

JACOB LAUBACHER

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EDUCATION

[3] **Ph.D. in Mathematics** May 2017
Bowling Green State University *Bowling Green, OH*

- Dissertation: *Secondary Hochschild and cyclic (co)homologies*
- Advisor: Mihai D. Staic

[2] **M.A. in Pure Mathematics** May 2013
Kent State University *Kent, OH*

[1] **B.S. in Mathematics** May 2010
Ohio Dominican University *Columbus, OH*

- Magna Cum Laude

TEACHING

[3] **Associate Professor** August 2022 – Present
St. Norbert College – Department of Mathematics *De Pere, WI*

- Fall 2022 {
 - MATH 490 – Mathematical Economics (independent study)
 - MATH 250 – Advanced Foundations in Mathematics
 - MATH 233 – Calculus and Analytic Geometry III
 - MATH 128 – Introductory Statistics for Business

[2] **Assistant Professor** August 2018 – May 2022
St. Norbert College – Department of Mathematics *De Pere, WI*

- Spring 2022 {
 - MATH 490 – Advanced Topology (independent study)
 - MATH 376 – Complex Analysis
 - MATH 128 – Introductory Statistics for Business (two sections)
- Fall 2021 {
 - MATH 490 – Probability and Statistics II (independent study)
 - MATH 250 – Advanced Foundations in Mathematics
 - MATH 128 – Introductory Statistics for Business (two sections)
- Spring 2021 {
 - MATH 321 – Probability and Statistics
 - MATH 131 – Calculus and Analytic Geometry I
 - MATH 128 – Introductory Statistics for Business
- Fall 2020 {
 - MATH 250 – Advanced Foundations in Mathematics
 - MATH 128 – Introductory Statistics for Business
 - HONR 101 – Introduction to Honors
- Spring 2020 {
 - MATH 321 – Probability and Statistics (arranged course)
 - MATH 250 – Advanced Foundations in Mathematics
 - MATH 128 – Introductory Statistics for Business
 - MATH 115 – Precalculus Mathematics
- Fall 2019 {
 - MATH 355 – Topology
 - MATH 128 – Introductory Statistics for Business
 - MATH 123 – Applications of Contemporary Mathematics
- Spring 2019 {
 - MATH 321 – Probability and Statistics
 - MATH 250 – Advanced Foundations in Mathematics
 - MATH 123 – Applications of Contemporary Mathematics

- Fall 2018 $\left\{ \begin{array}{l} \text{MATH 250 – Advanced Foundations in Mathematics} \\ \text{MATH 131 – Calculus and Analytic Geometry I} \\ \text{MATH 128 – Introductory Statistics for Business} \end{array} \right.$

[1] Visiting Assistant Professor

St. Norbert College – Department of Mathematics

August 2017 – May 2018

De Pere, WI

- Spring 2018 $\left\{ \begin{array}{l} \text{MATH 203 – Linear Algebra} \\ \text{MATH 131 – Calculus and Analytic Geometry I} \\ \text{MATH 128 – Introductory Statistics for Business} \end{array} \right.$
- Fall 2017 $\left\{ \begin{array}{l} \text{MATH 131 – Calculus and Analytic Geometry I} \\ \text{MATH 123 – Applications of Contemporary Mathematics (two sections)} \end{array} \right.$

PUBLICATIONS

- [11] Jacob Laubacher.** Secondary Hochschild homology and differentials. Submitted, arXiv:2206.11797, 2022.
- [10] Sara DeGroot, Jacob Laubacher,** and Mark Medwid. On prime character degree graphs occurring within a family of graphs (ii). *Comm. Algebra*, 50(8):3307–3319, 2022.
- [9] Samuel Carolus and Jacob Laubacher.** Simplicial structures over the 3-sphere and generalized higher order Hochschild homology. *Categ. Gen. Algebr. Struct. Appl.*, 15(1):93–143, 2021.
- [8] Samuel Carolus, Jacob Laubacher,** and Mihai D. Staic. A simplicial construction for noncommutative settings. *Homology Homotopy Appl.*, 23(1):49–60, 2021.
- [7] Jacob Laubacher** and Mark Medwid. On prime character degree graphs occurring within a family of graphs. *Comm. Algebra*, 49(4):1534–1547, 2021.
- [6] Samuel Carolus, Samuel A. Hokamp,** and **Jacob Laubacher.** Deformation theories controlled by Hochschild cohomologies. *São Paulo J. Math. Sci.*, 14(2):481–495, 2020.
- [5] Mark W. Bissler and Jacob Laubacher.** Classifying families of character degree graphs of solvable groups. *Int. J. Group Theory*, 8(4):37–46, 2019.
- [4] Mark W. Bissler, Jacob Laubacher,** and Mark L. Lewis. Classifying character degree graphs with six vertices. *Beitr. Algebra Geom.*, 60(3):499–511, 2019.
- [3] Mark W. Bissler, Jacob Laubacher,** and Corey F. Lyons. On the absence of a normal nonabelian Sylow subgroup. *Comm. Algebra*, 47(3):917–922, 2019.
- [2] Jacob Laubacher,** Mihai D. Staic, and Alin Stancu. Bar simplicial modules and secondary cyclic (co)homology. *J. Noncommut. Geom.*, 12(3):865–887, 2018.
- [1] Jacob Laubacher.** Properties of the secondary Hochschild homology. *Algebra Colloq.*, 25(2):225–242, 2018.

