

Mandi S. Maxwell

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EDUCATION

- **Doctor of Philosophy** in Applied Mathematics
Iowa State University, Ames, IA; May 2005
Major Professors: Dr. Sung-Yell Song & Dr. Clifford Bergman
- **Masters of Science** in Mathematics with an emphasis in Operations Research
Miami University, Oxford, OH; August 1998
Major Professor: Dr. Douglas Ward
- **Bachelor of Science** in Mathematics/Systems; Minor in Computer Science
Taylor University, Upland, IN; May 1996
 - Graduated Magna Cum Laude

EXPERIENCE

Professor, *Taylor University*, Upland, IN August 2019 – present

My responsibilities include teaching 24 credits per academic year which generally equates to three courses per semester.

Courses I teach include:

- MAT 151: Calculus I
- MAT 170: Calculus Recitation
- MAT 205: Explorations in Elementary School Mathematics

Professor, *Trinity Christian College*, Palos Heights, IL August 2013 – May 2019

Associate Professor, *Trinity Christian College*, Palos Heights, IL August 2009 – 2013

Assistant Professor, *Trinity Christian College*, Palos Heights, IL August 2005 – 2009

My responsibilities generally included teaching the equivalent of 12 credits per semester, usually three different courses and a total of four classes, with class sizes ranging from 3 to 35 students.

Courses I taught at Trinity Christian College include:

- Math 103: Math within a Liberal Arts Tradition
- Math 105: Statistics for the Social Sciences
- Math 109: Math Concepts for Teachers I
- Math 110: Math Concepts for Teachers II
- Math 111: Calculus and Analytic Geometry I
- Math 112: Calculus and Analytic Geometry II
- Math 141: Finite Mathematics
- Math 151: Statistics
- Math 210: Discrete Structures
- Math 288: Elementary Math Methods I
- Math 289: Middle Grades Math Methods I
- Math 301: Linear Algebra

- Math 351: Probability and Statistics
- Math 401: Senior Seminar
- CPSC 202: Data Structures and Algorithms
- CPSC 312: Algorithms and Complexity Theory

Faculty Athletics Representative: Summer 2014 to June 2019.

I reviewed transcripts to determine academic eligibility for all of Trinity's student-athletes and processed all NAIA Eligibility paperwork.

Teaching Assistant, *Iowa State University, Ames, IA* August 1999 – May 2005

My duties included teaching one course per semester, ranging from 30 to 40 students. I was responsible for preparing lectures and class assignments, writing exams and quizzes, grading, holding office hours, and participating in curricular discussions for the following courses:

- Math 140: Fundamentals of Algebra for Science and Higher Mathematics
- Math 151: Calculus for Business and Social Sciences (3 semesters)
- Math 165: Calculus I (3 semesters)
- Math 166: Calculus II
- Math 181: Calculus for the Life Sciences (2 semesters)
- Math 195: Mathematics for Elementary Education I

I also led discussion sessions for Math 166: Calculus II

Adjunct Instructor, *Drake University, Des Moines, IA* Fall Semester 2003 and 2004

I taught a section of Statistics 71: Statistics for Managers, which met one night a week, in the College of Business and Public Administration. My responsibilities included preparing lecture notes, holding office hours, and administering, writing, and evaluating student assignments and tests.

Adjunct Instructor, *Ivy Tech State College, Marion, IN* January 1999 – July 1999

I taught an introduction to computing class focusing on Windows 95/97, Microsoft Word, Excel and Access and a Logic and Programming class using Q-BASIC during the Spring and Summer Sessions. My responsibilities included adapting PowerPoint lecture notes, and administering, writing, and evaluating student assignments and tests.

