Richard Gene Chandler Jr.

Professional Experience

· **Assistant Professor of Mathematics** Dallas, TX
Mathematics and Informational Sciences Department, University of North Texas at Dallas August 2016 – Present

· **Adjunct Faculty Member** Arlington, TX
Department of Mathematics, University of Texas at Arlington June 2016 – August 2016

· **Emerging Scholars' Program Coordinator (ESP) & Peer Academic Leader Supervisor** Arlington, TX
Department of Mathematics, University of Texas at Arlington August 2012 – May 2016
  – Recruit undergraduate participants for ESP program
  – Develop curriculum for ESP workshop
  – Hire Peer Academic Leaders for Precalculus classes and ESP workshop
  – Coordinate schedules of, mentor and train Peer Academic Leaders

· **Graduate Teaching Assistant & Graduate Assistance in Areas of National Need Fellow** Arlington, TX
Department of Mathematics, University of Texas at Arlington August 2011 – May 2016

· **Mathematics Teacher** North Richland Hills, TX
Richland High School, Birdville Independent School District January 2011 – August 2011

Education

· **Doctorate of Philosophy in Mathematics** Arlington, TX
University of Texas at Arlington August 2011 – May 2016
  – Thesis Title: "On the Quantum Spaces of Some Regular Quadratic Algebras of Global Dimension Four"
  – Thesis Advisor: Dr. Michaela Vancliff

· **Bachelor of Arts in Mathematics** Arlington, TX
University of Texas at Arlington August 2008 – May 2011
  – Minor: Secondary Education with Grades 8-12 Teacher Certification
  – Latin Honors: Summa Cum Laude

· **Associate of Arts** Fort Worth, TX
Tarrant County College District August 2006 – May 2008

Current Research Interests

· Quadratic Regular Algebras of Global Dimension Four
· Lie Algebra, Lie Superalgebras, and Color Lie Algebra
· Noncommutative Projective Algebraic Geometry
· Hopf Algebras
· Dynamic Visualizations in Calculus and Linear Algebra
· Inquiry-Based Learning and Cooperative Learning in Calculus and Linear Algebra

Grant Support

· **Graduate Assistance in Areas of National Need (GAANN)** Arlington, TX
  Department of Mathematics, University of Texas at Arlington August 2011 – May 2016

· **NSF DMS-1302050** Arlington, TX
  Dr. Michaela Vancliff, University of Texas at Arlington Summer 2014

· **NSF DMS-0900239** Arlington, TX
  Dr. Michaela Vancliff, University of Texas at Arlington Summer 2013 & 2014

· **NSF Step – 0856796 (Arlington Undergraduate Research-based Achievement in STEM)** Arlington, TX
  Dr. Lynn Peterson & Dr. James Epperson, University of Texas at Arlington Summer 2013 & 2014

Publications

· R. G. Chandler and M. Vancliff. "The One-Dimensional Line Scheme of a Certain Family of Quantum $\mathbb{P}^3$'s". *J. Algebra*, **439** (2015), 316 – 333. (PDF Preprint: http://students.uta.edu/rg/rgc7061/ChV.pdf)
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Supervised Undergraduate Researchers

· **Nicholas Engel** – Isomorphism Classes of Graded Skew Clifford Algebras January 2016 – Present
· **Tyler Anway** – Graded Skew Clifford Algebras and Color Lie Algebras May 2015 – December 2015

Invited & Contributed Presentations

· **University of Texas at Arlington, GAANN Day** Arlington, TX
  (10 minutes) *An Overview of the Quantum Spaces of Some Quadratic Quantum $\mathbb{P}^3$'s* April 2016

· **Joint Mathematics Meetings** Seattle, WA
  (10 minutes) *Associating Geometry to Quantum $\mathfrak{sl}_2$* January 2016
  (10 minutes) *Enhancing the Instruction of Multivariable Calculus using Dynamic Visualizations*

· **University of Texas at Arlington, Mathematical Association of America Meeting** Arlington, TX
  (45 minutes) *Cryptography and Number Theory: A Historical Perspective* November 2015

· **Graduate Algebra Symposium: University of Texas at Arlington** Arlington, TX
  (20 minutes) *Associating Geometry to Quantum $\mathfrak{sl}_2$* November 2015

· **American Mathematical Society, Spring Western Sectional Meeting, #1109** Las Vegas, NV
  (20 minutes) *The One-Dimensional Line Scheme of a Certain Family of Quantum $\mathbb{P}^3$'s* April 2015

· **Graduate Algebra Symposium: University of North Texas** Denton, TX
  (40 minutes) *On the Quantum Spaces of Different Flavors of $\mathfrak{sl}_2$* February 2015

· **Graduate Algebra Symposium: University of Oklahoma** Norman, OK
  (20 minutes) *Determining the Multiplicity of Points in Projective Schemes* October 2014

· **Graduate Algebra Symposium: University of North Texas** Denton, TX
  (30 minutes) *An Introduction to Point Modules* November 2013

Seminar Presentations

· **University of North Texas, Algebra Seminar** Denton, TX
  (60 minutes) *The Quantum Spaces of Some Lie-Type Algebras Related to $\mathfrak{sl}_2$* April 2016

· **Syracuse University, Algebra Seminar** Syracuse, NY
  (60 minutes) *The Search for a Generic Quadratic Quantum $\mathbb{P}^3$* March 2016

