David Clark Marshall
Curriculum Vitae

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EDUCATION

2000	Ph.D. in Mathematics, Department of Mathematics, University of Arizona
1994	B.A. in Mathematics (Minor in Philosophy), Department of Mathematics, California State University at Fullerton

EMPLOYMENT

2022-pres.	Chairperson, Department of Mathematics, Monmouth University, West Long Branch, NJ
2009-pres.	Associate Professor, Department of Mathematics, Monmouth University, West Long Branch, NJ
2008-2017	Chairperson, Department of Mathematics, Monmouth University, West Long Branch, NJ
2004-2009	Assistant Professor, Department of Mathematics, Monmouth University, West Long Branch, NJ
2002-2004	Research Lecturer, Department of Mathematics, The University of Texas, Austin, TX
2000-2002	Postdoctoral Fellow, Department of Mathematics and Statistics, McMaster University, Canada

PUBLICATIONS

Peer Reviewed

2007	(with Starbird, Odell) *Number Theory Through Inquiry*, **MAA**TEXTBOOK series, Mathematical Association of America, November 2007.
2004	Greenberg's Conjecture and Cyclotomic Towers, *Acta Arithmetica*, **113**, no.1, 1-14, 2004.
2001	(with An, Kim, Marshall, McCallum, Perlis) Jacobians of Genus One Curves, *Journal of Number Theory*, **90**, 304-315, 2001.
2000	Galois Groups and Greenberg's Conjecture, Ph.D. Thesis, University of Arizona.
1995	(with Martelli) Stability and Attractivity in Discrete Dynamical Systems, *Math.Biosci.*, **128**, no.1-2, 347-355, 1995.

Other Works

2007   *Instructor's Resource Manual* to accompany *Number Theory Through Inquiry*, distributed by the MAA.

2004   *The Moore Method: A First Timer's Experience*, report submitted to the Educational Advancement Foundation, 2004

Work in Progress

1. (student research) Cubic Comparability Graphs.

2. (with S. Marshall) Counting Embeddings of Heronian Tetrahedra in $\mathbb{R}^3$, work in progress.

TALKS AND PRESENTATIONS

Contributed Paper and Conference Presentations

2018   *The Mathematics and Ethics of Infinity*, MAA Contributed Paper Session on *Mathematical Themes in a First-Year Seminar*, AMS-MAA Joint Meetings, San Diego, CA, January 2018

2014   *Reflections in Geometry*, MAA Contributed Paper Session on *More Favorite Geometry Proofs*, MAA MathFest, Portland, OR, August 2014

2010   *Reluctantly Creating a First Year Seminar*, MAA Contributed Paper Session on *First Year Seminar Mathematics Courses*, MAA MathFest, Pittsburgh, PA August 2010

2008   *A Two-Step Transition to Higher Mathematics*, MAA Contributed Paper Session on *Crossing the Bridge to Higher Mathematics*, AMS-MAA Joint Meetings, San Diego, CA January 2008

2007   *Search Engine Mathematics: An Application For All Levels*, MAA-NJ Contributed Paper Session on *Applications of Linear Algebra*, MAA-NJ Section Meeting, Rowan University, March 2007

2006   *The Role of Content in Countering Math Anxiety*, MAA Contributed Paper Session on *Strategies for Teaching Underprepared, Math-Anxious Students*, AMS-MAA Joint Meetings, San Antonio, TX January 2006

2002   *Cup Product Computations in the Galois Cohomology of Number Fields*, CNTA 7, Montreal, May 2002

1999   *On Greenberg's Conjecture*, AMS Special Session on *Number Theory*, Providence College, MA, October 1999

1998   *Jacobians of Genus 1 Curves*, AMS Special Session on *Arithmetic Geometry*, University of Arizona, November 1998

1998   *Computing Ranks of Elliptic Curves*, Arizona Winter School on the ABC Conjecture, Tucson, March 1998

Colloquium and Seminar Talks

2005   *Symmetry in Numbers*, Franklin and Marshall College Mathematics Colloquium, Lancaster, PA, 2005

2002   *Galois Groups and Iwasawa Modules*, Quebec-Vermont Number Theory Seminar, Montreal, January 2002

2001   *Etale Fundamental Groups and Cohomology of Number Rings*, McMaster University Number Theory Seminar, Hamilton, Ontario, 2001

