Curriculum Vita

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EDUCATION

- Ph.D. (May 2012) in Mathematics at University of Texas at Arlington.
  Areas of Study: Finite Geometries, Non-Associative Algebras
  Dissertation title: "New Results in Finite Geometries Pertaining to Albert-like Semifields"
  Dissertation Advisor: Dr. Minerva Cordero

- M.S. (August 2006) in Mathematics at Sam Houston State University.
  Thesis title: "A Partial Classification of Mathematically Celtic Knots"
  Thesis Advisor: Dr. Jacqueline Jensen

- B.S. (December 2003) in Mathematics, minor in Secondary Education at Sam Houston State University.
  Passed Mathematics Certification Exam for Grades 6-12 in 2003, passed Pedagogy and Professional Responsibility Exam for Grades 8-12 in 2003.

- A.S. (May 2000) in Mathematics/Physics/Pre-Engineering, Lee College, Baytown, TX.

ACADEMIC EMPLOYMENT

- Computer Science and Mathematics Department Chair, Sul Ross State University, May 2015-Present
  Perform administrative duties of the position.

- Assistant Professor, Sul Ross State University August 2012-Present
  Teach courses, course development, research.

  Courses Taught:

  - **Fall 2016:**
    Foundations of Higher Mathematics
    Calculus I
    College Algebra
    Individual Studies:Internship
    First Year Seminar
  - **Summer 2016:**
    College Algebra
    Individual Studies: McNair Research

- **Spring 2016:**
  Modern Algebra I
  Foundations of Elementary Math II
  Contemporary Mathematics
- **Fall 2015:**
  History of Mathematics
  Linear Algebra
  Foundations of Elementary Math I
  College Algebra
  First Year Seminar
  Department Seminar
  Independent Study: Topics in Geometry
- **Summer 2015:**
  Elementary Statistical Methods
- **Spring 2015:**
  Geometry
  Individial Studies: Modern Algebra I
  Foundations of Elementary Math II
  Plane Trigonometry
  Conteporary Mathematics
  Department Seminar
- **Fall 2014:**
  Complex Variables I
  Linear Algebra
  Foundations of Elementary Math I
  Calculus III
  First Year Seminar
- **Summer 2014:**
  Intro to University Math
  Statistics
- **Spring 2014:**
  History of Mathematics
  Calculus II
  Business Calculus
  Intro to University Math
- **Fall 2013:**
  Calculus III
  Linear Algebra
  Calculus I
  University Algebra
  Intro to University Math
- **Summer 2013:**
  University Algebra
  Individual Studies: Real Analysis
- **Spring 2013:**
  Modern Algebra I
  Calculus II
  University Algebra (2 sections)

- **Fall 2012:**
  University Algebra (2 sections)
  Calculus I
  Analysis I
  Graduate Individual Studies: Real Analysis

- Lecturer, University of Texas at Arlington, June 2012-July 2012.
  Instructor of Record for MATH 5341: Concepts and Techniques in Geometry. This is a course for those on the Master of Arts in Mathematics track.

- NSF GK-12 MAVS Grant Fellow, Department of Mathematics, University of Texas at Arlington, Arlington, TX, July 2009 -May 2011.
  - Year one: assisting in a junior high school classroom 10 hours a week, designing and presenting six lessons per year on my research to these students.
  - Year two: assisting in a high school geometry/algebra classroom 10 hours a week, designing and presenting six lessons on my research.

- Graduate Teaching Assistant, Department of Mathematics, University of Texas at Arlington, Arlington, TX, August 2006-August 2009, June 2011-May 2012. Taught courses, oversaw labs and grading.

  Courses Taught:
  - **Spring 2012:** Trigonometry (2 Sections)
  - **Fall 2011:** Trigonometry (2 Sections)
  - **Summer 2011:** Trigonometry
  - **Summer 2009:** Calculus I
  - **Fall 2006-Spring 2009:** College Algebra, 2 sections most semesters

- Graduate Teaching Assistant, Department of Mathematics, Sam Houston State University, Huntsville, TX, January 2004-August 2006.
  Instructor of record for developmental and freshman level courses, running recitation sessions for developmental mathematics, tutoring, and grading for professors.

  Courses Taught:
  - **Fall 2005:** Spring 2006 Math for Liberal Arts
  - **Spring 2004:** Developmental Mathematics II

- Student Teacher, Humble Independent School District, Humble, TX, August 2003-December 2003. Assisting and teaching eighth grade algebra and pre-algebra courses, assisting and teaching integrated physics and chemistry to on-level and below-level students high school students.