· **University of Texas at Arlington, Residence Hall Seminar** Arlington, TX
  (30 minutes) *Caesar Ciphers and Their Descendants* March 2016

· **University of Texas at Arlington, Mathematical Association of America Meeting** Arlington, TX
  (30 minutes) *Tangent Lines – An Algebraic Approach* March 2015

Teaching at the University of North Texas at Dallas

· **Calculus II – MATH 1720 (undergraduate)** Instructor of Record
  – Class Size: 10 students
  – Class Format: 5 mini tests and 1 final exam with weekly online and written homework

· **Trigonometry – MATH 1600 (undergraduate)** Instructor of Record
  – Class Size: 20 students
  – Class Format: 5 mini tests and 1 final exam with weekly online and written homework

· **Business Calculus – MATH 1190 (undergraduate)**   Instructor of Record
   – Class Size: 15 students
   – Class Format: 5 mini tests and 1 final exam with weekly online and written homework

Teaching at the University of Texas at Arlington

· **Mathematics-Specific Technologies – MATH 5344 (graduate)**   Instructor of Record
   – Class Size: 15 students
   – Class Format: Inquiry – based learning through activities with 3 projects

· **Elementary Number Theory – MATH 3307 (undergraduate)**   Instructor of Record
   – Class Size: 30 students
   – Class Format: 3 tests and 1 final exam per semester with weekly homework

· **Linear Algebra and Matrices – MATH 3330 (undergraduate)**   Instructor of Record
   – Class Size: 50 students
   – Class Format: 3 tests and 1 final exam per semester with weekly homework

· **Calculus III – MATH 2326 (undergraduate)**   Instructor of Record
   – Class Size: 50 students
   – Class Format: 3 tests and 1 final exam per semester with weekly online homework

· **Calculus II – MATH 2425 (undergraduate)**   Instructor of Record
   – Class Size: 90 students
   – Class Format: 2 midterms and 1 final exam with weekly lab meetings and online homework

· **Calculus I – MATH 1426 (undergraduate)**   Instructor of Record
   – Class Size: 90 students
   – Class Format: 2 midterms and 1 final exam with weekly lab meetings and online homework

· **Calculus I & II – MATH 1426 & MATH 2425 (undergraduate)**   ESP Workshop Facilitator
   – Class Size: 50 students
   – Class Format: weekly inquiry-based group activities with quizzes and homework
   – Responsibilities: curriculum development, student counseling and recruitment, exam reviews, office hours

· **Mathematics for Economics and Business Analysis – MATH 1316 (undergraduate)**   Teaching Assistant
   – Class Size: 100 students
   – Class Format: weekly review sessions with quizzes
   – Responsibilities: recitation and review sessions, proctoring of exams, grading of quizzes, office hours

Professional Service & Outreach Activities at UTA

- **Organizer**: Mathematics Department Midterms and Final Exams — December 2012 – May 2016
- **Mentor**: First Year Graduate Teaching Assistants in Mathematics — August 2013 – May 2016
- **Mentor**: Prospective GAANN Students — August 2011 – May 2016
- **Organizer**: Graduate Algebra Symposium (Participant 2013 - 2016) — August 2014 – May 2016
- **Organizer**: Math Camps for Grade School and High School Students — March 2013 – February 2016
- **Supervisor**: Undergraduate & Graduate Researchers under Dr. Michaela Vancliff — May 2014 – December 2015
- **Organizer**: Discussions in Algebra Seminars (Participant 2011 - 2016) — August 2014 – October 2015
- **Instructor**: Lie Algebra Summer Seminar & Mini-Course — June 2015 – August 2015
- **Organizer**: ESP Peer Academic Leader Training — August 2013 – August 2015
- **Consultant**: NBC 5 News Media Inquiry on Electric Rates in North Texas — April 2015
- **Panelist**: College of Science Transfer Student Panel — October 2014
- **Organizer**: Mathematical Analysis Ph.D. Qualifying Exam Reviews — May 2013 – May 2014
- **Panelist**: UTA Mathematics GAANN Day — March 2014
- **Contest Director**: Calculator Applications, Regional UIL Competition, Region 2AAAA — May 2013
- **Judge**: UTA's Annual Celebration of Excellence by Students (ACES) — March 2013
- **Recruiter**: Texas Section, Mathematics Association of America Spring Meeting — April 2012

Awards, Scholarships & Fellowships at UTA

- Graduate Assistance in Areas of National Need (GAANN) Fellowship — August 2011 – May 2016
- Outstanding Mathematics Graduate Student Teacher — May 2016
- Outstanding Mathematics Graduate Student — May 2015
- GAANN Peer Mentoring Award — March 2013
- Stephen Bernfeld Scholarship — May 2013
- Paul and Wanda Ray Scholarship — August 2011
- University Scholar Award — May 2011
- Outstanding Math Clinic Tutor — May 2011
- Scholarships for Undergraduates to Reach Goals in Education Program — January 2009 – May 2011
- Outstanding Senior Undergraduate Student — May 2010

Membership in Professional Organizations & Honor Societies

- American Mathematics Society — August 2011 – Present
- Association for Women in Mathematics — August 2011 – Present
- Pi Mu Epsilon Honor Society, Texas Iota Chapter (**President**: 2013 - 2016) — May 2010 – Present
- Mathematical Association of America — August 2009 – Present
- Phi Kappa Phi Honor Society — May 2009 – Present
- Phi Theta Kappa Honor Society — May 2008 – Present