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Department of Mathematics
Houghton University
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EDUCATION

Ph. D. Mathematics, May 2009, University of Montana
Advisor: Dr. Thomas Tonev
Dissertation: Norm-Preserving Criteria for Uniform Algebra Isomorphisms
M. A. Mathematics, May 2006, University of Montana
Advisor: Dr. Adam Nyman
Professional Project: Classifying Quadratic Forms
B.S. Mathematics, May 2003, Wheaton College, magna cum laude
Illinois Initial Teaching Certificate, Mathematics, Grades 6–12

TEACHING
EXPERIENCE

Houghton College/University
Professor, 2023–present
Associate Professor, 2016–2023
Mathematics Department Chair, 2015–2022
Assistant Professor, 2009–2016
Courses Taught: Calculus I with Precalculus A, Calculus and Problem Solving, Calculus I and II, Linear Algebra I and II, Introduction to Proofs, Real Analysis I and II, Complex Analysis, Abstract Algebra II, Probability and Statistics I, Graph Theory, Mathematics for the Liberal Arts, Mathematics Research Seminar, Reason and Abstraction: The Infinite, Reason and Abstraction: Mathematics for Human Flourishing, Reason and Abstraction: Origami and Math, Reason and Abstraction: Math of Games and Puzzles, Introduction to Category Theory, Game Theory, Mathematics of Origami, Senior Seminar, various independent studies.
Honors Projects Supervised
Numerical Range over Finite Fields (Timothy Lund, 2023)
Exploring Numerical Range over Finite Fields (Amy Huddell, 2020)
Variations on Multiplicative Preservers of the C -Numerical Range and Radius (Samantha Fairchild, 2015)

University of Montana

Teaching Assistant/Predoctoral Associate, Fall 2004–Spring 2009
Courses Taught: Linear Algebra, Calculus I, Precalculus, Probability and Linear Math, Contemporary Mathematics
Courses Assisted: Applied Calculus, Probability and Linear Math

Whitefield Academy, Smyrna, GA

Middle School Teacher, August 2003–May 2004
Courses Taught: 7th grade math, 8th grade honors algebra

PUBLICATIONS

Camenga, K. A., Paranamana, P., and Yates, R. B. J. *Bingo! A solution to syllabus information overload*, MAA FOCUS, submitted.

Camenga, K. A., Rault, P. X., Spitkovsky, I. M., and Yates, R. B. J. *The Gau–Wu Number for 4×4 and Select Arrowhead Matrices*, Linear Algebra and Its Applications, Volume 644, Elsevier, 1 July 2022, pp. 192–218.

Camenga, K. A., Collins, B., Hoefer, G., Quezada, J., Rault, P. X., Willson, J., and Yates, R. B. J. *On the geometry of numerical ranges over finite fields*, Linear Algebra and Its Applications, Volume 628, Elsevier, 1 November 2021, pp. 182–201.

PUBLICATIONS
CONTINUED

Camenga, K. A., Deaett, L., Rault, P. X., Sendova, T., Spitkovsky, I. M., and Yates, R. B. J. *Singularities of Base Polynomials and Gau–Wu Numbers*, Linear Algebra and Its Applications, Volume 581, Elsevier, 15 November 2019, pp. 112–127.

Camenga, K. A., and Yates, R. B. J. *The Real Numbers: Not All Decimals Are Fractions*, Frontiers for Young Minds, 8:4.

Camenga, K., and Yates, R. *Connecting the dots: rediscovering continuity*, Mathematics Teacher, Volume 108, Number 3, National Council of Teachers of Mathematics, October 2014, pp. 213–217.
Deaett, L., Lafuente-Rodriguez, R., Marin, J., Martin, E., Patton, L., Rasmussen, K., and Yates, R. *Trace conditions for symmetry of the numerical range*, Electronic Journal of Linear Algebra, Volume 26, International Linear Algebra Society, September 2013, pp. 591–603.

Hatori, O., Lambert, S., Luttmann, A., Miura, T., Tonev, T., and Yates, R. *Spectral Preservers in Commutative Banach Algebras*, in Function Spaces in Modern Analysis, Contemporary Mathematics, vol. 547, American Mathematical Society, Providence, RI, 2011, pp. 103–123.

Tonev, T. and Yates, R. *Norm–Linear and Norm–Additive Operators Between Uniform Algebras*, Journal of Mathematical Analysis and Applications, Volume 357, Issue 1, 1 September 2009, pp. 45–53.

Yates, R. *Classifying Quadratic Forms*, Professional Project for M.A. degree, published in the University of Montana Department of Mathematical Sciences, 2006.

Hruska, S., Johnson, R., and Yates, R. *An Alternating Series Expansion for $(\ln 2)^2$* , Pi Mu Epsilon Journal, 11:10(2004), 545–548.

