Matthew R. Boelkins

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EDUCATION

Ph.D. in College Teaching of Mathematics, Syracuse University, Syracuse, NY 13244	May 1998
M.S. in Mathematics, with distinction, Western Washington University, Bellingham, WA 98225	June 1993
B.S. in Mathematics, Geneva College, Beaver Falls, PA 15010	May 1991

POSITIONS HELD

Professor of Mathematics, Grand Valley State University, Allendale MI 49401	2012 -
Editor-in-Chief, *PRIMUS*	2021 -
Problems, Resources, and Issues in Mathematics Undergraduate Studies http://www.tandf.co.uk/journals/titles/10511970.asp	
Director of New Student Advising and Registration, GVSU	2013 - 2022
Chair of the Congress, Mathematical Association of America	2017
First Vice President, Mathematical Association of America	2016
Co-Editor-in-Chief, *PRIMUS*	2015 - 2020
Associate Editor, *PRIMUS*	2010 - 2014
Associate Professor, Grand Valley State University, Allendale MI 49401	2004 - 2012
Visiting Associate Professor, Hope College, Holland MI 49423	2004 - 2005
Assistant Professor, Grand Valley State University, Allendale MI 49401	1998 - 2004

PUBLICATIONS (**undergraduate student** co-authors are indicated in **bold**; peer-reviewed articles are denoted by *)

[15] *Active Prelude to Calculus* (free, open-source textbook).
ISBN 123-4567890. Available online in HTML, PDF, and print from https://activecalculus.org
(first published 1/2019; latest version 8/2019).

[14] *Active Calculus - Multivariable* (free, open-source textbook), with S. Schlicker (lead author) and D. Austin.
ISBN 978-1724366856. Available online in HTML, PDF, and print from https://activecalculus.org
(first published 8/2015; latest version 8/2018).

[13] *Active Calculus - Single Variable* (free, open-source textbook; lead author), with D. Austin and S. Schlicker.
ISBN 978-1724458322. Available online in HTML, PDF, and print from https://activecalculus.org
(first published 8/2012; latest version 7/2019).

[12] (a-i) Nine articles in *The Encyclopedia for Mathematics and Society*, S. J. Greenwald and J. E. Thomley (eds.),
Pasadena, CA: Salem Press, 2011 (article titles and page numbers are on the last page of this vita).

[11] *Differential Equations with Linear Algebra* (textbook), with J. Goldberg and M. Potter.
ISBN 978-0-19-538586-1, Oxford University Press, ©2009, 576pp.

[10*] "Polynomial Root Squeezing," with **J. From** and **S. Kolins**.
Mathematics Magazine 18:1 (Feb. 2008), pp. 39-44.

[09*] "On the Ratio Vectors of Chebyshev and Equispaced Polynomials," with **M. Wells**.
The Missouri Journal of Mathematical Sciences 19:1 (2007), pp. 15-28.

[08*] "A Note on PIPCIRs," with **M. Wells**. *The Pi Mu Epsilon Journal*, 12:5 (Fall 2006), pp. 257-263.

[07*] "From Chebyshev to Bernstein: A Tour of Polynomials Small and Large," with **J. Miller** and **B. Vugteveen**.
The College Mathematics Journal, 37:3 (May 2006), pp. 194-204.

[06*] "When Students Write the Text." *PRIMUS*, 15:2 (June 2005), 97-108.

[05*] "How we get our Students to Read the Text Before Class," with T. Ratliff.
FOCUS, 21:1 (Jan. 2001), 16-17. (An extended version of this article is available from MAA Online

[04] Book and software review on the topic of wavelets for undergraduates, with E. Aboufadel and S. Schlicker.
Am. Math. Monthly, 106:10 (1999), 971-977.

[03*] "Removable Ambiguities: Making Mathematics More Intelligible." *PRIMUS*, 8:4 (Dec. 1998), 331-339.

[02*] "Teaching Calculus Students How To Study," with T. Pfaff.
PRIMUS (Problems, Resources, and Issues in Mathematics Undergraduate Studies), 8:3 (Sept. 1998), 253-264.

[01] "On the Spectral Radius of a Positive Operator."
Syracuse University Ph.D. thesis (advisor: L. J. Lardy), May 1998.

SELECT INVITED PRESENTATIONS[1]

- "Interactive, Accessible, Free, and More: how open-source textbooks are changing the teaching and learning of mathematics," invited plenary, Indiana MAA Meeting, Indianapolis, IN, 4/6/24.

- "This episode is brought to you by the number 3," Mathfest Ignite, Philadelphia, PA, 8/5/22.

- "Active Learning with *Active Calculus*," Project NExT Workshop (via Zoom), 7/29/20 and 8/4/21.

- "More Linear Algebra, Please," invited plenary, SIMIODE Expo 2021 (via Zoom), 2/13/21.

- "The Future of Textbooks," invited address, WebSIGMAA annual meeting, Joint Mathematics Meetings, Denver, CO, 1/17/20.

