

MAA-PME Annual Summer MathFest - Student Talks by YSU Students

2018: Denver, CO - MathFest 2018 - August 1-4, 2018.

Nicolas Beike	Using Game Theory and Probability to Analyze International Conflict Deterrence	
Anthony Dickson	The Prime Number Theorem: A Historical Look at How Mathematicians Proved It	PME Best Talk Award
Samuel R. Delatore	A Not-So-Fair Guessing Game and the Math Behind It	PME Best Talk Award
David Gessler	Youngstown Temperature Forecast	(MAA talk)
Rabin Thapa	Convergence of an Infinite Series	(MAA talk)
Alanis Chew	Come Converge! Let's Talk About Clustering: Part One	(MAA talk)
Madeline A. Cope		
Julie A. Phillis	Come Converge! Let's Talk About Clustering: Part Two	(MAA talk)
Olivia M. Hall	Infectious Behavior	(MAA talk)
Lindsey R. Chludzinski		

2017: Chicago, IL - MathFest 2017 - July 26-29, 2017.

John Gaboriault-Whitcomb	Integration By Parts and Series	(MAA talk)
Hannah Haynie and Sarah Elisabeth Odidika	Life Saving Myogenesis: A Mathematical Representation of Muscle Formation, Part 1	(MAA talk)
Mirella Boulos and Alanis Chew	Life Saving Myogenesis: A Mathematical Representation of Muscle Formation, Part 2	(MAA talk)
Julie Phillis	A Mathematical Simulation of Bone Cell Behavior Part 1	(MAA talk)
Jacquelyn Chapman and Ashley Amendol	A Mathematical Simulation of Bone Cell Behavior Part 2	(MAA talk)
Elise Eckman	Evaluating Kostant's Multiplicity Formula	
Christine C. Langer	Surprising Nontransitive Games	PME Best Talk Award
Lexi Elaine Rager	Helping Students Make Wise Data Driven Academic Decisions	
Monica E. Busser	Induced Representations	PME Best Talk Award
Natalie Halavick, Khang Nguyen, Sara O'Kane	Analyzing New Health Care Placement of Mercy Health Facilities	PIC Math talk and poster
Monica E. Busser	"Bigs and Littles" Mentoring Program: Confronting the "Leaky Pipeline Effect".	Contributed Paper Session - Potluck: A Student Swap Session.
Natalie Halavick	The PME Ohio Xi Chapter Regional Conference: A How-To Guide.	Contributed Paper Session - Potluck: A Student Swap Session.

2016: Columbus, OH - MathFest 2016 - August 3-6, 2016.

Crystal D. Mackey	Numerical Results for the IVP to the Burgers Equation with External Forces	
Emily A. Hoopes	Representations of Heisenberg Groups	
Natalie Halavick	Historic Crime Analysis: Examining and Predicting Crime in Youngstown, Ohio	
Gabrielle K. Van Scoy	Making Muscles: Math Models of Muscle Formation	SIAM award for outstanding presentation
Samuel M. Rakocy	Using Individual Based Modeling to Determine the Fastest Driving Route	
Monica E. Busser	Combinatorial Number Theory	PME Best Talk Award
Zack While	Using Machine Learning to Identify Cheaters in Implicit-Association Tests	
Leah Bayer	attended but did not talk	
Elise Eckman	attended but did not talk	

2015: Washington, DC - MathFest 2015 - August 5-8, 2015.

Michael A. Baker	Optimization of a Nonlinear PID Loop
Josiah M. Banks	Properties of The First Hurwitz Equation

Monica E. Busser	Applications of Algebraic Geometry	PME Best Talk Award
Megan J. Chambers	An ABM of <i>Eleutherodactylus coqui</i>	PME Best Talk Award
Crystal D. Mackey	Mumps Outbreak at a College	
Eric A. Shehadi	Cellular Automata and Shrinking Cities	SIAM award for outstanding exposition and research in environmental mathematics.
Eric J. Stone	Neurons as Dynamical Systems	
Gabrielle K. Van Scoy	Mathematical Models of Bone Metabolism	Janet L. Andersen Award for outstanding exposition and research in Mathematical or Computational Biology.
Zack White	Futurama's Mind-Swapping Dilemma	PME Best Talk Award
Jenna L. Wise	Local-Global Property of Quadratic Residues	
Richard B Elrod	Topology in Floating-Point Arithmetic	(MAA talk)
Emily A. Hoopes	Sudoku Solver Application	(MAA talk)

2014: Portland, OR - MathFest 2014 - August 6-9, 2014.

Ashley Orr	Examining a Least Squares Method for Valuing American Options	
Camron A. Bagheri	Everywhere Continuous, Nowhere Differentiable Functions: An Introduction	
Crystal D. Mackey	Factorization Theory of Numerical Monoids	PME Best Talk Award
Daniel P. Catello	Classifying Youngstown State University's Peer Institutions: An Analytical Approach	
Eric A. Shehadi	Safeguard Fair Voting: Mathematically Diagnosing Gerrymanders	PME Best Talk Award
James D. Munyon	Approaches to Addressing Overfitting in Averaging Classifiers	
Jenna L. Wise	Minimal Weakly Connected Dominating Sets	
Shawn Doyle	Computational Models of Congressional Redistricting	
Timothy R. Shaffer	Elliptic Curves and Their Applications in Cryptography	

2013: Hartford, CT - MathFest 2013 - July 31 - August 3, 2013.

