

THOMAS MCKENZIE

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EDUCATION

Ph.D., University of Oregon, Department of Mathematics, December 1992.
Thesis Advisor: David Harrison.

M.S., University of Oregon, Department of Mathematics, June 1988.

B.A., Clark University, Department of Mathematics, June 1985.

AREAS OF SPECIAL INTEREST

Algebraic Number Theory, Commutative Algebra, Graph Theory, Electrical Impedance Tomography.

TEACHING EXPERIENCE

Professor - Gonzaga University, Department of Mathematics, 2010-Present.

Associate Professor - Gonzaga University, Department of Mathematics, 2002-2009.

Associate Professor - Bradley University, Department of Mathematics, 2001-2002.

Visiting Associate Professor - Colorado State University, Department of Mathematics, 2000-2001.

Associate Professor - Bradley University, Department of Mathematics, 1999-2000.

Assistant Professor - Bradley University, Department of Mathematics, 1993-1999.

Graduate Teaching Fellow - University of Oregon, Department of Mathematics, 1986-1992.

Teaching Assistant - Clark University, Department of Mathematics and Computer Sciences, 1983-1985.

REFEREED PUBLICATIONS

Toward an Arithmetic of Polynomials, Aequationes Mathematicae, Vol. 43, No. 1, pp. 21-37, 1992 (With D. K. Harrison).

Separable Polynomials and Weak Henselizations, Rings, Extensions, and Cohomology, Lecture Notes in Pure and Applied Mathematics, Vol. 159, pp. 165-179, 1994.

Weakly Henselian Rings, The Mathematical Journal of Okayama University, 38, pp. 1-5, 1997.

The Separable Closure of a Local Ring, The Journal of Algebra, 207, pp. 657-663, 1998.

Strongly Etale Extensions and Weak Henselizations, Communications in Algebra 28 (5), (2000) 2497-2506 (with Frank DeMeyer and Kim Schneider).

The Zero Divisor Graph of a Commutative Semigroup, Semigroup Forum 65 (2002) 206-214 (with Frank DeMeyer and Kim Schneider).

On Generic Polynomials, Journal of Algebra, 261 (2003), [No. 2](#), 327-333 (with Frank DeMeyer).

Purely Periodic Second Order Linear Recurrences, Fibonacci Quarterly, Vol. 46/47, No. 2, 160-166, May 2008/09 (with Shannon Overbay).

Book Embeddings and Zero Divisors, Ars Combinatoria, Vol. 95, April, 2010 (with Shannon Overbay).

Sums of Second Order Linear Recurrences, Fibonacci Quarterly, Vol. 48, No. 4, November 2010, pp. 335-342 (with Shannon Overbay).

G-Sets and Linear Recurrences Modulo Primes, Missouri Journal of Mathematical Sciences. Vol 25, Issue 1, 2013, pp, 27-36 (with Shannon Overbay and Rob Ray).

Jordan Forms and Nth Order Linear Recurrences, Missouri Journal of Mathematical Sciences. Vol 26, Issue 2, 2014, pp, 122-133 (with Shannon Overbay and Rob Ray).

Book Thickness of Planar Zero Divisor Graphs, Missouri Journal of Mathematical Sciences. Vol 27, Issue 1, 2015, pp, 2-9 (with Shannon Overbay).

Book Thickness of Toroidal Zero Divisor Graphs, Africa Matematika, Vol 28, Issue 5, 2017, pp, 823-830, (with Shannon Overbay).

Subhamiltonian Toroidal Graphs, Africa Matematika, Vol 33, Issue 2, 2022, (with Shannon Overbay).

Deques on a Torus. Combinatorics, Graph Theory and Computing. Springer Proceedings in Mathematics & Statistics, vol 462 (2024) pp, 351 - 363. (with Shannon Overbay).

Möbius Book Embeddings. Combinatorics, Graph Theory and Computing. Springer Proceedings in Mathematics & Statistics, vol 462, (2024) pp, 365 - 375. (with Nick Linthicum, Luke Martin, Shannon Overbay, and Lin Ai Tan).