- "Polynomial Root Dragging," invited live classroom presentation, National Inquiry-Based Learning and Teaching in Mathematics Conference, Denver, CO, 6/5/19.

- "The Geometry of Polynomials," presented in multiple settings, including

    - Plenary address, Kansas MAA Section Meeting, Johnson County CC, Overland Park, KS, 4/20/18.
    - Keynote address, SUMMR (Summer Undergraduate Michigan Mathematics Research) Conference, GVSU, 7/14/17.
    - Plenary address, Pacific Northwest MAA Section Meeting, Gonzaga University, Spokane WA, 6/18/17.

- "Fibonacci's Garden," presented in multiple settings, including

    - Plenary Address, MathPath 2019, Grand Valley State University, 7/12/19.
    - Invited address, Kenyon College Mathematics Honors Banquet, Gambier, OH, 4/22/19
    - Plenary Address, Rocky Mountain MAA Section Meeting, University of Northern Colorado, Greeley CO, 4/13/18.
    - *15th Annual George M. Kitchen Lecture*, Kalamazoo, MI 5/15/13.
    - Michigan Mathematics Prize Competition Banquet, Hope College, 3/2/13.
    - *The Art of Mathematics*, public lecture, Grand Valley State University, 2/8/07.

- "Active Calculus." MIT Electronic Seminar on Mathematics Education, http://math.mit.edu/seminars/emes/pastseminars.html, 10/2/18.

- "More Active Learning." Workshop for STEM faculty, Calvin College, 8/22/18.

- "28,835." Honors Convocation Address, Grand Valley State University, 4/9/18.

- "How Can Technology Extend the Humanity of Learners? A Dialogue." With R. Talbert, Keynote Address for the 2016 Teaching & Learning with Technology Symposium, Grand Valley State University, 3/23/16.

- "Preparing Students for In-class Active Learning: Reading Assignments and More." Address to Syracuse University Project Advance Seminars: (Upstate) Syracuse, NY, 10/22/15; (Downstate) New York, NY, 10/23/15.

- "How Now Shall We Teach Mathematics?" Plenary workshop, Project NExT, Mathfest, Wash. DC, 8/2/2015.

- "Calculus 2020: A Vision for the Future." Plenary address, KC Math & Tech Expo, Kansas City, MO, 10/4/14.

- "Student Research with Polynomial Functions: Calculus at Work." Address to Syracuse University Project Advance Seminars: (Upstate) Syracuse, NY, 5/17/06, (Downstate) New York, NY, 5/18/06.

HONORS AND DISTINCTIONS

2022 Meritorious Service Award, Mathematical Association of America
2019 Michigan Section of the Mathematical Association of America Distinguished Service Award
2016 Michigan Association of State Universities Distinguished Professor of the Year (press release)
2016 Grand Valley State University Glenn A. Niemeyer Award
2014 Grand Valley State University Outstanding Academic Advising and Student Services Award
2013 Michigan Section of the Mathematical Association of America Distinguished Teaching Award
2003 Grand Valley State University Division of Science and Mathematics Pew Teaching Excellence Award
1999-2000 Mathematical Association of America Project NExT Fellow
1998 Donald E. Kibbey Prize for Teaching Excellence (co-recipient), Syracuse University Department of Mathematics
1997 Special Chair's Citation for Exceptional Contributions to Undergraduate Education in Mathematics, Syracuse University Department of Mathematics
1995-1998 Teaching Fellow, Syracuse University Graduate School
1995 Outstanding Teaching Assistant Award, Syracuse University

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[1]a full chronological list of presentations given may be found at http://gvsu.edu/s/Gz as an addendum to this vita.

SELECT MEDIA AND EDITORIAL CONTRIBUTIONS

[06] "*PRIMUS*: Our Fourth Decade," with B. Katz and K. Weld.
 PRIMUS, 31:6, 659-661, DOI: 10.1080/10511970.2021.1872752.
[05] "Meet New MAA president Jenny Quinn."
 MAA FOCUS, Feb/Mar 2021.
[04] "More Linear Algebra," with F. Alayont, D. Austin, P. Fishback, S. Schlicker, R. Talbert, C. Wells.
 MAA FOCUS, Dec/Jan 2021.
[03] "PreTeXt: the Future of Textbooks," with J. Firkins Nordstrom.
 MAA FOCUS, Dec/Jan 2020.
[02] "*PRIMUS* is an MAA Benefit," with J. Ellis-Monaghan.
 MAA FOCUS, Apr/May 2019.
[01] "*PRIMUS*: Sharing Ideas in Changing Times," with J. Ellis-Monaghan.
 PRIMUS, 21:1, 1-3, DOI: 10.1080/10511970.2010.515546.