- Astronomy Lab Assistant, Sam Houston State University, Huntsville, TX, August 2002-May 2003. Running the laboratory course for freshman level astronomy including setting up labs, teaching the course, and writing quizzes and tests for the course.

- Mathematics Teaching Assistant, Kingwood Christian Academy, Kingwood, TX, September 2000-May 2001.
  Assisting with pre-algebra and algebra classes and substitute teaching 6-8 grade courses.

- Chemistry Lab Assistant, Lee College, Baytown, TX, August 1999-December 2000.
  Assisting with chemistry labs including setting up laboratory equipment, mixing chemicals for experiments, assisting students in lab, tutoring, and laboratory clean up.

PUBLICATIONS

1. Usef Faghihi, Albert Brautigam, Kris Jorgenson, David Martin, **Angela Brown**, Elizabeth Measures, Sioui Maldonado-Bouchard "How Gamification Applies for Educational Purpose Specially with College Algebra" Procedia Computer Science , Volume 41, 2014, 182-187 BICA 2014, 5th Annual International Conference on Biologically Inspired Cognitive Architectures.

PROFESSIONAL ASSOCIATIONS

- Association for Women in Mathematics
- Mathematical Association of America
- Society for Industrial and Applied Mathematics
- Texas Section of the Mathematical Association of America
  - Section Photographer
  - Nominating Committee 2015-2016
- Texas Academy of Science
  - Mathematics Section Chair 2014-Present
  - Mathematics Section Vice Chair 2013-2014

RESEARCH AND PROFESSIONAL PRESENTATIONS

1. Brown, A.M. Putting the Art into a Liberal Arts Math Course, MathFest, August 3-6, 2016,Columbus, Ohio.
2. Brown, A.M. Results in Finite Geometry Pertaining to Albert-Like Semifields, Texas Academy of Science, March 8 , 2014, Galveston, TX.
3. Brown, A.M., Some New Results in Finite Geometries, Joint Mathematics Meeting, January 6, 2012, Boston, MA.
4. Brown, A.M., Helixon, K., Bringing Finite Geometries to a Double Block Algebra/Geometry Class, Conference for the Advancement of Mathematics Teaching (CAMT), July 19, 2011, Grapevine, TX.
5. Brown, A.M., Automorphisms on Albert-Like Semifield Planes, Texas Section Meeting of the Mathematical Association of America, April 15, 2011, Tyler, TX.
6. Brown, A.M., Cordero, M., Epperson, J., Helixon, K., Jorgensen, T., Randell, K., Veerapen, P., Facilitating the Integration of Research Level Mathematics into the Classroom , Graduate STEM Fellows in K-12 Education Annual Conference, March 12, 2011, Washington, D.C.

7. Brown, A.M., Some New Results in Finite Geometries and How to Connect Them to K-12 Mathematics, Graduate STEM Fellows in K-12 Education Annual Conference, March 11, 2011, Washington, D.C. (NSF Poster Presentation)

8. Brown, A.M., New Results in Finite Geometries and How to Connect Them to K-12 Mathematics, Southwest Local Algebra Meeting, March 5, 2011, Las Cruces, NM. (Poster Presentation)

9. Brown, A.M., Automorphisms on Albert-like Semifield Planes, Joint Mathematics Meeting, January 7, 2011, New Orleans, LA.

10. Brown, A.M., Randell, K., Creating Art In The Junior High Math Classroom Using Finite Number Systems, Conference for the Advancement of Mathematics Teaching, July 15, 2010, San Antonio, TX.

11. Brown, A.M. A Further Generalization of Alberts Generalized Twisted Fields. Texas Section Meeting of the Mathematical Association of America, April 9, 2010, Denton, TX.

12. Brown, A.M. MAVS GK-12 Project: Finite Geometries. Joint Mathematics Meeting, San Francisco, CA January 2010. (Poster Presentation)

13. Brown, A.M. Introducing Finite Geometries and Semifields to 7th Grade Students. Southwest Regional National Science Foundation (NSF) GK-12 Conference, November 14, 2009, Fort Worth, TX.

14. Brown, A.M. An Introduction to Finite Geometries and Semifields. Texas Undergraduate Mathematics Conference, November 8,2009, Huntsville, TX.

15. Brown, A.M. A Short Introduction to Knot Theory and How it Applies to Celtic Knots. Texas Undergraduate Mathematics Conference, Huntsville, TX, October 21, 2006.

16. Brown, A.M. and J.A. Jensen. A Partial Classification of Mathematically Celtic Knots. Math Fest 2006, Knoxville, TN August, 2006. (Poster Presentation)

17. Brown, A.M. and J.A. Jensen. A Partial Classification of Mathematically Celtic Knots. Meeting of the Texas Section of the MAA, Wichita Falls, TX, April, 2006.

