

Derek Thompson

Department of Mathematics
Taylor University
Upland, IN 46989

EDUCATION

Doctorate of Philosophy, Mathematics
Indiana University-Purdue University Indianapolis (IUPUI), Indianapolis, IN May 2013

Master of Arts, Mathematics
Ball State University, Muncie, IN May 2008

Bachelor of Science, Mathematics
Indiana Wesleyan University, Marion, IN May 2006

EMPLOYMENT

Associate Professor, Taylor University 8/18 - Present
Assistant Professor, Taylor University 8/14 - 8/18
Assistant Professor, Trine University 5/13 - 5/14
Instructor, Trine University 1/13 - 5/13
Graduate Assistant Instructor, IUPUI 8/09 - 12/12
Graduate Assistant Instructor, Ball State University 8/07 - 8/08
Graduate Assistant in Computing Services, Ball State University 8/06 - 8/07

GRANTS & AWARDS

2018-2019 MAA Tensor Women in Mathematics Grant
2017 School of Natural and Applied Sciences (SNAS) Distinguished Lecturer
2016, 2017 Women's Giving Circle Research Grant
2016 Faculty-Mentored Undergraduate Scholarship (FMUS) award
2016, 2017 Fund for Faculty Scholarship Award
2016 Teaching & Learning Connection Technology Mini-Grant
2015 Teaching & Learning Connection Technology Mini-Grant
2015 Office of Sponsored Programs Mini-Grant
2015 netVUE Career & Calling Mini Grant
2015 BCTLE Mini-Grant on Course Redesign
2015 PRMO2015 NSF Travel Grant
2014 MAA Project NExT Fellow (Gold Dot '14)
2012 AMS Graduate Student Travel Grant
2008 IUPUI University Fellowship

Mentored or Coached Student Awards

Outstanding Presentation Award, MathFest 2017, Caleb Holleman
Outstanding Presentation Award, MathFest 2016, Ruth Jansen and Becca Rousseau
1st Place, 2014 Indiana College Mathematics Competition, Josh Kiers, Claire Spychalla (Kiers), Daniel Crane

PUBLICATIONS

A name in **bold** was an undergraduate student at that time. Student-led projects are included here.

1. **M. Guillaume, A. Mishra**, D. Thompson, *Numerical Range of Toeplitz Matrices over Finite Fields*, submitted.
2. **M. Guillaume, A. Mishra**, *Numerical Range of 3×3 Truncated Composition Operators*, submitted.
3. D. Thompson, *Normaloid weighted composition operators on H^2* , J. Math. Anal. Appl. 467 (2) (2018) 1153-1162.
4. **C. Holleman, T. McClatchey**, D. Thompson, *Binormal, complex symmetric operators*, submitted, 2017.
5. M. Fatehi, M. H. Shaabani, D. Thompson, *Quasinormal and hyponormal weighted composition operators on H^2 and A_α^2 with linear fractional compositional symbol*, Complex Analysis and Operator Theory, 2017. doi: 10.1007/s11785-017-0683-3
6. D. Thompson, *Normality properties of weighted composition operators on H^2* , Contemporary Mathematics: Problems and Recent Methods in Operator Theory, 687 (2017) 231-239.
7. **R. Jansen, R. K. Rousseau**, *Complex symmetry of truncated composition operators*, Rose-Hulman Undergraduate Mathematics Journal, 18 (1) (2017) 44-51.
8. W. Johnston and D. Thompson, *The Lebesgue Integral for Undergraduates: An Instructor's Resource Guide*, complement to the book *The Lebesgue Integral for Undergraduates* by W. Johnston, MAA Press.
9. S. K. Narayan, D. Sievewright, D. Thompson, *Complex symmetric composition operators on H^2* , J. Math. Anal. Appl. 443 (2016) 625-630.
10. D. Thompson, *Teaching Validity and Soundness of Arguments Using the Board Game: The Resistance*, PRIMUS 25 (6) (2015) 542-552.
11. C. Cowen, E. Ko, F. Tian, D. Thompson, *Spectra of some weighted composition operators on H^2* , Acta Sci. Math (Szeged) 82 (2016), 221-234.
12. D. Thompson, *Restrictions of composition operators to $z^k H^2(\mathbb{D})$* , Acta Sci. Math (Szeged) 81 (2015), 309-323.

