

Dr. Michelle L. Knox

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Department of Mathematics
Midwestern State University
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Educational Background

- Ph.D. in Mathematics, Bowling Green State University, Bowling Green, OH, August 2005
- M.A. in Mathematics, Bowling Green State University, Bowling Green, OH, August 2001
- B.A. in Mathematics (minor: English), Malone College, Canton, OH, May 1999

Teaching Experience

- Midwestern State University 2005-present
 - Professor of Mathematics, 2017-present
 - Associate Professor of Mathematics, 2011-2017
 - Assistant Professor of Mathematics, 2005-2011
 - Courses taught:
 - MATH 0003/1053 Corequisite Contemporary Mathematics
 - MATH 1003 Intermediate Algebra
 - MATH 1003/1233 Corequisite Intermediate/College Algebra
 - MATH 1053 Contemporary Mathematics
 - MATH 1203 Mathematical Analysis for Business
 - MATH 1233 College Algebra
 - MATH 1433 Trigonometry
 - MATH 1534 Precalculus
 - MATH 1634 Calculus I
 - MATH 1734 Calculus II
 - MATH 2534 Calculus III
 - MATH 2753 Linear Algebra
 - MATH 3233 Introduction to Modern Mathematics
 - MATH 3293 Abstract Algebra I
 - MATH 3753 Vector Spaces
 - MATH 4293 Abstract Algebra II
 - MATH 4733 Introductory Analysis I
 - MATH 4833 Introductory Analysis II
 - MATH 4933 Topics: Topology
 - STAT 3573 Probability and Statistics
- Bowling Green State University, Graduate Teaching Assistant, 1999-2004

Publications

1. *Distribution of constant terms of irreducible polynomials in $Z_p[x]$ whose degree is a product of two distinct primes* with S. Cobb, M. Lopez, T. McDonald, and P. Mitchell, Notes on Number Theory and Discrete Mathematics, Vol. 30, No. 1, (2024), p. 195-210.
2. *Disconnection in the Alexandroff Duplicate* with P. Bhattacharjee and W. Wm. McGovern, Applied General Topology, Vol. 22, No. 2 (2021) 331-344.
3. *Distribution of Constant Terms of Polynomials in $Z_p[x]$* with S. Cobb, M. Lopez, T. McDonald, and P. Mitchell, Notes on Number Theory and Discrete Mathematics, Vol. 25, No. 4 (2019) p. 72-82
4. *Evaluationally Relatively Prime Polynomials* with T. McDonald and P. Mitchell, Notes on Number Theory and Discrete Math, Vol. 21, No. 1 (2015) p. 36-41.
5. *pg -extensions and p -Extensions with Applications to $C(X)$* with P. Bhattacharjee, Journal of Algebra and Its Applications, Vol. 14 No. 5 (2015).
6. *p -Extensions* with P. Bhattacharjee and W. Wm. McGovern, Ring Theory and Its Applications, Contemporary Mathematics, Volume 609, American Mathematical Society, Providence, RI (2014).
7. *The Classical Ring of Quotients of $C_c(X)$* with P. Bhattacharjee and W. Wm. McGovern, Applied General Top. Vol. 15 No. 2 (2014) p. 147-154.
8. *p -Embeddings* with P. Bhattacharjee and W. Wm. McGovern, Top. Appl. Vol. 160, No. 13 (2013) p. 1566-1576
9. *Feebly Projectable ℓ -Groups* with W. Wm. McGovern, Algebra Universalis, Vol. 62, No. 1 (2010) p. 91-112.
10. *Generalizations of Complemented Rings with Applications to Rings of Functions* with R. Levy, W. Wm. McGovern, and J. Shapiro, Journal of Algebra and Its Applications, Vol. 8, No. 1 (2009) p. 17-40.
11. *Conditional Completeness of $C(X, \mathbb{R}_\tau)$ for Weak P -spaces \mathbb{R}_τ* , Real Analysis Exchange, Vol. 34, No. 1 (2008) p. 61-68.
12. *Rigid Extensions of ℓ -Groups of Continuous Functions* with W. Wm. McGovern, Czechoslovak Mathematical Journal, Vol. 58 (133), No. 4, (2008) p. 993-1014.
13. *Feebly Projectable Algebraic Frames and Multiplicative Filters of Ideals* with W. Wm. McGovern, Applied Categorical Structures, Vol. 15, No. 1-2 (2007) p. 3-17.
14. *A Characterization of Rings of Density Continuous Functions*, Real Analysis Exchange, Vol. 31, No. 1, (2006) p. 165-177.

