

Chase Thomas Worley

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EDUCATION

The University of Tennessee, Knoxville

- Ph.D. in Mathematics Aug 2011 – Aug 2017
 - Thesis: “Construction and Classification Results for Commuting Squares of Finite Dimensional \ast -Algebras”
 - Adviser: Remus Nicoara
 - Focus: Hadamard Matrices, Commuting Squares, Multi-parametric families of Hadamard matrices, Subfactor Theory.
- M.S. in Mathematics Dec 2014

Maryville College, Maryville, TN

- B.A. in Mathematics Aug 2007 – May 2011
 - Thesis: “A Lefkovich Matrix Model for the Common Housefly, *Musca Domestica*”
 - Thesis Advisor: Maria Siopsis
 - Graduated with distinction of magna cum laude.
 - Cumulative GPA: 3.79 / 4.00

TEACHING EXPERIENCE

Maryville College (TN)

- Visiting Lecturer of Mathematics Aug 2017– May 2019
 - Met with students several times a week for lecture and office hours.
 - Prepared lecture materials including notes, PowerPoints, homework assignments, quizzes, and exams.
 - Attended weekly course development meetings for the core curriculum course Quantitative Literacy, a liberal arts course which exposes students to mathematical concepts needed not only in their major courses but also needed to be a well-informed citizen.
 - Attended and participated in weekly Faculty Meetings/Forums.
 - Attended and participated in weekly Division Meetings.
 - Attended and participated in Strategic Planning Sessions for the College.
 - Posted Puzzler Problems for the Campus Community.
 - Courses taught as instructor of record (all traditional format):
 - Pre-Calculus with Trigonometry (4 credit hours) – Fall 2017, Spring 2018, Fall 2018, Spring 2019
 - Quantitative Literacy (3 credit hours) – Fall 2017, January 2018, Fall 2018, Spring 2019
 - Calculus II (4 credit hours) – Fall 2018
 - Calculus III (4 credit hours) – Spring 2018, Spring 2019

The University of Tennessee, Knoxville,

- Graduate Teaching Associate, Department of Mathematics May 2012 – May 2017
 - Met with students several times a week for lecture and office hours.
 - Prepared lecture materials including notes, PowerPoints, homework assignments, quizzes, and exams.
- Graduate Teaching Assistant, Department of Mathematics Aug 2011 – May 2011
 - Met with students once a week for a supplemental lecture.
 - Helped students one-on-one in office hours.
 - Graded homework, quizzes, and exams.
 - Courses taught as instructor of record:
 - College Algebra (traditional lecture format, ALEKS online)
 - Basic Calculus (Calculus for non-STEM majors)
 - Calculus I
 - Calculus III (traditional lecture format and flipped format)
 - Calculus II (Spring 2017)
 - Recitation Leader:
 - College Algebra (traditional lecture format, flipped format using Coursera)
 - Basic Calculus (Calculus for non-STEM majors)
 - Calculus I

LaTeX, Mathematica, Word, Excel, PowerPoint, R, SPSS, C++, Access.

R. Nicoara, and C. Worley, “Finiteness Result for Circulant Core Hadamard Matrices of order $p + 1$ for prime p ,” *Linear Algebra and its Applications* vol. 571, pp. 143–153, 2019

C. Worley, "Construction and Classification Results for Commuting Squares of Finite Dimensional \ast -Algebras." PhD diss., University of Tennessee, 2017. https://trace.tennessee.edu/utk_graddiss/4716

C. Worley, “Construction of Multi-Parametric Families Containing the Fourier Matrix for Non-Prime n ,” (preprint).

I. Francis, R. Nicoara, and C. Worley, “Commuting Squares of Bismash Product Hopf Algebras Coming from Factorizable Groups,” (preprint).

C. Worley, “The defect of a Finite Group,” (preprint).

- Commuting Squares of Bismash Product Hopf Algebras
 - 2018 Joint Mathematics Meetings (JMM)
 - San Diego, CA
- Building “New” Groups from “Pre-Existing” Groups.
 - Seminar – Undergraduate Modern Algebra Group
 - Maryville College (TN)
 - Sep 2017
- Construction and Classification Results for Commuting Squares of Finite Dimensional \ast -Algebras.
 - Ph.D. Dissertation Defense
 - The University of Tennessee, Knoxville
 - Jun 2017
- Finiteness Result for Circulant Core Hadamard Matrices of order $p + 1$ for prime p .
 - 2017 Joint Mathematics Meetings (JMM)
 - Atlanta, GA
- Parametric Families of Hadamard Matrices containing the Fourier matrix F_n
 - Analysis Seminar, The University of Tennessee, Knoxville
 - Oct 2016
- Finiteness Result for Circulant Core Hadamard Matrices of order $p + 1$ for prime p .
 - 2016 Great Plains Operator Theory Symposium (GPOTS)
 - University of Illinois, Urbana-Champaign
- An Introduction to Hadamard Matrices
 - Colloquium, Maryville College
 - Nov 2015
- Number of Circulant Hadamard Matrices of Prime Order
 - Oral Specialty Exam, The University of Tennessee, Knoxville
 - Mar 2015
- On Tao’s Proof of the Uncertainty Principle for Cyclic Groups
 - Analysis Seminar, The University of Tennessee, Knoxville
 - Mar 2015