MEETINGS ATTENDED

IN-MAA Meetings

Fall 2017, Manchester University

Spring 2017, Earlham College

Fall 2014, Trine University

Fall 2012, Butler University

Spring 2011, Indiana Wesleyan

Spring 2016, Franklin College

Fall 2013, Univ. Southern IN

Spring 2012, Ball State University

Spring 2010, Franklin College

Spring 2015, Taylor University

Spring 2013, IU East

Fall 2011, University of Indianapolis

Fall 2003, Goshen College

AMS Section Meetings

Central Section, Indiana University, Bloomington, IN, Spring 2017

Southeastern Section, University of Memphis, Memphis, TN, Spring 2015

Central Section, Washington University, St. Louis, MO, Fall 2013

Southeastern Section, University of Kentucky, Lexington, KY, Spring 2010

MAA MathFest

2016, Columbus, OH

2014, Portland, OR

2015, Washington, D.C.

2013, Hartford, CT

Joint Mathematical Meetings (JMM)

2015, San Antonio, TX

2012, Boston, MA

ACMS Biennial Conferences

20th, Redeemer University College, Hamilton, Ontario, 2015 (+ pre-conference workshop on faith integration)

Other Meetings Attended

- Indiana Undergraduate Research Conference, Indiana University, 7/24/18.
- International Workshop on Operator Theory and Applications (IWOTA), Washington University, St. Louis, MO, 7/8/16 - 7/11/16.
- CUR Biennial Conference, University of South Florida, Tampa, FL, 6/26/16 - 6/28/16.
- Problems and Recent Methods in Operator Theory (PRMO) Workshop, Memphis, TN, 10/15/15 - 10/16/15.
- Celebration of the Mathematical Mind, IPFW, Fort Wayne, IN, 11/13/15.
- Conference on Research and Innovation in Teaching Mathematics with Technology, University of Wisconsin-LaCrosse, LaCrosse, WI, 7/20/15 - 7/21/15.
- Analysis Symposium, IPFW, Fort Wayne, IN, 11/8/13.
- Gen Con Trade Day for Educators, Indianapolis, IN, 8/14/13.

SERVICE**Memberships**

Mathematical Association of America (MAA)

Indiana MAA (IN-MAA) Section NExT

American Mathematical Society (AMS)

Association of Christians in the Mathematical Sciences (ACMS)

Association of Women in Mathematics (AWM)

Continual Service

BCTLE Advisory Board	2017-present
Zondervan Games Committee (ZGC)	2017-present
Math Club Sponsor	2017-present
Taylor University Community Life Committee	2016-present
Taylor-IWU Math Field Day coordinator	2014-present
Math Competition Coach	2014-2017
IN-MAA Nominations Committee	2014-2018

Ad-Hoc Service

Organizer of Panel on Women in Mathematics at Taylor University	2017
IN-MAA Section NExT Panel Moderator	2017
IN-MAA ICMC Grader	2017
Game Jam judge	2016-2017
Organizer of presentations by Carl Cowen at Taylor University	2016
Contributor to Mastery-Based Testing Blog (mbtmath.wordpress.com)	2016
Faculty Game Night Organizer	2016
Co-led MathFest workshop on Teaching the Lebesgue Integral to Undergraduates	2016
Guest lecture in Systems Game Studies course	2016, 2018
Author of Franklin College Joint Comprehensive Exam	2015
Session moderator at IN-MAA meeting	2015
Co-coordinator of ACMS graduate student workshop	2015
Organizer of math students' "Grad School Visit Day" at IUPUI	2014
Graduate student panelist, IN-MAA meeting	2010

Peer Review

Journal of Mathematical Analysis and Applications (JMAA), Rose-Hulman Undergraduate Mathematics Journal (RHUMJ), PRIMUS, AMS Contemporary Mathematics series (CONM), Proceedings of the AMS (PAMS)