MENTORING EXPERIENCE

- [9] Project with Sara DeGroot '22 (funded through The Collaborative)** Spring 2022
- “On prime character degree graphs occurring within a family of graphs (ii).”
 - Poster presentation at the SNC Undergraduate Research Forum, April 28, 2022.
 - Joint project with Dr. Mark Medwid (Rhode Island College).
- [8] Exam P Preparation with Daniel Scaife '23** Fall 2021
- He passed Exam P on November 19, 2021.
- [7] New Faculty Mentor for Dr. Samuel Hokamp** Fall 2019 – Spring 2020
- [6] Project with Jack Maastricht '20 (funded through The Collaborative)** Fall 2019
- “Modernizing Archimedes’ Approach to Pi.”
- [5] Vocational Experience with Brianne Barta '21 (through *Navigate*)** Spring 2019

- *Navigate* is a vocational and discernment program through SNC.
- [4] **Project with Brady Miller '19 (funded through The Collaborative)** Spring 2019
- “Measuring the Market Impact of Wisconsin Political Events.”
 - Verbal presentation at the SNC Undergraduate Research Forum, April 12, 2019.
 - Joint project with Dr. Daniel Kling (Economics).
- [3] **Project with Jaewon Kim '20** Fall 2018
- “Next Time I Will Win: Breaking Down the Gambler’s Fallacy.”
 - Presented at the SNC Pi Mu Epsilon Conference, November 3, 2018.
- [2] **Project with Mark Nichols '19 (funded through The Poss-Wroble Fellowship)** Summer 2018
- “Examples of graphs that admit no normal nonabelian Sylow p -subgroup.”
 - Presented at MathFest in Denver, CO, August 2, 2018.
 - Participated in SURF.
- [1] **Project with Henry Petersen '18** Fall 2017
- “Configurations of the Rubik’s Cube.”
 - Presented at the SNC Pi Mu Epsilon Conference, November 4, 2017.

SERVICE OUTSIDE THE MATH DISCIPLINE

- [17] **Committee member for the Job Search for the Administrative Assistant in the Division of Natural Science** Summer 2022
- [16] **External Committee Member for the Job Search in Biology** Fall 2021
- [15] **Member of the HLC Teaching Evaluation Working Group** Fall 2020
- [14] **Member of the Athletic Committee** Fall 2020
- [13] **Virtual Summer Advisor** Summer 2020
- [12] **External Committee Member for the Job Search in Computer Science** Spring 2020
- [11] **External Committee Member for the Job Search in Supply Chain and Operations Management for the Schneider School of Business & Economics** Fall 2019
- [10] **Member of the Faculty Development Committee** Fall 2019 – Spring 2022
- Chair of the Summer Grant Subcommittee Spring 2022
 - Facilitator of the session “Creating a Learning-Community through Mentoring” Summer 2021
 - Chair of the Summer Grant Subcommittee Spring 2021
- [9] **Invited speaker for a Q&A Panel during New Faculty Orientation** August 15, 2019
- [8] **Summer Advisor** Summer 2019
- [7] **Judge for the Poster Session at the Undergraduate Research Forum** April 12, 2019
- [6] **Judge for the Delaney Writing Contest** Spring 2019
- [5] **Academic Advisor** Fall 2018 – Present
- Currently has 16 advisees
- [4] **Member of the External Faculty Pool for Tenure Track Searches** Fall 2018 – Spring 2020
- [3] **Member of the Academic Honor Board** Fall 2018 – Spring 2020
- [2] **Bruess Brigade Participant** Summer 2018
- [1] **Judge for the Poster Session at the Undergraduate Research Forum** April 20, 2018