18. Brown, A.M. and J.A. Jensen. Which Mathematical Knots are Celtic? Math Fest 2005, Albuquerque, NM, August, 2005.

19. Brown, A.M. and J.A. Jensen. What Determines a Celtic Knot? Meeting of the Texas Section of the MAA, Arlington, TX, April, 2005.

20. Brown, A.M. and J.A. Jensen. Can Celtic Knots Be Classified? Joint Mathematics Meetings, Atlanta, GA, January, 2005.

21. Brown, A.M. and J.A. Jensen. Knot Your Usual Talk About Celtic Art. MathFest 2004, Providence, RI, August, 2004.

22. Brown, A.M. and J.A. Jensen. Knot Theory: An Overview. Meeting of the Texas Section of the MAA, Corpus Christi, TX, April, 2004.

23. Brown, A.M. and J.A. Jensen. An Overview of Molecular and Crystallographic Symmetries. MathFest 2003, Boulder, CO, August, 2003.

24. Brown, A.M. and J.A. Jensen. Symmetry Groups of Molecular Structures. Meeting of the Texas Section of the MAA, Huntsville TX, April, 2003.

CONSULTING AND OTHER INVITED PROFESSIONAL PRESENTATIONS

1. Presented to teachers over algebraic reasoning for the Region 18 Education Service Center entitled "There's Algebra Before Algebra I?" on November 20, 2014.

2. Ran Origami Session at the Texas Undergraduate Mathematics Conference October 18, 2014.

3. Presented on Jobs in Mathematics for Gear Up on November 17, 2012.

4. Invited Panelist, "What is Life in Graduate School Really like?" Texas Undergraduate Mathematics Conference, Tyler, TX, October 22, 2011.

5. Brown, A.M., Some New Results in Finite Geometries, Annual Celebration of Excellence by Students, March 24, 2011, Arlington, TX.

   This was an accepted talk for the general sessions of the ACES conference

6. Brown, A.M., Some New Results in Finite Geometries, Annual Celebration of Excellence by Students, NSF GK-12 Special Session, March 23, 2011, Arlington, TX.

7. TexPREP Summer Program-PREFRESHMAN ENGINEERING PROGRAM July 26, 2010.

   Gave an hour long presentation talking about grad school and the research I do. I also did an activity with them over modular arithmetic.

8. Brown. A.M. A Further Generalization of Albert's Twisted Fields. GAANN Day University of Texas at Arlington, March 26, 2010, Arlington, TX.

9. Invited Panelist, "What is Life in Graduate School REALLY like?" Texas Undergraduate Mathematics Conference, Huntsville, TX, September 27, 2008.

10. Brown, A.M. Classifying Mathematically Celtic Knots. Presentation for the Geometry and Geometric Analysis Colloquium, Texas Christian University, February 22, 2007 (Invited Speaker).

11. Brown, A.M. An Introduction to Knot Theory and How it Applies to Celtic Knots. Presentation for the MAA Student Chapter, University of Texas at Arlington, September 21, 2006.

ACADEMIC AWARDS

1. Texas NExT Fellow 2012-2014.

2. Graduate Teaching Award, University of Texas at Arlington, 2012.

3. NSF GK-12 Fellow, University of Texas at Arlington, 2009-2011.

4. GAANN Fellow, University of Texas at Arlington, 2008-2009.

5. Special Graduate Scholarship, Sam Houston State University, 2005-2006.

OTHER AFFILIATIONS AND INVOLVEMENT

1. Judge for the Moody Mega Mathematics Challenge 2015 and 2016

2. Judges Mathematics, Physics, and Pre-Engineering Posters at the West Texas STEM Conference, November 7, 2015, Midland, TX.

3. 8U Assistant Softball Coach for BBASA Regular Season and All Stars 2016

4. Tball Assistant Coach BBASA 2015

5. Relay for Life Participant 2013, 2014, 2015, and 2016

6. Workshop Leader for the First Annual Sonia Kovalevsky Day at the University of Texas at Arlington. Ran a Workshop on the Four Color Theorem at this conference for 6-8 grade girls.

7. Co-Leader Sam Houston High School Math Club, 2010-2011. We plan the activities every two weeks and present the material to the students.

8. Riverside Mathematics Day, 2009, Helped lead a mathematics activity for groups of middle school students.

9. University of Texas at Arlington Calculus Bowl, 2007,2009-2012. Competition for area high school students, assisted with set up and running the scoreboard and took photographs.