2001   *Some Relationships Between Galois Group and Iwasawa Module Structures*, University of Texas at Austin Number Theory Seminar, Fall 2001

2000   *Galois Groups and Greenberg's Conjecture* (3 lectures), McMaster University Number Theory Seminar, Hamilton, Ontario, 2000

Panel Participation

2010   Invited Panelist, *Postdoctoral Exposure to Inquiry Based Teaching*, MAA PREP Workshop on IBL, The University of Texas at Austin, May 2010

2009   Invited Panelist, *New Experiences in Inquiry Based Learning*, AMS-MAA Special Session on IBL, Joint Mathematics Meetings, Washington, D.C., January 2009

2008   Invited Panelist, *Innovative Teaching Techniques*, NJ-NExT Workshop, MAA-NJ Section Meeting, Fairleigh Dickinson University, Fall 2008

2007   Invited Panelist, *Balancing Responsibilities: Finding Your Niche*, NJ-NExT Workshop, MAA-NJ Section Meeting, St. Peter's College, Fall 2007

SUPPORT/HONORS

2018   Sr. Stephanie Sloyan MAA-NJ Section Award for Distinguished Service

2008   Grant-in-Aid of Creativity, Monmouth University

2004   New Jersey Project NExT Fellow

2000   AMS Travel Grant

2000   NSF VIGRE Graduate Fellowship

1999   Summer Research Support, NSF Group Infrastructure Grant

1998   Summer Research Support, NSF Group Infrastructure Grant

ADMINISTRATIVE ACCOMPLISHMENTS - DEPARTMENT CHAIR

The following activities were conducted while Chair of the Mathematics Department from 2008-2017, and were accomplished with help and assistance from department colleagues.

2013-2014	Secured annual funding School of Science Student Travel Grants. The Grants are designed to provide full financial support for 1-2 students from each department to attend national meetings in their fields.
2012-2013	Led the Department in an external review and evaluation process. This included the development of an extensive Self-Study document, securing external evaluators, and scheduling and conducting the on-site visit and review.
2011-2012	Created a new Minor in Statistics program, geared towards students already taking introductory statistics in Biology and Business.
2010-2011	Created a new BS in Mathematics with a Concentration in Statistics degree program. The new program required course development and an informal feasibility study.
2009-2010	Secured Travel Funding for all full-time math faculty as part of the annual department budget.
2009-2017	Oversaw the facilities redesign, renovation, and upgrade of two department classrooms and an undergraduate mathematics study room
2008-2017	Successfully hired and promoted several full-time mathematics faculty.

TEACHING EXPERIENCE

Monmouth University

Liberal Arts Mathematics
Freshman Seminars (topics: (1) Cryptography and (2) Infinity)
Mathematics for Elementary School Teachers
College Algebra
Pre-Calculus
Calculus (differential, integral, vector, and honors)
Linear Algebra
Discrete Mathematics/ Introduction to Proof
Number Theory
Geometry (Euclidean and non-Euclidean)
Complex Analysis
Graph Theory and Combinatorics
Abstract Algebra (rings and fields)

The University of Texas at Austin

Liberal Arts Mathematics (mathematics for non-science majors)
Mathematics for Elementary School Teachers
Calculus (differential)
Discrete Mathematics/ Introduction to Proof
Number Theory
Topology

Abstract Algebra (groups, rings, and fields)

McMaster University

Calculus (applied and differential)
Linear Algebra
Number Theory

TEACHING WORKSHOPS

Workshops Organized

2008   Co-director of an MAA PREP (Professional Enhancement Program) Workshop on *Inquiry Based Learning with a Focus on Number Theory, a Transitions-to-Proof Course*, The University of Texas at Austin, June 1-6, 2008

1997   Co-organized the Southwest Regional Institute in Mathematical Sciences *One Day Cryptography Workshop for High School Teachers and Students*, University of Arizona, Fall 1997

Workshop Lectures

2007   *The Mathematics of Internet Search Engines*, Lecture delivered at Monmouth University's Spring Symposium Professional Development Workshop for Inservice and Preservice Teachers, March 2007

1997   *Modular Arithmetic and Caesar Shifts* and *Public-Key and the Diffie-Hellman Key Exchange*, Southwest Regional Institute in Mathematical Sciences One Day Cryptography Workshop for High School Teachers and Students, University of Arizona, Fall 1997