Mathematics Instructor, *Taylor University, Upland, IN* September 1998 – May 1999

My responsibilities included teaching three courses per semester and one course during a 4-week January session, with course sizes ranging from 7 to 40 students. I administered, wrote, and evaluated student tests, quizzes, and projects and prepared curriculum for the following courses:

- MAT 110: Finite Mathematics
- MAT 130: Algebra & Trigonometry
- MAT 140: Calculus for Business and the Social Sciences
- MAT 201: Math for Elementary Teachers I
- NAS 240: Introductory Statistics

Teaching Assistant, *Miami University, Oxford, OH* January 1997 – May 1998

- Taught three semesters of a five credit Calculus I course
- Prepared curriculum for 35 students per semester
- Administered, wrote, and evaluated student tests, quizzes, and projects

PUBLICATIONS

Clark, T., Harsy, A., Janssen, M., Klanderma, D., Maxwell, M., and Robbert, S. (2018). Start a Math Teacher Circle: Connect K-12 Teachers with Engaging, Approachable, and Meaningful Mathematical Problems. *Proceedings of the 21st Biennial Meeting of the Association of Christians in the Mathematical Sciences*. Volume 21. Wheaton, IL: Association of Christians in the Mathematical Sciences, pp. 22-29.

Klanderma, D., Maxwell, M., and Tintle, N. (2015). Experiencing a Paradigm Shift: Teaching Statistics through Simulation-Based Inference. In *Proceedings of the 20th Conference of the Association of Christians in the Mathematical Sciences*. Ancaster, ON, Canada: Association of Christians in the Mathematical Sciences, 50-57.

Klanderma, D., Webster Moore, M., Maxwell, M., and Robbert, S. Creating Problems and Their Solutions: Service-Learning Through Trinity Mathematics Triathlons, Math Nights, and Math Centers. *PRIMUS*, 23(6): 563-571, 2013.

Klanderma, D., Maxwell, M., Robbert, S., and Boerman-Cornell, B. (2013). Reading Assignments and Assessments: Are Your Students Reading Math Text Before Class, After Class, Both, or Neither? In *Proceedings of the 19th Conference of the Association of Christians in the Mathematical Sciences*. Wheaton, IL: Association of Christians in the Mathematical Sciences, 160-167.

Hensley, F.R., T.R. Jones, M.S. Maxwell, L.J. Adams, and N.S. Nedella. (2010). Demography, terrestrial behavior, and growth of Sonoran Mud Turtles (*Kinosternon sonoriense*) in an extreme habitat. *Herpetological Monographs*, 24: 174-193.

“Tanzania, Mathematics, and Me: Reflections from my work with Tanzanian Teachers.” In *Proceedings of the Sixteenth Biennial Conference of the Association of Christians in the Mathematical Sciences held at Messiah College, May 30 – June 2, 2007*.

With Dave Klanderma and Mary Webster Moore. “Reflections from a journey: Diary excerpts highlighting the content preparation of a middle school mathematics teacher.” In *Abstracts of Papers presented to the American Mathematical Society*. Providence, Rhode Island. American Mathematical Society, p. 257. 2007.

Choi, Ji Young; DeAlba, Luz Maria; Hogben, Leslie; Maxwell, Mandi S.; Wangsness, Amy. *The P₀-matrix Completion Problem*. ELA 9 (2002), 1-20.

PRESENTATIONS

“Number Patterns and Insights for the Mathematically Apprehensive.” At the Twenty-second Biennial Conference of the Association of Christians in the Mathematical Sciences held at Indiana Wesleyan University, May 29 – June 1, 2019.

With Tom Clark, Amanda Harsy, Mike Janssen, Dave Klanderma, and Sharon Robbert. “Start a Math Teacher Circle: Connect K-12 Teachers with Engaging, Approachable, and Meaningful Mathematical Problems.” At the Twenty-first Biennial Conference of the Association of Christians in the Mathematical Sciences held at Charleston Southern University, May 31 – June 3, 2017.

With Sarah Klanderma, “Math Teachers’ Circle: Strategies, Collaboration, and Explanation of Solutions.” At the Southwest Chicago Math Teachers’ Circle at Lewis University, Romeoville, IL, May 18, 2017.

