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CARRIE E. FINCH  
CURRICULUM VITAE

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EDUCATION

PhD	University of South Carolina	Mathematics	Dec 2006
	<i>Advisors: Michael Filaseta &amp; Andrew R. Kustin</i>		
MS	Shippensburg University	Mathematics	Dec 1999
MS	Georgetown University	Linguistics	May 1998
BA	Messiah College	French	May 1995
	l'Université de Strasbourg - l'Institut International d'Etudes Françaises		1992-1993

TEACHING EXPERIENCE

2007 - present	Assistant Professor	Washington & Lee University (VA)
Spring 2007	Visiting Assistant Professor	Columbia College (SC)
2001 - 2006	Teaching Assistant	University of South Carolina
2004 - 2005	Adjunct Instructor	Midlands Technical College (SC)
2000-2001	Full-time Instructor	Shippensburg University (PA)
1999-2000	Adjunct Instructor	Montgomery College (MD)
Fall 1999	Adjunct Instructor	Shepherd College (WV)

COURSES TAUGHT

WASHINGTON AND LEE

Math 101E: Calculus & Sailing  
Math 101Z: Calculus I  
Math 102: Calculus II  
Math 221: Multivariable Calculus  
Math 301: Fundamental Concepts of Mathematics

OTHER COURSES

Developmental Math    Statistics  
Beginning Algebra    Math for Liberal Studies  
Intermediate Algebra    Calculus I  
College Algebra    Calculus II  
Finite Mathematics    Trigonometry  
Applied Calculus    Geometry for Elementary Education

PUBLICATIONS

1. A curious connection between Fermat numbers and finite groups (with L. Jones), *American Mathematical Monthly* **109** (2002), no. 6, 517-524.
2. Finite groups that have exactly  $n$  elements of order  $n$  (with R. Foote, L. Jones, and D. Spickler), *Mathematics Magazine* **75** (2002), 215-219.
3. Nonabelian groups with perfect order subsets (with L. Jones), *JP Journal of Algebra, Number Theory and Applications* **3** (2003), no. 1, 13-26 and **4** (2004), no. 2, 413-416.

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4. On the irreducibility of  $\{-1, 0, 1\}$ -quadrinomials (with L. Jones), *INTEGERS: Electronic Journal of Combinatorial Number Theory* **6** (2006), no. A16.
  5. On Two Questions Concerning  $\{0, 1\}$ -polynomials (with M. Filaseta and C. Nicol), *Journal de théorie des nombres de Bordeaux* **18** (2006), no. 2, 357-370.
  6. T. N. Shorey's Influence in the Theory of Irreducible Polynomials (with M. Filaseta and J. Leidy), Proceedings of a Conference on Diophantine Equations held in honor of T. N. Shorey (to appear).
  7. On powers associated with Sierpinski numbers, Riesel numbers and Polignac's conjecture (with M. Filaseta and M. Kozek), *Journal of Number Theory* **128** (2008), no. 7, 1916-1940.
  8. On the irreducibility of certain polynomials with coefficients in arithmetic progression (with N. Saradha), *Acta Arithmetica* (accepted for publication).
  9. On the irreducibility of polynomials with distinct cyclotomic factors (with L. Jones), (submitted for publication).
  10. On the irreducibility of polynomials with exponents in arithmetic progression, (in preparation).

#### CONFERENCE PRESENTATIONS AND SEMINAR TALKS

1. *Polynomial Party Tricks*. Invited colloquium talk, Shippensburg University of Pennsylvania, Shippensburg, PA. 10 April 2008.
2. *On the irreducibility of a combination of polynomials which are products of distinct cyclotomic polynomials*. Palmetto Number Theory Series, University of South Carolina, Columbia, SC. 8 December 2007. West Coast Number Theory Conference, Asilomar Conference Center, Pacific Grove, CA. 17 December 2007. Joint Mathematics Meetings, San Diego, CA. 7 January 2008. (joint work with L. Jones)
3. *The irreducibility of a certain class of polynomials*. INTEGERS conference, University of West Georgia, Carrollton, GA. 27 October 2007. (joint work with N. Saradha)
4. *Sequences of polynomials with exponents in arithmetic progression*. Joint Mathematics Meetings, New Orleans, LA. 5 January 2007. Illinois Number Theory Fest, University of Illinois, Urbana-Champaign, IL. 19 May 2007.
5. *Finite abelian groups with exactly  $n$  elements of order  $n$* . Number Theory Seminar, University of South Carolina. 7 March 2007.