TALKS

Derivative or Integral? Connecting Mathematics with Faith, Learning, and Life in a Senior Seminar Course The Kuyers Institute/International Network for Christian Higher Education/De Vries Institute 2024 Conference on Integrated Education in a Reductionist Age, Calvin University, October 11, 2024

Every valley shall be raised up, and every mountain made low, and the rough places...a crane? Association of Christians in the Mathematical Sciences Conference, Dordt University, May 30, 2024

The Dot and the Line: A Romance in Finite Field Numerical Ranges Joint Mathematics Meetings, San Francisco, CA, January 3, 2024

Integrating Math and Faith: Highlights Wheaton College Mathematics and Computer Science Department Chapel, November 8, 2023

The Dot and the Line: A Romance in Finite Field Numerical Ranges Fall Meeting of the Math Division of the Associated Colleges of the Chicago Area November 7, 2023 (invited plenary speaker)

Two Person Games Not Worth Playing (and Some That Might Be) Fall Meeting of the Math Division of the Associated Colleges of the Chicago Area, November 7, 2023 (invited plenary speaker)

Math at the Ballot Box Houghton University Math Day interactive session, October 26, 2023

Infinite Snowflakes Houghton University Math Day interactive session, October 27, 2022

All Natural π Calvin College Mathematics Colloquium, April 29, 2021.

Oh the Books You Can Read! Joint Mathematics Meetings, Denver, CO, January 16, 2020.

Making Stuff Up: A Model for Undergraduate Research in Mathematics, Association of Christians in the Mathematical Sciences Conference, Indiana Wesleyan University, May 30, 2019.

TALKS

CONTINUED

All Natural π

MAA Seaway Section Banquet Address, St. John Fisher College, April 5, 2019.

A Century at Home on the (Numerical) Range

Houghton College Science and Math Colloquium, February 26, 2019.

Taxis, Trains, and Teleportation: Circling the Value of π ,

Math and Science Day interactive session, Houghton College, February 6, 2019.

Taxis, Trains, and Teleportation: Circling the Value of π

Juniata College Mathematics Colloquium, November 1, 2018.

A Century at Home on the (Numerical) Range: Historical Highlights and Current Research

University of Nebraska at Omaha Mathematics Colloquium, October 26, 2018.

Incarnate in the Ordinary

Houghton College Baccalaureate, May 11, 2018.

Knowing What You Know

Joint Mathematics Meetings, San Diego, January 12, 2018.

On Beyond Calculus: A Day for Community Outreach

Association of Christians in the Mathematical Sciences Conference, Charleston Southern University, June 2, 2017.

There Are 10 Kinds of People: Those Who Come to This Session and Those Who Don't

Math and Science Day interactive session, Houghton College, February 7, 2017.

The Mathematics of Voting

Math Discovery Day interactive session, Houghton College, April 9, 2016.

As the Crow Flies and the Taxi Drives

Math and Science Day interactive session, Houghton College, February 2, 2016.

On Beyond Calculus

Joint Mathematics Meetings, Seattle, January 9, 2016.

The Road Best Traveled: The Mathematics of Getting There and Back Again

Math and Science Day interactive session, Houghton College, February 2015 & 2018.

The Subspace Game

Joint Mathematics Meetings, San Antonio, January 10, 2015.

To Infinity and Beyond

Math and Science Day interactive session, Houghton College, February 2011 & 2014.

Helping Students Overcome Discouragement in Real Analysis

Joint Mathematics Meetings, Baltimore, January 13, 2014.

Integrating Faith through Writing in Calculus I

Association of Christian in the Mathematical Sciences Conference, Bethel University, May 31, 2013.

What If I Get Bored? How One Chapel Made Me a Mathematician.

Houghton Education and Life Planning Day Alternative Chapel, March 13, 2013.

Writing in Calculus I: Is It Derivative or Integral?

Joint Mathematics Meetings, San Diego, January 12, 2013.

Obama and Romney: What's Math Got to Do with It?

with Jill Jordan, Houghton College Homecoming, Fall 2012.

Numerical Range: Counting Necklaces and Searching for Symmetry

SUNY Geneseo Mathematics Colloquium, October 13, 2011.

An Infinity of Infinities

Houghton College Faculty Lecture Series, September 21, 2011.

A Second Course in Linear Algebra: Teaching Students to Read and Speak Mathematics

Association of Christians in the Mathematical Sciences Conference, Westmont College, June 2, 2011.

Helping Pre-Service Teachers Recognize Continuity in the Secondary Curriculum

with Kristin Camenga, Joint Mathematics Meetings, New Orleans, January 9, 2011.

REBEKAH B. JOHNSON YATES

PROFESSIONAL ACTIVITIES

Problems, Resources, and Issues in Mathematics Undergraduate Studies (PRIMUS) editorial board
August 2017–August 2020.