With Dave Klanderma, “Experiencing a Paradigm Shift: Teaching Statistics through Simulation-Based Inference” At the Twentieth Biennial Conference of the Association of Christians in the Mathematical Sciences held at Redeemer University College, May 27 – 30, 2015.

“Mathematics: Patterns, Connections, and Number Sequences. Can mathematical imagery shape our faith?” Tenure Lecture, Trinity Christian College, November 25, 2013.

With Dave Klanderma and Sharon Robbert, “Reading Assignments and Assessments: Are Your Students Reading Math Text Before Class, After Class, Both, or Neither?” At the Nineteenth Biennial Conference of the Association of Christians in the Mathematical Sciences held at Bethel University, May 29 – June 1, 2013.

“How Operations Research is Saving Lives: The Mathematics Behind Kidney Exchange Programs.” Presentation to the Trinity Christian College Math 401 Capstone students and others. October 6, 2011.

“How Operations Research is Saving Lives: The Mathematics Behind Kidney Exchange Programs.” Invited Speaker for the Taylor University Systems Seminar in Upland, Indiana. March 14, 2011.

With Bill Boerman-Cornell, Dave Klanderma and Sharon Robbert, “Reading in Math Class?!” At the Christian Educators Convention, October 21, 2010.

“Visual Mathematics for the Visually Impaired: Reflections and Strategies.” At ISMAA conference at Bradley University in Peoria, Illinois, April 3, 2009.

“Visual Mathematics for the Visually Impaired: Reflections and Strategies.” At Mathfest 2008 in Madison, Wisconsin, July 31, 2008.

“An Introduction to Almost Perfect Nonlinear Functions.” Presentation to the Trinity Christian College Math 401 Capstone students and others. November 15, 2007.

With Dave Klanderma, “Connecting a Christian worldview to the teaching and learning of MS and HS mathematics: 9 lesson units From the Kuyers Institute Grant.” At the Christian Educators Association Convention, October 19, 2007.

With Dave Klanderma and Matt Hoffman, “The Trinity Math Triathlon: Celebrating the Stories of the Past 14 Years and Taking Time To Dream About the Next 14 Years.” At the Christian Educators Convention, October 19, 2007.

“Tanzania, Mathematics, and Me: Reflections from my work with Tanzanian Teachers.” At the Sixteenth Biennial Conference of the Association of Christians in the Mathematical Sciences held at Messiah College, May 30 – June 2, 2007.

With Nancy Kwasteniet, “Debriefing the Tanzania Teacher Safari: Reflections on our experiences working with Tanzanian Secondary School Teachers.” Trinity Christian College Faculty coffee on February 12, 2007.

With Dave Klanderma and Mary Webster Moore, “Reflections from a journey: Diary excerpts highlighting the content preparation of a middle school mathematics teacher.” At the Joint Meeting of the American Mathematical Society and the Mathematical Association of America, January 5, 2007.

SUPERVISION OF STUDENT RESEARCH

At Trinity Christian College

- **Vander Velde Junior Scholars**, 2011-2012, Brian Hofman and Trevor Schaap, “The Black Chamber,” co-supervised along with Sharon Robbert their research in Cryptography which culminated in their presentation “Cryptography using Elliptic Curves” at the ISMAA 2012 Annual Meeting at Illinois State University in Normal, Illinois on March 30, 2012.
- **Vander Velde Junior Scholars**, 2010-2011, Peter Keep, “Markov chains and econometrics,” supervised his research which culminated in his presentation “Markov Processes and Inflation Rate Modeling” at the ISMAA 2011 Annual Meeting at North Central College in Naperville, Illinois on April 8, 2011.