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6. *Reducible  $0, 1$ -polynomials.* Endicott College, Beverly, MA. 16 December 2006. Muhlenberg College, Muhlenberg, PA. 22 January 2007. Davidson College, Davidson, NC. 23 January 2007. Washington & Lee University, Lexington, VA. 29 January 2007.
  7. *Irreducibility of  $\{0, 1\}$ -polynomials with exponents in arithmetic progression.* SouthEast Regional Meeting on Numbers, Furman University, Greenville, SC. 19 March 2006. MathFest 2006, Knoxville Convention Center, Knoxville, TN. 12 August 2006. Number Theory Seminar, University of South Carolina. 17 October 2006.
  8. *Perfect Power Sierpinski Numbers.* West Coast Number Theory Conference, Asilomar Conference Center, Pacific Grove, CA. 17 December 2005. American Mathematical Society Session on Number Theory, Joint Mathematics Meetings, San Antonio, TX. 5 January 2006. (joint work with M. Filaseta and M. Kozek)
  9. *The differential in the minimal free resolution of the universal ring for resolutions of length two.* American Mathematical Society Special Session on Homological Aspects of Commutative Algebra, Northeast Regional AMS Meeting, Annandale-on-Hudson, NY. 8 October 2005. Joint Commutative Algebra seminar with Georgia State University, Atlanta, GA. 19 October 2006. (joint work with A. Kustin and J. Weyman)
  10. *Two questions concerning  $\{0, 1\}$ -polynomials.* American Mathematical Society Session on Number Theory, Joint Mathematics Meetings, Atlanta, GA. 5 January 2005. (joint work with M. Filaseta and C. Nicol)
  11. *Two problems on  $\{0, 1\}$ -polynomials.* West Coast Number Theory Conference, University of Nevada - Las Vegas, Las Vegas, NV. 17 December 2004. Number Theory Seminar, University of South Carolina. 5, 12 & 19 October 2004. (joint work with M. Filaseta and C. Nicol)
  12. *Classification of Tor-algebras Associated with Gorenstein Resolutions of Length Four.* American Mathematical Society Session on Algebra, Joint Mathematics Meetings, Phoenix, AZ. 7 January 2004. (joint work with S. Gabrielli, A. R. Kustin, M. E. Kustin, F. Sanacory, W. H. Streyer, A. Vraciu, B. Willet and J. Work)
  13. *Sequences of reducible  $\{0, 1\}$ -polynomials.* Algebra Mini Conference, University of New South Wales, Sydney, Australia. 10 January 2003. Algebra and Number Theory Seminar, University of Western Sydney, Sydney, Australia. 7 January 2003.
  14. *Nonabelian Groups with Perfect Order Subsets.* American Mathematical Society Session on Group Theory, Joint Mathematics Meetings, San Diego, CA. 7 January 2002. (joint work with L. Jones)

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15. *Abelian Groups with Perfect Order Subsets*. Graduate Student Seminar, George Washington University. 14 April 2000. Number Theory Seminar, University of South Carolina. September 2001. (joint work with L. Jones)
  16. *Iteration of Quadratic Functions in  $\mathbb{Z}_n$* . American Mathematical Society Session on Field Theory and Commutative Rings, Joint Mathematics Meetings, New Orleans, LA. 11 January 2001. (joint work with L. Jones and M. D. Seyfried)
  17. *Perfect Order Subsets in Finite Abelian Groups*. American Mathematical Society Session on Group Theory, Joint Mathematics Meetings, Washington, DC. January 2000. (joint work with L. Jones)
  18. *Perfect Order Subsets*. Joint Mathematics Meetings, San Antonio, TX. January 1999. (joint work with L. Jones)
  19. *Constraint Ranking in Plains Cree*. Workshop on American Indigineous Languages, UC - Santa Barbara. 8-10 May 1998.

#### WORKSHOPS AND SHORT COURSES ATTENDED

- Mathematical Association of America Short Course, *Teaching themed calculus classes to motivated honors students*, Joint Mathematics Meetings, San Diego, CA. 7-9 January 2008.
- Summer School in Commutative Algebra: *Local Cohomology and its Applications*, Snowbird, UT. 20-30 June 2005.
- Mathematical Sciences Research Institute Summer Graduate Program, *Excursions in Computational Number Theory - Polynomials with Integer Coefficients*. Simon Fraser University, Burnaby, British Columbia, Canada. 17-28 June 2002.
- Mathematical Association of America Short Course, *Number Theory: The Legacy of Ramanujan*, Math-Fest, Madison, WI. 31 July - 5 August 2001

#### CONFERENCES ATTENDED

- Joint Mathematics Meetings, January 2008, San Diego, CA
- West Coast Number Theory Conference, Asilomar Conference Center, 16-20 December 2007, Pacific Grove, CA
- Palmetto Number Theory Seminar, 8-9 December 2007, University of South Carolina, Columbia, SC
- INTEGERS conference, 24-27 October 2007, University of West Georgia, Carrollton, GA
- Illinois Number Theory Fest - a conference in honor of Heini Halberstam and John Selfridge, May 2007, University of Illinois, Champaign, IL
- Southeast Regional American Mathematical Society Meeting, 3-4 March, 2007, Davidson College, Davidson, NC
- Palmetto Number Theory Seminar, February 2007, Clemson University, Clemson, SC