Research Groups

1. Meet weekly with MSU mathematics faculty Dr. Sarah Cobb, Dr. Terry McDonald, and Dr. Patrick Mitchell. Three of my publications are with members of this group.

Works in Progress

1. *Zero-dimensionality in the Alexandroff duplicate* with W. Wm. McGovern and P. Bhattacharjee

Textbooks

1. *Precalculus An Integrated Approach* with M. May, P. Mitchell, and D. Tucker, published via MSU press, fall 2012

Presentations

- "How to Tell an Orange from a Doughnut" Workshop at Math, Science, & U Girls Conference with Sarah Cobb, MSU Nov. 2019
- Cryptography workshops for Burkburnett ISD STEM night, Feb. 22, 2018—canceled due to snow
- "Can You Keep a Secret?" Workshop at Math, Science & U Girls Conference with Sarah Cobb, MSU, Nov. 2017
- "Properties of the Ring $A(X)$," Joint Meetings of the AMS and MAA, San Antonio, TX, Jan. 13, 2015
- "Evaluationally Relatively Prime Polynomials," Faculty Forum, MSU, with T. McDonald and P. Mitchell, Mar. 2014
- "p-Extensions and $C(X, \mathbb{Z}) < C(X, \mathbb{Q}) < C(X)$," OAL13, Erie, PA, Jun. 24, 2013
- "An Introduction to LaTeX," Workshop at MSU, Thursday, Mar. 21, 2013
- "p-Embeddings," Joint Meetings of the AMS and MAA, San Diego, CA, Jan. 11, 2013
- "Classifying ERP Polynomials," Texas Section Meeting of the Mathematical Association of America, Dallas, TX, Apr. 2012
- "Can You Keep a Secret?" Workshop at Math, Science & U Girls Conference, MSU, Nov. 2011
- "Questions of Divisibility in a Group of Density Continuous Functions," Joint Meetings of the AMS and MAA, New Orleans, LA, Jan. 2011
- "An Introduction to Calculus," Workshop at MSU Young Engineer Summer Camp, MSU, June 22-23, 2010
- "Lattice-Ordered Groups," College of Science and Mathematics seminar, MSU, Sept. 26, 2008
- "Feebly Projectable l-Groups," The Consortium for Order in Algebra and Logic, Gainesville, FL, May 5, 2008
- Invited speaker: "Conditional Completeness of $C(X, \mathbb{R}_\tau)$ Where \mathbb{R}_τ is a Weak P-Space," Joint Meetings of the AMS and MAA, San Antonio, TX, Jan. 12, 2006

Professional Activities

- Judge, AWM/Math for America Essay Contest, 2012-2016, 2018, 2020-2021, 2023-2025

- Member, editorial board, MAA book series *Spectrum*, Jan. 2016-Jan. 2019
- Member, organizing committee for Math, Science, & U girls conference, 2005-2022
 - Co-chair, fall 2009-spring 2016
 - Registrar, fall 2016-fall 2022
- Referee for the following journals:
 - Journal of Algebra and Its Applications
 - Commentationes Mathematicae Universitatis Carolinae
 - Tatra Mountains Mathematical Publications
 - Texas Journal of Science
 - Algebra Universalis
 - Quaestiones Mathematicae
 - American Mathematical Monthly
- Reviewer for the following:
 - American Mathematical Society Mathematical Reviews
 - Zentralblatt Math
- Member, MAA Committee on Short Courses, 2013-2015
- Textbook reviewer for Calculus Early Transcendentals by Briggs, Cochran, and Gillett
- External reviewer, doctoral dissertation by T. Ighedo, U. of South Africa, Dec. 2013-Jan. 2014
- Co-chair, organizing committee for Texas Oklahoma Research Undergraduate Symposium, summer 2012-spring 2013
- Member, organizing committee for Texas Oklahoma Research Undergraduate Symposium, fall 2009-spring 2010
- Grader, AP Calculus exam, 2008 and 2012