Christian Service

Nursery worker for Mt. Olive United Methodist Church	2014-2017
Youth group leader for Mt. Olive United Methodist Church	2017-2018
Webpage manager for Mt. Olive United Methodist Church	2017-present
Regular contributor to GeeksUnderGrace.com	2016-present

PRESENTATIONS

1. "Complex Symmetric Operators," SNAS Distinguished Lecture, Taylor University, Upland, IN, 9/18/17.
2. "Complex Symmetric Composition Operators on H^2 ," Special Session on Multivariable Operator Theory and Function Theory, Central Section Meeting of the AMS, Indiana University, Bloomington, IN, 4/1/17.
3. "Top Ten Reasons to Use Plickers," (with Melissa Lindsey), IN-MAA Spring Meeting, Earlham College, Richmond, IN, 3/15/17.
4. "A Journey Towards Specifications Grading," Themed Contributed Paper Session on Formative Assessment Techniques for Undergraduate Math Courses, MathFest 2016, Columbus, OH, 8/5/16.
5. "Complex Symmetric Composition Operators on H^2 ," International Workshop on Operator Theory and Applications (IWOTA), Washington University, St. Louis, MO, 7/9/16.
6. "Spectra of some weighted composition operators on H^2 ," Complex Analysis Seminar, University of Toledo, Toledo, OH, 4/28/16.
7. "Spectra of some weighted composition operators on H^2 ," Analysis Seminar, Central Michigan University, Mount Pleasant, MI, 1/29/16.
8. "Teaching Validity and Soundness of Arguments Using the Board Game The Resistance," Celebration of the Mathematical Mind, IPFW, Fort Wayne, IN, 11/13/15.
9. "Spectra of some weighted composition operators on H^2 ," Poster Session, Problems and Recent Methods in Operator Theory (PRMO) conference, University of Memphis, Memphis, TN, 10/13/15-10/14/15.
10. "Teaching Validity and Soundness of Arguments Using the Board Game The Resistance," Themed Contributed Paper Session on Cultivating Critical Thinking through Active Learning in Mathematics, Mathfest 2015, Washington D.C., 8/6/15.
11. "Reading Scripture Logically," Twentieth Biennial Conference of the ACMS, Redeemer University College, Hamilton, Ontario, 5/27/15.
12. "Spectra of some weighted composition operators on H^2 ," Operator Theory Seminar, IUPUI, Indianapolis, IN, 4/1/15.
13. "Demonstrations with Desmos," IN-MAA Spring Meeting, Taylor University, Upland, IN, 3/13/15.
14. "Invariant Subspaces in Infinite Dimensions: Finding the Positive in a Negative Result," Mathematics Colloquium, Indiana Wesleyan University, Marion, IN, 3/12/15.
15. "Technology in Mathematics: What We Gain and What We Lose," SNAS Lecture Series, Taylor University, Upland, IN, 10/27/14.
16. "Writing About Continuity," MAA MathFest 2014, Portland, OR, 8/6/14.
17. "Invariant Subspaces in Infinite Dimensions: Finding the Positive in a Negative Result," invited speaker, Butler University, Indianapolis, IN, 3/19/14.
18. "Spectra of some weighted composition operators on H^2 ," Operator Theory Seminar, IUPUI, Indianapolis, IN, 12/4/13.

19. "Reading Scripture Logically," invited speaker, Indiana Wesleyan University, Marion, IN, 11/26/13.
20. "Writing About Continuity," IN-MAA Fall Meeting, University of Southern Indiana, Evansville, IN, 10/26/13.
21. "Restrictions to Invariant Subspaces of Composition Operators on the Hardy Space of the Disk," Special Session on Operator Theory, Central Section Meeting of the AMS, Washington University, St. Louis, MO, 10/20/13.
22. "Video Games and Calculus," MAA Mathfest 2013, Hartford, CT, 8/2/13.
23. "Restrictions of composition operators to $z^k H^2(\mathbb{D})$," Complex Analysis Seminar, University of Toledo, Toledo, OH, 4/11/13.
24. "Video Games and Calculus," IN-MAA Spring Meeting, IU East, Richmond, IN, 3/23/13.
25. "Board Games and Finite Mathematics," IN-MAA Fall Meeting, Butler University, Indianapolis, IN, 10/27/12.
26. "Restrictions of composition operators to $z^k H^2(\mathbb{D})$," Operator Theory Seminar, IUPUI, Indianapolis, IN, 9/12/12.
27. "Geometry and Algebra of Linear Fractional Transformations on the Riemann Sphere," IN-MAA Spring Meeting, Ball State University, Muncie, IN, 3/24/12.
28. "Restrictions to invariant subspaces of composition operators," Special Session on Operator Theory and Analytic Function Spaces, JMM 2012, Boston, MA, 1/7/12.
29. "Broke By Sundown," IN-MAA Spring Meeting, Indiana Wesleyan University, Marion, IN, 4/8/11.

