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Department of Mathematics and Computer Science  
Elizabeth City State University  
Elizabeth City, NC 27909  
(252) 335 - 8549

108 Alfred Loop, Apt. 212  
Chesapeake, VA 23320  
(757) 321 - 0265  
fjchandler@mail.ecsu.edu

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## **EDUCATION**

### **Ph.D. in Mathematics, May 2005**

North Carolina State University, Raleigh, NC

- Thesis Topic: Characterization of Involutions on  $SP(2n, k)$
- Advisor: Dr. Aloysius Helminck

### **M.S. in Mathematics, December 2001**

North Carolina State University, Raleigh, NC

- Qualifying Examination Fields: Abstract Algebra, Linear Algebra/Lie Algebras, and Topology/Algebraic Topology.

### **B.S. in Mathematics Education, May 1999**

North Carolina Agricultural and Technical State University, Greensboro, NC

- Summa Cum Laude
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## **RESEARCH INTERESTS**

- Algebra: Isomorphism Classes of Involutions and Symmetric Spaces
  - Graph Theory: Mixed Hypergraphs and their Chromatic Spectrum
  - Mathematics Education
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## **WORK EXPERIENCE**

### **Associate Professor, August 2007 – Present**

Elizabeth City State University, Elizabeth City, NC

- MATH 165: Calculus and Analytic Geometry I – Coordinate geometry, limits, differentiation and applications of differentiation.
- MATH 351: Linear Algebra – Fundamental theory of finite dimensional vector spaces, matrices and linear transformations, eigenvalues and eigenvectors
- MATT 525: High School Mathematics from an Advanced Perspective – Covers algebra and analysis with connections to geometry. Topics include: real and complex numbers, functions, equations, integers and polynomials and number system structures.

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## WORK EXPERIENCE CONTINUED

**Assistant Professor**, August 2005 – July 2007

University of North Carolina Wilmington (UNCW), Wilmington, NC

- MAT 151: Basic Calculus with Applications – Taken primarily by business majors.
- MAT 335: Linear Algebra and Matrices – Systems of linear equations, vector spaces, algebra of matrices and linear transformations, determinants, applications.
- MAT 275: Axiomatic Systems – Introduction to logic and mathematical proof with a focus on properties of the real number system.
- MAT 101: College Mathematics for the General Student – Covered topics such as the mathematics of voting and scheduling, Euler Circuits and the traveling-salesman problem.

**Graduate Student Instructor**, January 2002 – June 2005

North Carolina State University, Raleigh, NC

Assumed full responsibility for the following courses

- MA 107: Precalculus I
- MA 141: Calculus I
- MA141L: Calculus I Maple Lab
- MA 242: Calculus III
- MA 242L: Calculus III Maple Lab

**Adjunct Professor**, August 2004 – December 2004

Meredith College, Raleigh, NC

- MA 141: College Algebra – Utilized TI-Interactive computer software as well as the TI-83 calculator throughout the course.

**Graduate Mentor**, Summer 2003 and 2004

Enhancing Diversity in Graduate Education Program (EDGE), Pomona College, Claremont, CA and Spelman College, Atlanta, GA

- Served as a graduate mentor in this intensive four-week program for women who are entering graduate programs in mathematics. Mentor responsibilities included running problem sessions in the areas of analysis and algebra/linear algebra and providing continuing general support and advice for the participants.

**Facilitator**, Summer 2003 and Summer 2004

North Carolina State University Graduate Teacher Assistant Workshop

- Oversaw mini-lecture presentations given by incoming graduate students. Gave constructive criticism and offered suggestions for improvement.

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## RESEARCH ACTIVITIES

*Constructive Learning in Undergraduate Linear Algebra*, (with D.T. Taylor), PRIMUS, accepted

*Classification of Involutions of  $SP(2n, k)$* , (with A.G. Helminck ), in preparation