UNDERGRADUATE RESEARCH SUPERVISED

2009 GVSU McNair Scholars Program
 Student: Neil Biegalle
2005 Grand Valley State University REU, National Science Foundation grant DMS-0451254.
 Students: Justin From and Samuel Kolins
2003 Grand Valley State University REU, National Science Foundation grant DMS-0137264.
 Students: Jennifer Miller and Ben Vugteveen
2001 GVSU SURP (Summer Undergraduate Research Project)
 Student: Matthew J. Wells

SELECT SPONSORED UNDERGRADUATE RESEARCH PRESENTATIONS

Neil Biegalle*, "The Extremality of Bernstein Polynomials." Mathfest, Portland, OR, August 2009.
Sam Kolins*, "Polynomial Root Squeezing and the Minimum Span Problem." Mathfest, Albuquerque, NM,
 August 2005.
Justin From, "A Problem Related to the Sendov Conjecture." Mathfest, Albuquerque, NM, August 2005.
Jennifer Miller and Ben Vugteveen, "Ratio Vectors of Polynomials with Distinct Real Zeros." Mathfest,
 Boulder, CO, August 2003.
Matt Wells, "Critical numbers of polynomials as a function of root location." Mathfest, Madison, WI, August 2001.

* - these students each received a prize from the MAA for giving the best talk in their respective sessions.

SELECT SERVICE ACTIVITIES

NATIONAL
Editorial Board, *PRIMUS*: Problems, Resources, and Issues in Mathematics Undergraduate Studies, 2006-
Editorial Board, *FOCUS* (newsmagazine of the Mathematical Association of America), 2020-2022
Chair of the Congress, Mathematical Association of America, 2017
First Vice President, Mathematical Association of America, 2016
Governor, Michigan Section of the Mathematical Association of America, 2013-16

REGIONAL
Chair, Program Committee, 3rd IL-IN-MI MAA Tri-Section Meeting, Valparaiso University 2017-2018
Executive Committee, Michigan Section of the Mathematical Association of America, 2007-2010
 Four Year Vice Chair and Annual Meeting Program Chair, 2007-08
 Chair, 2008-09   Past Chair, 2009-10
 Governor, 2013-2016
Program Committee, Annual Meeting of the Michigan Section of the MAA, 2005-06, 2008-09 (chair), 2019-20
Co-organizer, annual Michigan Project NExT Symposium, 2001-05
Organizer, Sixth Annual Michigan Undergraduate Mathematics Conference, 2003

SELECT SERVICE ACTIVITIES (cont'd)

UNIVERSITY

Search Committee, Vice Provost for Student Affairs, Grand Valley State University, 2018
Provost's 2016-2020 Strategic Positioning Committee, Grand Valley State University, 2013-15
Member, University Academic Senate, 2007-2021

COLLEGE OF LIBERAL ARTS AND SCIENCES

Faculty Development Committee, College of Liberal Arts and Sciences, 2005-11
    (committee chair 2005-06, 2006-07, 2007-08).

MATHEMATICS DEPARTMENT

Assistant Chair, Department of Mathematics, Grand Valley State University, 2008-11, 2013-15, 2019-25
    Chair, Search Committee, 2008-09, 2009-10, 2010-2011, 2019-20, 2021-22, 2023-24, 2024-25
    Chair, Personnel Committee, 2013-14
Acting Chair, Department of Mathematics, Grand Valley State University, July 2011-December 2011
Co-editor (and co-founder), *Mackinac Gazette*, annual mathematics department alumni newsletter
    2002, 2003, 2004, 2006, 2007, 2008, 2009, 2010, 2011, 2013, 2014, 2015, 2016, 2017, 2018, 2019,
    2021, 2022, 2023, 2024
Personnel Committee, Department of Mathematics, Grand Valley State University, 2005-07, 2012-13
Co-organizer, Math in Action Conference, 2001, 2002

COURSES TAUGHT AT GVSU

Math 122, College Algebra	Math 123, Trigonometry
Math 124, Functions and Models	Math 201, Calculus I
Math 202, Calculus II	Math 203, Calculus III
Math 204, Linear Algebra I	Math 205, Linear Algebra II
Math 210, Communicating in Mathematics	Math 302, Linear Algebra and Differential Equations
Math 304, Analysis of Differential Equations	Math 331, Euclidean Geometry
Math 405, Numerical Analysis	Math 495, The Nature of Modern Mathematics
Math 496, Senior Thesis	Math 685, Workshop for Teachers of AP Calculus

Enumeration of publication [12]

[12] Nine articles in *The Encyclopedia for Mathematics and Society*, S. J. Greenwald and J. E. Thomley (eds.),
Pasadena, CA: Salem Press, 2011.

[a] Bees: the Geometric Efficiency of Honeycomb, pp. 103-105.
[b] How a Decaying Quantity Tells its Age through the Carbon it Contains, pp. 157-159.
[c] The Vindication of Euclid: the Parallel Postulate Really is a Postulate, pp. 750-752.
[d] Exponential and Logarithmic Functions: Powers and their Undoing, pp. 370-372.
[e] The Curious Nature of Infinity, pp. 504-506.
[f] Polynomials: the Building Blocks of Functions, pp. 784-786.
[g] The Pythagorean Theorem: a Masterpiece of Mathematics, pp. 827-829.
[h] What is Mathematics, Really?, pp. 608-610.
[i] Rate of Change: Changing Quantities and Changing Rates, pp. 405-408.