- Blount County Alumni Association (BCAA) of Maryville College
 - Board Member Aug 2015 – Present
 - Served on various committees responsible for the vibrant continuation of the BCAA.
 - Attended and participated in monthly meetings.
 - Performed service projects on the College campus.
 - Raised scholarship monies for local students through various fundraising opportunities.
- Participated in curriculum research for the Division of Mathematics and Computer Science.
 - Aided in determining the course of study for a typical student majoring in mathematics and peer and model institutions.

- Aided in tailoring the mathematics major to fit the current curriculum guidelines set by the Mathematical Association of America (MAA).
- Participated in the development of a Bachelor of Science degree in Mathematics at Maryville College Apr 2018
- Participated in the restructuring of the Bachelor of Arts degree in Mathematics at Maryville College Apr 2018
- Faculty Co-Advisor to new 3D printing club (MC3D) 2018-2019
 - Advised students on the development of the MC3D student organization constitution.
 - Advised on appropriate activities for members of MC3D.
 - Advised students in proper care of 3D printers.
- Aided in development of a “maker space” at Maryville College 2018
 - Acquired 3D printers and materials for use by students and faculty members.
 - Designed and printed materials for instruction in the Calculus sequence (multivariate extrema, solids of revolution, etc.)
 - Aided students in designing objects in CAD programs used in undergraduate research and internships
 - Designed tools needed in laboratories in the Division of Natural Sciences.
- Developed STEAM (Science, Technology, Engineering, Arts, and Mathematics) summer camp for area middle and high school students 2018-2019
- Participated in the annual STEMfest at Maryville College Sep 2018
 - Annual event for current and perspective students.
 - Printed items on 3D printer for use in logic puzzles, prizes, etc..
 - Developed appropriate activities related to mathematics.
- Attend several “Meet Maryville” events 2017-2019
 - Represented the Division of Mathematics and Computer Science in Admissions Event for perspective students.
- Tracked Student Learning Outcomes (SLOs) for the Calculus sequence 2017-2019
- Judge/timer to the Pro2Serve Mathematics Team Competition 2011–2014
 - University of Tennessee, Knoxville

SERVICE TO THE COMMUNITY

- Youth Football Coach – Maryville Rebs/Southerners/Little Rebs Club – Parks and Rec 2015 – Present
 - Coached in practices and games five days a week.
 - Served as mentor to players.
- Chain Crew Member 2015–Present
 - Maryville High School Football
 - Responsible for the accurate and fair placement of the down and distance markers for the varsity football games.

SERVICE TO THE PROFESSION

- Co-chair AMS Contributed Paper Session on Functional Analysis
 - 2017 Joint Mathematics Meetings
 - Atlanta, GA

ACADEMIC AWARDS

- Science Alliance Fellowship 2016 – 2017
- Graduate Summer Research Fellowship 2016
- Science Alliance Fellowship 2015 – 2016
- Yuer-Er, Hong-Hsu, & Clarence Cheng Kuo Fellowship Endowment Apr 2014
- George A. Knapp Mathematics Award Apr 2011
- George A. Knapp Mathematics Award Apr 2010
- Troy Bell Lane Waggoner & Russell N. and Francis Lane Edwards Award Apr 2009

OTHER AWARDS

- USA South Athletic Conference Academic All-Conference 2007– 2011
- USA South Athletic Conference All-Sportsmanship Team 2010 Football Season

REFERENCES

- **Dr. Remus Nicoara**
The University of Tennessee, Knoxville
Director of Math Honors and Undergraduate Research
Department of Mathematics
nicoara@math.utk.edu
- **Dr. Joan Lind**
The University of Tennessee, Knoxville
Associate Professor
Department of Mathematics
lind@math.utk.edu
- **Dr. Jeff Bay**
Maryville College (TN)
Chair, Division of Mathematics and Computer Science
Professor of Statistics
jeff.bay@maryvillecollege.edu
- **Dr. Maria Siopsis**
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- **Dr. Nikolay Brodskiy**
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