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- Joint Mathematics Meetings, 5-8 January 2007, New Orleans, LA
  - Palmetto Number Theory Seminar, December 2006, University of South Carolina, Columbia, SC
  - MathFest 2006, 10-12 August 2006, Knoxville Convention Center, Knoxville, TN
  - Southeast Regional Meeting on Numbers, 18-19 March 2006, Furman University, Greenville, SC
  - Joint Mathematics Meetings, January 2006, San Antonio, TX
  - West Coast Number Theory Conference, Asilomar Conference Center, 16-20 December 2005, Pacific Grove, CA
  - INTEGERS - conference in honor of the 70<sup>th</sup> birthday of Ron Graham, 26-30 October 2005, University of West Georgia, Carrollton, GA
  - Northeast Regional American Mathematical Society Meeting, 8-9 October 2005, Bard College, Annandale-On-Hudson, NY
  - Conference in honor of retirement of Phillip Griffith, 14-16 September 2005, University of Illinois, Urbana-Champaign, IL
  - Southeast Regional Meeting on Numbers, 15-17 April 2005, USC, Columbia, SC
  - Joint Mathematics Meetings, January 2005, Atlanta, GA
  - West Coast Number Theory Conference, University of Nevada - Las Vegas, 16-20 December 2004, Las Vegas, NV
  - Southeast Regional Meeting on Numbers, 17-18 April 2004, College of Charleston, Charleston, SC
  - Joint Mathematics Meetings, 7-10 January 2004, Phoenix, AZ
  - Conference on Groups, Representations and Galois Theory in Honor of Walter Feit, 30 October - 2 November 2003, Yale University, New Haven, CT
  - Southeast Regional Meeting on Numbers, 29-30 March 2003, UNC-Greensboro, Greensboro, NC
  - Joint Mathematics Meetings, 15-18 January 2003, Baltimore, MD
  - University of New South Wales Algebra Mini Conference, University of New South Wales, 10 January 2003, Sydney, Australia
  - West Coast Number Theory Conference, San Francisco State University, 15-19 December 2002, San Francisco, CA
  - Southeast Regional Meeting on Numbers, 16-17 March 2002, Clemson University, Clemson, SC
  - Joint Mathematics Meetings, 6-9 January 2002, San Diego, CA
  - Joint Mathematics Meetings, 10-13 January 2001, New Orleans, LA
  - Joint Mathematics Meetings, 19-22 January 2000, Washington, DC
  - MathFest, Summer 1999, Providence, RI
  - Joint Mathematics Meetings, 13-16 January 1999, San Antonio, TX

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## AWARDS

- Selfridge Prize for Excellence in Mathematics Presentation (2006)
- USC Educational Foundation Outstanding Graduate Assistant Teaching Award (2005)
- Department of Mathematics Outstanding Graduate Teaching Assistant (2005)
- USC Dean's Fellowship (2001-2005)
- USC Graduate Assistantship (2001-2006)
- Graduate Assistantship in Areas of National Need (2002-2004)
- Pi Mu Epsilon Award (2001)
- Student Research Achievement Award, Shippensburg University (2000)
- Shippensburg University Graduate Assistantship (1998-2000)
- Georgetown University Research Fellowship (1996-1998)

## SERVICE ACTIVITIES

- Student Financial Aid Committee member.
- Referee for *Integers*.
- Chair of American Mathematical Society Session on Number Theory, Joint Mathematics Meetings, New Orleans, LA. January 2007.
- Student Representative to Math Department Graduate Advisory Council. (2003-2005)
- Math Department Happy Hour Organizer. (2004-2005)
- USC Graduate Assistant Orientation Volunteer. (August 2004)
- Regional Science Fair Judge. (2004-2006)
- Mathematical Sciences Research Institute Summer Graduate Program Teaching Assistant. (June 2002)
- USC High School Math Contest Judge. (2002-2006)
- AP Calculus Practice Exam Proctor. (2002-2004)
- Pi Mu Epsilon - Graduate Advisor (2001-2002), Vice President (2002-2003), Faculty Liaison (2002-2003), Integration Bee Organizer (2001-2006)
- Chair of American Mathematical Society Session on Group Theory, Joint Mathematics Meetings, San Diego, CA. 7 January 2002.

## PROFESSIONAL ORGANIZATIONS

- American Mathematical Society
- Mathematical Association of America
- Association for Women in Mathematics
- Pi Mu Epsilon, South Carolina Alpha chapter (mathematical honor society)
- Kappa Mu Epsilon, Pennsylvania Iota chapter (mathematical honor society)