facilitate a training session for the Math CATS tutors in reference to factoring and finding inverses of functions at the Math CATS Tutor Training Fall 2019.

G. Teaching Professional Development Activities Attended

Workshop, "Pathways Training II: Precalculus Teaching Workshop," Arizona State University. (October 10, 2025).

Workshop, "Pathways Training I: Precalculus Teaching Workshop," Arizona State University. (August 19, 2025).

Professional Development to promote Covariational Reasoning for College Algebra, "ITsCRITiCAL," NSF, University of Colorado at Denver. (January 2022 - May 2022).

Haleys letterforProject-Participant-Bikai-Spr24-1.pdf

Additional Comments: This is a study in which I attended five professional development sessions where we discussed the details of the implementation of more than six asynchronous and synchronous desmos techtivities that we added to our course. My course was a large 150+ student fully online section. The intention to promote covariational reasoning among students so that they may better understand graphs and how changing quantities effect graphs. This was a five university wide study sponsored by the NSF and facilitated by Heather Johnson at the University of Colorado at Denver. When the initial portion of the study concluded, I was asked to participate again throughout 2023.

III. SCHOLARLY/CREATIVE

B. Works Not in Print:

2. Invited Talks, Lectures, and Presentations:

King, H. R., "Teaching Demonstration: Interactive Desmos Activities." (April 11, 2025).
Haley King- Contributions to 1315 Forum-1.pdf
Additional Comments: This was a teaching demonstration for the College Algebra Teaching Forum. The purpose was to showcase various interactive technology activities that support College Algebra topics. One example is the Marble Slide Exponential Function game, where you must transform the function correctly to slide marbles through all the stars on the screen. These activities and many more were later adapted to become part of a larger program to support the course.

King, H. R. (Researcher/Presenter), Differential Equations Applied Math Seminar, "Matrix Theory for Data Association in a Prototype Verification System," Department of Mathematics/NASA Langley Research Center, Zoom, San Marcos, TX, United States. (September 3, 2021).
mtda-1-2.pdf
DEAM_king_9_3_2021-1.pdf
Additional Comments: I worked on this project with Tanner Slagel of the Formal Methods Group, Langley Research Center, NASA during Summer 2021. We developed algorithms such as a Kalman Filter with a Mahalanobis Distance function and other topics from linear algebra for critical safety avionics purposes. These algorithms were specified through a prototype verification system (PVS), which is an interactive proof solver, then we compared numerical experiments with MATLAB. In order to accomplish this, we developed an advanced linear algebra pvs library to support formal verification and data association that is now added to NASA's mathematical library. I presented a talk on this research both for the Formal Methods Group and for the Differential Equations and Applied Math Seminar here at Texas State. I will be a co-author on the paper detailing this project to be published Spring 2022.

E. Scholarly / Creative Professional Development Activities Attended:

PhD Course on Mathematics Education, ""Independent Study: Modeling, Differential Equations, and the Role of Technology in the Classroom"." (January 2023 - May 2023).

PhD Courseon Mathematics Education, ""Advanced Quantitative Research in Mathematics Eduation"," Mathematics Department, San Marcos, TX, United States. (August 2022 - December 2022).

PhD Course on Mathematics Education, ""Quantitative Research Analysis"," Mathematics Department, San Marcos, TX, United States. (January 2022 - May 2022).

PhD Course on Mathematics, ""Statistics I"," Mathematics Department, San Marcos, TX, United States. (August 2021 - December 2021).

PhD Course on MAthematics Education, ""RUME I"," Mathematics Department, San Marcos, TX, United States. (August 2021 - December 2021).

PhD Course on Mathematics, ""Algebra II"," Mathematics Department, San Marcos, TX, United States. (January 2021 - May 2021).

PhD Course on Mathematics Education, ""Teaching Specialized Content: Calculus"," Mathematics Department, San Marcos, TX, United States. (January 2021 - May 2021).

PhD Course on Education, ""Beginning Qualitative Design"," Education Department/Mathematics Department, San Marcos, TX, United States. (August 2020 - December 2020).

PhD Course on Mathematics Education, ""Curriculum Design and Analysis"," Mathematics Department, San Marcos, TX, United States. (August 2020 - December 2020).

PhD Course on Mathematics Education, ""History of Mathematics"," Mathematics Department, San Marcos, TX, United States. (January 2020 - May 2020).

PhD Course on Mathematics Education, "Current Research in Mathematics Education," Mathematics Department, San Marcos, TX, United States. (August 26, 2019 - December 13, 2019).

PhD Course on Mathematics Education, "Instructional Techniques and Assessments," Mathematics Department, San Marcos, TX, United States. (January 22, 2019 - May 15, 2019).