COURSES TAUGHT

Taylor University

- MAT145 Intro to Functions & Calculus $\times 3$
- MAT146 Functions & Calculus
- MAT151 Calculus I $\times 2$
- MAT180 Problem Solving $\times 2$
- MAT215 Discrete Math for Computer Science $\times 5$
- MAT230 Calculus II $\times 7$
- MAT330 Technology for Mathematics $\times 2$
- MAT340 Advanced Calculus $\times 2$
- MAT461 Real Analysis $\times 3$

Trine University

- MA-134 Calculus I $\times 8$
- MA-164 Calculus II $\times 3$
- MA-123 Trigonometry
- FIT-2151 Social Board Games

IUPUI

- MATH-00100 Introduction to Algebra
- MATH-M118 Finite Mathematics $\times 3$
- MATH-M119 Brief Survey of Calculus I $\times 2$
- MATH-15300 Algebra and Trigonometry I $\times 2$

- MATH-15400 Algebra and Trigonometry II
- MATH-16500 Analytic Geometry and Calculus I
- MATH-16500 Analytic Geometry and Calculus I Recitations $\times 2$
- MATH-22100 Calculus for Technology I

Ball State University

- MATHS-112 Precalculus-Trigonometry $\times 2$

BCTLE Participation

Regular Events

- Colleagues' College: 2014, 2015, 2016, 2017, 2018
- Educational Issues Seminar: all offered 2014-2015, 2015-2016, 2016-2017, 2017-2018

Mid-Semester Feedback

- MAT145 Intro to Functions & Calculus, Fall 2014
- MAT151 Calculus I, Spring 2015
- MAT145 Intro to Functions & Calculus, Fall 2015
- MAT340 Advanced Calculus, Spring 2016

Teaching Squares

- 2015 with Jon Denning, Tom Nurkkala, Mark Colgan
- 2016 with Diane Dungan, Solomon Abebe, and Connor Angell
- 2017 with Jon Denning, Brandon Magers, Bill Bauson

Reading Groups

- 2014: *Teaching Naked: How Moving Technology Out of Your College Classroom Will Improve Student Learning*, Jose Antonio Bowen
- 2015: *Faith & Learning*, Patrick Allen and Kenneth Bradley
- 2016: *Augustine's Confessions*
- 2017: *Grit*, Angela Duckworth

Individual Events

I have attended over 40 ad-hoc events put on the BCTLE. Below are some of the more impactful events I have attended.

- "Creating classroom spaces for sensitive topics," Steve Messer, 3/14/17
- Workshop on Vocation, Chris Armstrong, OPUS: The Art of Work, Wheaton College, 3/10/16
- "Snapshot Vantage," Jamie Miles, 4/14/16
- "Notes from the spectrum: on writing, teaching, faith, and autism," Daniel Bowman, 12/10/15

INTERESTS

I have written over 200 board game reviews over the past five years. I began doing them on MeepleTown (meepletown.com), but now am a regular contributor to the ministry Geeks Under Grace (geeksundergrace.com) and helped launch their Tabletop section. I am one of the top *Star Realms* players in the world and occasionally write strategy articles for Megahaulin' (megahaulin.wordpress.com). I also enjoy video games, time with my wife and young children, Christian metal and hardcore music, medieval fantasy and science fiction literature, and learning new classroom technologies.