Workshop Attendance and Participation

2020   Monmouth University Online Teaching Academy, Monmouth University (Online), June 2020

2005   MAA PMET (Preparing Mathematicians to Educate Teachers) Workshop on the Mathematical Preparation of Elementary Teachers, Kent University, June 12-24, 2005

1996   Workshop on Teaching Consortium Calculus, University of Arizona, August 1996

SUPERVISED UNDERGRADUATE RESEARCH

2022   Lindsay Amendola and Matt Wolyn, *Triangle Configurations in Cubic Comparability Graphs*, Monmouth University Summer Research Program

2020   Olivia Verni, *Cubic Comparability Graphs*, Monmouth University Summer Resaerch Program

2012   Jesse Andrews, *Isometry Classes of Quadratic Forms over Finite Fields of Characteristic 2*, Monmouth University Summer Research Program

2012   Lauren Halton, *Magic Squares of Squares*, Monmouth University Honors Thesis

2009   Joseph York, *Investigations into the Geometry of Heronian Tetrahedra*, Monmouth University Honors Thesis

2007   Meghan Moratelli, *One and Two Dimensional Crystallographic Groups in Spanish Architecture*, Monmouth University Honors Thesis

2007   Krystle Hinds, *The Mathematics of Information Retrieval*, Monmouth University Honors Thesis (awarded $1000 Jane Freed Grant, Co-Supervised with Joseph Coyle)

2006   Danielle DePasquale, *The Search for Transcendental Numbers*, Monmouth University Honors Thesis (awarded $1000 Jane Freed Grant)

SERVICE

Monmouth University Service

2023-pres.	Task Force on AI and ChatGPT
2022-2023	Interim Chair, Department of Mathematics
2021-2023	Chair, Academic Standards and Review Committee
2018-pres.	Faculty Advisor, Board of Trustees Admissions and Enrollment Committee
2018-pres.	First Year Advisor
2018-2021	Faculty Peer Observer (Teaching)
2018-2020	School Personnel Committee, School of Science
2018-2019	Chair, Tenure Track Search Committee
2017-pres.	Department Advising Coordinator
2017 (Fall)	Chair, School of Science Strategic Plan Implementation Committee
2014-2017	Chair, Undergraduate Studies Committee
2013-2017	Executive Committee, Council of Chairs
2013-2014	Provost Search Committee
2013-2023	Academic Standards and Review Committee
2012-2013	Provost Task Force on Course Capacities
2012-2013	Department Internship Coordinator
2010-2017	Chair, Department of Mathematics
2010-2011	Roles and Responsibilities of Department Chairs Taskforce
2008-2012	Department Advising Coordinator
2008-2010	Co-Chair, Department of Mathematics
2007-2010	University Teacher Education Advisory Council
2007-2008	Chair, Tenure Track Search Committee
2007-2009	Freshman Advisor
2007-2010	Kappa Mu Epsilon Faculty Advisor
2006-2010	Webmaster, Department of Mathematics Website
2006-2007	Tenure Track Search Committee
2005-2013	University Discipline Committee
2005-2006	Lecturer Search Committee
2004-pres.	Various Department Committees

Professional Service

2016-pres.	Mentor for early career mathematicians, MAA Mentoring Network
2014-2016	Vice Chair for Innovations, Mathematical Association of America, New Jersey Section
2009-2015	Workshop Coordinator, Mathematical Association of America, New Jersey Section
2007-pres.	Consultant, NJ-NExT and Project NExT
2007-2009	Program Editor, Mathematical Association of America, New Jersey Section
2001-2008	Judge, Undergraduate Research Poster Session, Annual Joint Meetings of the AMS and MAA (2001, 2004, 2005, 2006, 2008)
2006-2010	Organizer, Mathematics Colloquium, Monmouth University
2002-2003	Organizer, Number Theory Seminar, University of Texas at Austin
2001	Organizer, Algebra and Number Theory Seminar, McMaster University
1996	Judge for the 47th International Science and Engineering Fair, Mathematics Division, Tucson, AZ

MEMBERSHIPS

2008-pres.	Association of Mathematics Teachers of New Jersey
2004-pres.	National Council of Teachers of Mathematics
1994-pres.	Mathematical Association of America (1994-1996, 2001-pres.)