IV. SERVICE

A. Institutional

1. University:

Participant, Course Transformation Project: College Algebra-Office of Faculty Success. (May 2025 - Present).

Haley King Letter of Support Course Transformation Project-1.pdf

Additional Comments: I had the pleasure of participating in the Course Transformation Project for College Algebra conducted by the Office

of Faculty Success. Through Summer 2025 our project group members met regularly to discuss assigned readings on pedagogical literature and review and analyze data associated with our own College Algebra courses as well as data associated with the course's performance as a whole. From these meetings groups were formed to execute specific projects necessary to transform the course. My groups were the Learning Objective(LO) Group and the Pre-Lecture Assignment(PLA) group. The LO group did a thorough inspection and realignment of all topics represented in the template homework and notes; being sure that all necessary topics were represented, problems were concise, ordered in the most productive way. The PLA group designed assignments for every topic in the course. A variety of assignments developed including interactive technology activities, interactive graphs, and standalone documents as well. These assignments were bundled in a master LaTex document with all appropriate links and instructions for implementation in a directive for instructor convenience.

Participant, NIH Study: Supporting Student Agency in Undergraduate Biomedical Education. (August 2024 - May 2025).

Spring 2025 Certificate of Participation NIH Study_King-1.pdf

Additional Comments: This is a large-scale, five-year, multi-university research project conducted simultaneously at the University of Southern California, the University of Michigan, and Texas State University. It investigates the effectiveness of an intervention designed to promote college students' agency, their ability to actively shape their learning and motivation, in introductory biomedical science courses. Using a longitudinal, cluster-randomized, active control design, the project examines how the intervention affects students' engagement, motivation, persistence, academic performance, and long-term outcomes such as degree completion and career intentions. The study also explores the role of classroom environments and instructor practices in supporting student agency and motivation, as well as how these effects vary across different student populations and classroom contexts. My role was to participate in interviews and teaching observations, as well as facilitate data collection connected with my Calculus for Life Sciences course.

3. Department/School:

Organizer, Precalculus Teaching Forum. (May 2025 - Present).

Additional Comments: I was appointed as a leader for the Precalculus Teaching Forum over the Summer of 2025. This is a position I am enthusiastic about as I care deeply about enabling success for this historically challenging course. My most important role at this time has been coordinating professional development sessions through a series of teaching workshops hosted by the authors of the curriculum for the course. I have also worked to coordinate and host regular forum meetings, resolve technology issues associated with Canvas

integration, resolve DDA issues with textbook access when they arise, and reorganize and maintain the forum site with up to date information.

Participant, Awards Committe. (April 2025 - Present).
awards_ceremony_volunteer_24_25-2.pdf
Additional Comments: I assisted in the Awards Ceremony in 2025 in organizing and handing out awards during the ceremony.

Participant, College Algebra Teaching Forum. (January 2020 - Present).
Haley King- Contributions to 1315 Forum-1.pdf

Member, Precalculus Teaching Forum. (August 2018 - Present).

Participant, Mathematics Education Seminar. (August 2016 - Present).

Participant, Differential Equations and Applied Math Seminar. (January 2015 - Present).

Participant, ITsCRITiCAL Project. (2022 - 2024).
Haleys letterforProject-Participant-Bikai-Spr24-1.pdf
Additional Comments: This is a study in which I attended five professional development sessions where we discussed the details of the implementation of more than six asynchronous and synchronous desmos techtivities that we added to our course. My course was a large 150+ student fully online section. The intention to promote covariational reasoning among students so that they may better understand graphs and how changing quantities effect graphs. This was a five university wide study sponsored by the NSF and facilitated by Heather Johnson at the University of Colorado at Denver. When the initial portion of the study concluded, I was asked to participate again throughout 2023

Participant, Awards Committee. (April 2024).
awards_ceremony_volunteer_24_25-1.pdf
Additional Comments: I assisted in the 2024 Awards Ceremony in organizing and handing out awards during the ceremony.

Member, Survey Contemporary Mathematics & Elementary Algebra Teaching Forum. (August 2019 - January 2024).
Haley Letter_13161300forum_part-1.docx
Additional Comments: I have attended the 1316/1300 Teaching Forum regularly every semester that I was currently teaching the courses since I first initially taught one of the paired courses in 2019. This is a forum I am currently participating in.

D. Organization Memberships:

Calculus for Life Sciences Teaching Forum. (September 2018 - Present).
HKing_Math2321TeachingForum-1.pdf

College Algebra Teaching Forum. (September 2018 - Present).
Haley King- Contributions to 1315 Forum-1.pdf

Survey for Contemporary Math Teaching Forum. (September 1, 2018 - Present).
Haley Letter 1316 Forum-1.pdf

Business Math Teaching Forum. (September 1, 2017 - Present).

Precalculus Teaching Forum. (September 1, 2017 - Present).