TRAINING AND WORKSHOPS

- **Indiana CCCU Faith-Learning Integration Workshop** Taylor University, August 13, 2019.
- **ISMAA Conference Workshop:** “The Beauty of Three-Dimensional Polyhedra,” Illinois College, Jacksonville, Illinois, led by Jim Olsen from Western Illinois University, April 8, 2016.
- **ISMAA Conference Workshop:** “Blended and Online Learning...In a Math Class?,” Northern Illinois University, DeKalb, Illinois, led by Ellen Ziliak from Benedictine University, March 27, 2015.
- **Reconnect 2014 Workshop:** “Math and Forensics” held at the Massachusetts Maritime Academy, Buzzard’s Bay, MA, June 1-7, 2014. Sponsored by the Department of Homeland Security and the Command, Control, and Interoperability Center for Advanced Data Analysis.

- **CCSS Summit:** “*Tomorrow’s Teachers, Today’s Standards: Summit on Integrating Common Core into Educator Prep Programs,*” Bloomington, Illinois, June 6, 2012.
- **ISMAA Conference Workshop:** “An Interactive Tour of Public Key Cryptography (and of Number Theory),” Illinois State University, Normal, Illinois, led by Joshua Holden from Rose-Hulman Institute of Technology, March 30, 2012.
- **ISMAA Conference Workshop:** “Origami Geometry Workshop,” Eastern Illinois University, Charleston, Illinois, led by Tom Hull from Merrimack College, April 4, 2008.
- **ISMAA Conference Workshop:** “Bringing Life (Sciences) to Calculus Courses,” Western Illinois University, Macomb, Illinois, led by Tim Comar from Benedictine University, March 30-31, 2007.
- **Project NExT,** August 2005 – August 2006
- **Ohio MAA Short Course: Baseball, Statistics, and the Role of Chance in the Game,** Mount Union College, Alliance, Ohio, June 7-9, 2006
- **ISMAA Conference Workshop:** “Why Knot?” North Central College, Naperville, Illinois, led by Colin Adams from Williams College, April 7, 2006.
- **Preparing Future Faculty Program,** Iowa State University, January 2002 – December 2003

CONFERENCES

- **Nebraska Conference for Undergraduate Women in Mathematics**
 - Lincoln, Nebraska, January 31- February 2, 2014. *Note: Attended with 2 students.*
 - Lincoln, Nebraska, January 27-29, 2012. *Note: Attended with 3 students.*
- **Conferences of the Association of Christians in the Mathematical Sciences**
 - Twenty-second Biennial Meeting at Indiana Wesleyan University, Marion, Indiana, May-June 2019.
 - Twenty-first Biennial Meeting at Charleston Southern University, Charleston, South Carolina, May-June 2017.
 - Twentieth Biennial Meeting at Redeemer University College, Ancaster, Ontario, Canada, May 2015.
 - Nineteenth Biennial Meeting at Bethel University, St. Paul, Minnesota, May-June 2013.
 - Eighteenth Biennial Meeting at Westmont College, Santa Barbara, California, June 2011.
 - Seventeenth Biennial Meeting at Wheaton College, Wheaton, Illinois, May 2009.
 - Sixteenth Biennial Meeting at Messiah College, Grantham, Pennsylvania, May-June 2007.
 - Fifteenth Biennial Meeting at Huntington College, Huntington, Indiana, May 2005.
 - Fourteenth Biennial Meeting at Point Loma Nazarene University, Point Loma, California, May 2003.
 - Thirteenth Biennial Meeting at Calvin College, Grand Rapids, Michigan, May 2001.
 - Tenth Biennial Meeting at Taylor University, Upland, Indiana, May 1995.

• **Annual Meetings of the Illinois Section of the Mathematical Association of America. Illinois Project NExT Workshop, 2006 to 2007.**

Tri-Section Meeting with Indiana and Michigan at Valparaiso University, Valparaiso, Indiana, March 2018.

Ninety-Sixth Meeting at College of DuPage, Glen Ellyn, Illinois, March-April 2017.

Ninety-Fifth Meeting at Illinois College, Jacksonville, Illinois, April 2016.

Ninety-Fourth Meeting at Northern Illinois University, DeKalb, Illinois, March 2015.