Proceedings of the Association of Christians in the Mathematical Sciences reviewer
August 2017–present.

Association of Christians in the Mathematical Sciences board member
2013–June 2021, secretary May 2015–May 2017.

MAA Seaway Section Department Liaison
Spring 2010–present.

Undergraduate Research Poster Session judge
Joint Math Meetings, January 2011, 2012, 2013, 2014.

Abstract Reviewer for the Young Mathematicians Conference
The Ohio State University, June 2012.

Graduate Student Talks mentor
MathFest, August 2011.

HOUGHTON SERVICE

Admission Committee
Fall 2024–Spring 2025.

re:SET Task Force on student evaluations and evaluating teaching and service
January 2024–present.

Peer Reviewer for mid- and post-tenure reviews
Fall 2022, Spring 2024, Fall 2024, Spring 2025

Rank and Tenure Committee
Fall 2021–Spring 2024.

Faculty Concerns Committee
Fall 2017–Spring 2019.

Houghton College Science and Math Colloquium Organizer
Fall 2014–Spring 2018.

Investigative Team for Sexual Harassment Complaints
Fall 2014–Spring 2019.

Self-Study Steering Committee for reaccreditation and co-chair of a working group
2013–2015.

Faculty Search Committees, Houghton College
2011–2012 (math), 2013–2014 (math), 2014–2015 (math and applied math; chair of applied math), 2016–2017 (philosophy).

Co-PI for application for NSF Robert Noyce Teacher Scholarship
February 2014. Application was not funded.

Virginia Tech Regional Math Contest local organizer
Houghton College, October 2010, 2011, 2012.

Faculty Development Committee
Houghton College, September 2010–April 2012.

Willing to Be Wiser mentoring program participant
Houghton College, September 2011–April 2012.

Math Club advisor
Houghton College, September 2010–May 2011.

REBEKAH B. JOHNSON YATES

HONORS AND AWARDS	<i>Initiative for Christ-Centered Teaching and Scholarship Fellow</i> Houghton University, AY 2024–2025 <i>Excellence in Teaching Award</i> Houghton University, March 2024 <i>2010–2011 Project NExT Fellow</i> MAA and Houghton College. <i>Graduate Student Distinguished Teaching Award</i> University of Montana Department of Mathematical Sciences, 2006–2007.
GRANTS	<i>American Institute of Mathematics Research Experience for Undergraduate Faculty Continuation Grant</i> Institute for Computational and Experimental Research in Mathematics, Brown University, Providence, RI, June 2–6, 2025. <i>American Institute of Mathematics Research Experience for Undergraduate Faculty Continuation Grant</i> Houghton, NY, May 31–June 4, 2021. <i>American Institute of Mathematics Research Experience for Undergraduate Faculty Continuation Grant</i> San Jose, CA, August 7–11, 2017.
CONFERENCES ATTENDED	<i>Advocating for Students of Color: There’s More You Can Do</i> virtual, Fall 2020. <i>Math Chairs for Racial Justice</i> virtual reading group, Summer 2020. <i>Mastery Based Grading Conference</i> virtual, June 5–6, 2020. <i>Inquiry-Based Learning Workshop</i> Nazareth College, Rochester, NY, July 18–21, 2017. <i>AMS/MAA Joint Mathematics Meetings</i> San Francisco 2024, Denver 2020, Seattle 2016, San Antonio 2015, Baltimore 2014 & 2019, San Diego 2018, 2013, & 2008, Boston 2012, New Orleans 2011, Washington, D.C. 2009. <i>Association of Christians in the Mathematical Sciences Biennial Meeting</i> Dordt University 2024, Indiana Wesleyan University 2019, Charleston Southern University 2017, Redeemer University College 2015, Bethel University 2013, Westmont College 2011, Wheaton College 2009. <i>MAA Seaway Section Meeting</i> St. John Fisher College Spring 2019, SUNY Oswego Spring 2017, Rochester Institute of Technology Fall 2016, Elmira College Fall 2012, Nazareth College Spring 2011, SUNY Fredonia Fall 2009. <i>Conference on Undergraduate Research in Mathematics</i> Pennsylvania State University, November 2011 (with six students), November 2009 (with seven students). <i>Project NExT Workshops and MAA MathFest</i> Pittsburgh, PA, August 2010 and Lexington, KY, August 2011. <i>American Institute of Mathematics Research Experience for Undergraduate Faculty</i> Palo Alto, CA, July 18–22, 2011. <i>St. Lawrence Valley Mathematics Symposium III</i> Clarkson University, November 5–6, 2010 (with six students). <i>6th Conference on Function Spaces</i> Southern Illinois University at Edwardsville, May 2010.