D-bar Reconstructions with Nonsmooth Learned Spatial Priors in 2D Electrical Impedance Tomography. Journal of Computational and Applied Mathematics. Accepted for publication. (with Melody Alsaker, Ben Bladow, Scott Campbell, Nick Linthicum, Jennifer Mueller, and Tallis Santos).

Klein Book Embeddings, submitted (with Luke Martin, Shannon Overbay, and Lin Ai Tan).

**STUDENT TALKS
AND POSTER
PRESENTATIONS
LAST THREE YEARS**

Möbius Book Embeddings of Graphs with Applications to Delivery Systems, Nick Linthicum (faculty advisors: Shannon Overbay and Thomas McKenzie), Math Colloquium, Gonzaga University, Spokane, WA, December 3, 2022.

Cylinder, Torus, and Möbius Book Embeddings of Graphs, Lin Ai Tan (faculty advisors: Shannon Overbay and Thomas McKenzie), Math Colloquium, Gonzaga University, Spokane, WA, December 3, 2022.

Möbius Book Embeddings, Luke Martin (faculty advisors: Shannon Overbay and Thomas McKenzie), 53rd Southeastern International Conference on Combinatorics, Graph Theory & Computing, Florida Atlantic University, Boca Raton, FL, March 7, 2022.

Book Embeddings, Torus Books, Mobius Books, and Edge Bounds, Luke Martin and Lin Ai Tan (faculty advisors: Shannon Overbay and Thomas McKenzie), Math 360 speakers, Gonzaga University, March 25, 2022.

Mobius Book Embeddings of Graphs with Applications to Delivery Systems, Nick Linthacum (faculty advisors: Shannon Overbay and Thomas McKenzie), Joint Mathematics Meetings (JMM), Virtual, April 7, 2022.

Cylinder, Torus, and Mobius Book Embeddings of Graphs, Lin Ai Tan (faculty advisors: Shannon Overbay and Thomas McKenzie), Joint Mathematics Meetings (JMM), Virtual, April 7, 2022.

Mobius Book Embeddings, Luke Martin (faculty advisors: Shannon Overbay and Thomas McKenzie), Pacific Inland Mathematics Undergraduate Conference (PIMUC), Washington State University, Pullman, WA, April 9, 2022. Luke received an award for top oral presentation.

Cylinder, Torus, and Mobius Book Embeddings of Graphs, Lin Ai Tan (faculty advisors: Shannon Overbay and Thomas McKenzie), Pacific Inland Mathematics Undergraduate Conference (PIMUC), Washington State University, Pullman, WA, April 9, 2022.

Mobius Book Embeddings, Luke Martin (faculty advisors: Shannon Overbay and Thomas McKenzie), Joint Mathematical Meetings, Boston, 2023.

SELECTED SERVICE

Chairman, Gonzaga University Department of Mathematics, 2007 - 2013.

Core Curriculum Committee, Gonzaga University, 2008 - 2011.

Secretary and Treasurer, Pacific Northwest Section of the Mathematical Association of America, 2014 - 2017.

AVP Core Task Force Summer, 2012.

Academic Council At Large Representative, 2012 – 2015.

Chair of the Academic Council Assessment Committee, 2012 - 2015.

University Rank, Promotion, and Tenure Committee, Fall 2016 - Spring 2019.

Point Person for Department of Mathematics Program Review, Spring 2015 - Fall 2016.

Faculty President 2018 - 2020.

Editor, Missouri Journal of Mathematical Sciences, 2021 - 2024.

Mathematics Major Assessment Chair 2021 - present.

Applied Mathematics Director 2022 - 2024.

Data Science Committee Chair 2022 - 2024.

Faculty President 2024 – present.

PRESENTATIONS LAST SIX YEARS

"A Matroid of Polynomials", Coast Combinatorics Conference, Kona, Hawaii, 2017.

A Graph of Separable Polynomials. Spring Western Sectional Meeting of the American Mathematical Society. Pullman, WA, 2017.

Book Embeddings and Matroids. American Mathematical Society Annual Meeting, San Diego, California, 2018.

Deques on a Torus. The 53rd Southeastern International Conference on Combinatorics, Graph Theory and Computing, Boca Raton, Florida, 2022.

**GRANTS AND
AWARDS
PAST THREE YEARS**

McDonald Work Award. Two students. 2021-2022 and 2022-2023 school years.