*Pascal Matrices*, A. Powell, Undergraduate Student at UNCW

– served as Faculty Advisor for project in MAT 495: Seminar in Mathematics

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## PRESENTATIONS

- *An Introduction to the Symplectic Group*, **Invited Talk**, July 2006  
The American Association for the Advancement of Sciences (AAAS)/David and Lucile Packard Graduate Scholars Annual Meeting, Washington, DC
  - *On the classification of  $k$ -involutions of  $SP(2n, k)$* , **Invited Talk**, June 2006  
Conference for African-American Researchers in the Mathematical Sciences (CAARMS12)  
University of North Carolina Chapel Hill, Chapel Hill, NC
  - *Inner  $k$ -involutions of  $SL(2n, k)$  and  $SP(2n, k)$* , **Departmental Seminar**, March 2006  
University of North Carolina Wilmington, Wilmington, NC
  - *On the classification of  $k$ -involutions of  $SP(2n, k)$* , **Invited Talk**, January 2006  
Special Session on Algebraic Groups, Symmetric Spaces and Invariant Theory  
Joint Mathematics Meetings, San Antonio, TX
  - *Relationship Between Bilinear Forms Over  $k^n$  and Involutions of  $SL(n, k)$  and  $SP(2n, k)$*   
**Poster Presentation**, June 2004  
Enhancing Diversity in Graduate Education Symposium, "The Graduate School Experience for Women in Mathematics: From Assessment to Action," Atlanta, GA
  - *Pricing a Perpetual American Call on a Dividend-Paying Stock*  
**Undergraduate Presentation**, March 1999  
MAA, Southeastern Section Meeting, Rhodes College Memphis, TN
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## PROFESSIONAL ACTIVITIES

- *Project NeXT*, **Member**, Summer 2005–Present  
Sponsored by The Mathematical Association of America (MAA)  
A program for recent Ph.Ds which addresses all aspects of an academic career.
- *Best Practices for Recruitment and Retention of Underrepresented Minorities in the Mathematical Sciences*, **Panelists**, November 2006  
Blackwell–Tapia Conference, Institute for Mathematics and Its Applications  
University of Minnesota, Minneapolis, MN
- *Teachers Teaching with Technology Conference ( $T^3$ )*, **Co-Chair**, April 2006  
Sponsored by Texas Instrument and UNCW, Wilmington, NC

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## PROFESSIONAL ACTIVITIES CONTINUED

- *AP Calculus Review Session, Instructor*, April 2006  
Sponsored by the Science and Mathematics Education Center (SMEC)  
University of North Carolina Wilmington, Wilmington, NC
- *Perspectives for the Future from Younger Mathematicians, Panelists*, January 2006  
Sponsored by the National Association of Mathematicians (NAM)  
Joint Mathematics Meetings, San Antonio, TX
- *Making the Switch: Refining and Changing Your Research Area, Panel Organizer*  
Sponsored by the MAA and Project NExT, January 2006  
Joint Mathematics Meetings, San Antonio, TX
- *Achieving Diversity in Graduate Programs, Part II: The Challenge to Retain Underrepresented Groups, Panelists*, January 2005  
Sponsored by The Association for Women in Mathematics and NAM  
Joint Mathematics Meetings, Atlanta, GA
- *Enhancing Diversity in Graduate Education Summer Program, Participant*, Summer 1999  
Spelman College, Atlanta, GA  
-Took courses in analysis and linear/abstract algebra as well as a mini-course in PDEs.
- *Center for Nonlinear Analysis, Summer Undergraduate Applied Mathematics Institute, Participant*, Summer 1998  
Carnegie Mellon University, Pittsburgh, PA  
-Conducted research in financial mathematics and took courses in analysis and Maple

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## AWARDS AND HONORS

### **Summer Research/Curriculum Development Initiative Award, 2006**

University of North Carolina - Wilmington

**Maltbie Award**, Spring 2005, North Carolina State University

- Received the prestigious Department of Mathematics award for outstanding teaching amongst graduate students. Award based upon excellent evaluations from students and faculty observations and evaluations.

**Outstanding Teaching Assistant Award**, Spring 2004 North Carolina State University

- Received award through the Graduate School for outstanding teaching during Spring 2003 and Fall 2004. Award based upon evaluations and comments from students.

**David and Lucile Packard Graduate Fellowship**, August 1999 – May 2005

**National Security Agency Scholarship**, August 1998 – May 1999

**Pi Mu Epsilon**, Inducted Spring 1997

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## SERVICE

### Elizabeth City State University

- Master's Thesis Committee Member  
*Analyzing the Impact of SAT Scores on Academic Achievement at Elizabeth City State University*, Brian Jordan
- Master's Thesis Committee Member  
*An Assessment of the Students Enrolled at Elizabeth City State University in Developmental Mathematics*, Kimberly Griffin

### University of North Carolina Wilmington

- Master's Thesis Committee Member  
*An Examination of the Structure of Extension Families of Irreducible Polynomials Over Finite Fields*, Matthew Psioda
- Mathematics and Statistics Club Advisor
- Reappointment, Promotion and Tenure Task Force
- Diversity Council
- Faculty Senate