Ninety-Third Meeting at Southern Illinois University, Edwardsville, Illinois, March 2014. *Note: Attended with a student.*

Ninety-Second Meeting at Roosevelt University, Chicago, Illinois, April 2013. *Note: Attended with two students.*

Ninety-First Meeting at Illinois State University, Normal, Illinois, March 2012. *Note: Attended with two students.*

Ninetieth Meeting at North Central College, Naperville, Illinois, April 2011. *Note: Attended with three students.*

Eighty-Eighth Meeting at Bradley University, Peoria, Illinois, April 2009. *Note: Attended with two students.*

Eighty-Seventh Meeting at Eastern Illinois University, Charleston, Illinois, April 2008.

Eighty-Sixth Meeting at Western Illinois University, Macomb, Illinois, March 2007. *Note: Attended with three students.*

Eighty-Fifth Meeting at North Central College, Naperville, Illinois, April 2006.

• **Joint Annual Meetings of the American Mathematical Society and the Mathematical Association of America**

Summer Mathfest, Chicago, Illinois, July 26-29, 2017.

Summer Mathfest, Madison, Wisconsin, August 2-4, 2012.

Summer Mathfest, Pittsburgh, Pennsylvania, August 4-7, 2010.

Summer Mathfest, Madison, Wisconsin, July 31-August 2, 2008.

Joint AMS/MAA Meetings, New Orleans, Louisiana, January 2007.

Summer Mathfest, Knoxville, Tennessee, August 2006.

Joint AMS/MAA Meetings, San Antonio, Texas, January 2006.

Summer Mathfest, Albuquerque, New Mexico, August 2005.

Joint AMS/MAA Meetings, Atlanta, Georgia, January 2005.

HONORS AND AWARDS

• **Granted Tenure**, Trinity Christian College, 2013.

• **Rich Kooy Award**, Trinity Christian College, 2010-2011

• **Project NExT Dolciani-Halloran Fellow**, 2005-2006

• **Robert J. Lambert Excellence in Teaching Award**, Iowa State University, May 2005

This award was presented biennially by the Department of Mathematics for outstanding work by a graduate student in teaching.

- **Preparing Future Faculty Scholar**, Iowa State University, December 2003
- **Graduate Teaching Excellence Award**, Iowa State University, May 2003
These awards were presented annually by the university to the top 10% of graduate students as evaluated by their respective departments.
- **Preparing Future Faculty Fellow**, Iowa State University, April 2003
- **Preparing Future Faculty Associate**, Iowa State University, December 2002
- **Teaching Assistantships**, Iowa State University, 1999-2005
- **Research Assistantships**, Iowa State University, Summers 2001 - 2004
- **Teaching Assistantships**, Miami University, 1996-1998
- **SIAM Journal Award**, Miami University, April 1998
This award was presented in recognition of outstanding Scholarship in Applied Mathematics and Statistics.

COLLEGE SERVICE

- **Committees** (at Trinity Christian College)
 - Athletic: 2006-2007, 2011 to 2015 (chair: 2011-2012)
 - Faculty/Professional Development: 2007 to 2011
 - Teacher Education: 2006 to 2008, 2009 to 2019
 - F.L.U.T.E.: Fall 2008 to 2014, 2018 to 2019
 - Mathematics search committee: 2018
 - Men's Basketball Coach search committee: 2018
 - Softball Coach search committee: 2010 & 2018
 - Men's Soccer Coach search committee: 2016
 - Men's and Women's Golf Coach search committee: 2016
 - Women's Basketball Coach/PE search committee: 2010, 2012 & 2015
 - Learning Behavior Specialist II director search committee: 2014
 - Computer Science search committee: 2012 & 2013
 - Biology search committee: 2011

ORGANIZATIONS AND MEMBERSHIPS

- **Mathematical Association of America**
Director at Large for the Illinois Section of the MAA: March 2014 – March 2017
- **Association of Christians in the Mathematical Sciences**