SERVICE WITHIN THE MATH DISCIPLINE

[12] Discipline Coordinator	Fall 2022 – Present
[11] Co-organizer for MATH 499	Spring 2021 – Present
[10] Committee Member for the Job Search in Mathematics	Fall 2020 – Spring 2021
[9] Organizer for the Math Teaching Assistants	Fall 2019 – Spring 2022
[8] Committee Member for the Open Rank Job Search in Mathematics	Fall 2018
[7] Co-organizer for the SNC PME Undergraduate Regional Conference	Fall 2018 – Fall 2020
[6] Advisor for the National Mathematics Honor Society at SNC	Fall 2018 – Present
[5] Advisor for the Actuarial Club	Fall 2018 – Fall 2019
[4] Advisor for the Math Club	Fall 2018 – Fall 2019
[3] Administer of Math Placement Exams	Summer 2018 – Summer 2019
[2] Editor of the SNC Math Newsletter	Spring 2018 – Spring 2019
[1] Leader of the SNC Putnam Team	Fall 2017 – Spring 2019

SCHOLARLY SERVICE

[3] Referee for Mathematical Journals	Summer 2020 – Present
<ul style="list-style-type: none"> • <i>Algebra Colloquium</i> • <i>Monatshefte für Mathematik</i> • <i>Communications in Algebra</i> • <i>Discrete Mathematics</i> • <i>Journal of Pure and Applied Algebra</i> 	
[2] Reviewer for MathSciNet	Spring 2019 – Present
<ul style="list-style-type: none"> • Reviewed “p-divisibility of co-degrees of irreducible characters” by Roya Bahramian and Neda Ahanjideh • Reviewed “Deformations of Loday-type algebras and their morphisms” by Apurba Das • Reviewed “Solvable groups whose character degree graphs generalize squares” by Mark L. Lewis and Qingyun Meng • Reviewed “On a question of Dixon and Rahnamai Barghi” by Sesuai Y. Madanha • Reviewed “The dominant dimension of cohomological Mackey functors” by Markus Linckelmann 	
[1] Judge/Moderator for an MAA Student Paper Session at MathFEST	August 3, 2018
<ul style="list-style-type: none"> • Introduced and judged a session consisting of five talks 	

PROFESSIONAL DEVELOPMENT

[4] Joint Mathematics Meeting in Baltimore, MD	January 16th – 19th, 2019
[3] MathFest in Denver, CO	August 1st – 4th, 2018
[2] Joint Mathematics Meeting in San Diego, CA	January 10th – 13th, 2018
[1] AMS Fall Eastern Sectional Meeting in Buffalo, NY	September 16th – 17th, 2017

INVITED TALKS

[4] Jesus was the Greatest Mathematician Ever	March 4, 2022
<ul style="list-style-type: none"> • SNCtalks, Walter Theater, De Pere, WI 	
[3] Mathematics: None Shall Pass	November 14, 2018

- S.T.E.A.M. Engine GB, Neville Public Museum, Green Bay, WI
- [2] **The New Year’s Day Afterthought** March 15, 2018
 - Departmental Colloquium at Rhode Island College, Providence, RI
- [1] **Simplicial Structures for Higher Order Homology over the 2-Sphere** September 16, 2017
 - AMS Sectional Meeting in Buffalo, NY
 - Special Session on Cohomology, Deformations, and Quantum Groups: A Session Dedicated to the Memory of Samuel D. Schack

CONTRIBUTED TALKS

- [6] **The Kool-Aid Man** November 11, 2020
 - Mathematics Colloquium Series at SNC
- [5] **Snakes, Chains, and Kernels** February 14, 2019
 - Mathematics Colloquium Series at SNC
- [4] **A Deformation Theory Controlled by $H_{S^d}^\bullet(A, A)$** January 17, 2019
 - At the JMM in Baltimore, MD
- [3] **The Paw of the Lion** April 6, 2018
 - Mathematics Colloquium Series at SNC
- [2] **Properties of the Secondary Hochschild Homology** January 12, 2018
 - At the JMM in San Diego, CA
- [1] **Ramsey Numbers** September 7, 2017
 - Mathematics Colloquium Series at SNC