Camron A. Bagheri	Applications of Linear Algebra to the Fibonacci Sequence.	PME Best Talk Award
Michael A. Baker	A Study of Optical Gain in Three-Component Multilayered Films	PME Best Talk Award
Daniel P. Catello	Managing Risk through Linear Techniques.	
Kim Do	Introduction to Combinatorial Game Theory and What Lies Underneath.	PME Best Talk Award
Shawn Doyle	Newton's Series for Pi.	(MAA talk)
James D. Munyon	Ranking the 2012 NFL Teams.	
Ashley Orr	Fourier and Wavelet Analysis: Extracting the Business Cycle.	PME Best Talk Award
Blain A. Patterson	Isometries as Reflections.	
Matthew C. Pierson	A Characterization of Dihedral and Generalized Quaternion Groups.	
Sarah Ritchey	Residue Number System Algorithms for Signed Numbers.	PME Best Talk Award
Eric A. Shehadi	Prioritizing Vacant Residential Properties for Demolition in Youngstown, Ohio.	PME Best Talk Award

2012: Madison, WI - MathFest 2012 - August 1-4, 2012.

Matthew Pierson	Mathematical Modeling of Selenium Metabolism.	
Danielle DeChellis	Coloring the Platonic Solids.	
Mario Sracic	Outer Automorphisms of S-6.	PME Best Talk Award
Daniel Catello	Goursat's "Other" Theorem.	
Estee George	Mathematical Model for Butanol Fermentation.	Janet L. Andersen Award for outstanding exposition and research in Mathematical or Computational Biology.

Bradley Slabe	Proofs Using Complex Numbers.	
Sarah Ritchey	Points on a Circle with Integer Distances.	
Tim Shaffer	Determining the Primality of an Integer.	Outstanding presentation award from MAA (MAA talk)
James Munyon	Discrete Markov Chains and Candy Land.	(MAA talk)
Megan Chambers	The "Bigger Half": Examining Fair Division.	(MAA talk)

2011: Lexington, KY - MathFest 2011 - August 3-6, 2011.

Michael Coates	Anomalous Cancellation	(MAA talk)
Jason Cooke	Multiple Private Keys in RSA	(MAA talk)
Mario Sracic	Cryptology & Quantum Computing	PME Best Talk Award
Daniel Catello	Using Eigenvalues and Eigenvectors	
Tara Sansom	Bacterial Growth and Metabolism of Toxins	
Bradley Slabe	Modeling Enzyme Kinetics in ABE Fermentation	
Sarah Ritchey	Adding Harmony to the Harmonic Series	(MAA talk)
Sepideh Khavari	Time-to-Peak Response in Biological Systems	Janet L. Andersen Award for outstanding exposition and research in Mathematical or Computational Biology.
Matthew Alexander	Proof and Application of Leibniz's Formula	

2010: Pittsburgh, PA - MathFest 2010 - August 4-7, 2010.

Matt Alexander	Discrete Consideration of Aleksandrov's Projection Theorem	PME Best Talk Award
Lisa Curll	Mathematical Modeling of Riparian Ecosystems and Land-form Dynamics	Award for outstanding exposition and research in environmental mathematics.
Tyler Hardgrove	The Four Vertex Theorem	
Sepideh Khavari	Modeling Gene Expressions in the Presence of Toxic Selenite in <i>E. coli</i>	PME Best Talk Award
Tara McCart	An Introduction to Lie Groups via Matrix Groups	
Josh Mike	Response to <i>b</i> -Adrenergic Stimulation in Rabbit Cardiac Myocytes	
Bradley Slabe	How Many Primes are Less than n ?	
Mario Sracic	Putnam Problem A1: A Variation of Functions on Squares in a Plane	
Moriah Wright	An Investigation of the Isoperimetric Inequality	
Randi Yazvac	Model of Chitin Synthase Gene Expressions	
Jarrett Scacchetti	attended but did not talk	

2009: Portland, Oregon - MathFest, August 5 - August 8, 2009

Alycia Kolat	Supersolvable Groups	
Patrick Walker	Metric-Preserving Mappings	Outstanding presentation award from MAA (MAA talk)
Mario Sracic	Volume and Surface Area of Hyperspheres in R^n	
Scott Eddy	A Geometric Composition of Isometries	
Allison Wiland	Sylow's Theorem	
Angela Urban	Groups and Counting	
Moriah Wright	Mathematical Modeling of Cardiac Myocytes	PME Best Talk Award
Joshua Mike	Modeling Sensitive Response to Pyramidal Neuron	
Kristi Mraz	Modeling Selenium Metabolism in Bacteria	
Lisa Curll	Bacterial Resistance	PME Best Talk Award
Matthew Alexander	An Application of the Riemann Zeta Function	PME Best Talk Award
Justin Laufman	Really Counterintuitive	

2008: Madison, Wisconsin Mathfest, University of Wisconsin - Madison, July 31 - August 1

Matt Alexander	Cracking the Sudoku	Outstanding presentation award from MAA (MAA talk)
Erica Cross	Regression Statistics with Data Subjected to Type II Censoring	
Tyler Drombosky	An Introduction to the Hodgkin-Huxley Model	

Krista Foster	Thermal Nondestructive Evaluation in Composite Materials with Porosity	
Damon Haught	An Introduction to Degree Theory in \mathbb{R}^n	
John Hoffman	What Do We Know About Symmetries of Polynomials?	
W. Ryan Livingston	Can 2008 be the first digits of 2^n ?	PME Best Talk Award
Jared Ruiz	A Surprising Sum of Arctangents	PME Best Talk Award
Doug Wajda	Partial Differential Equation Model of Traffic Flow	SIAM award for outstanding presentation
Allison Wiland	Fibonacci Numbers in Architecture	
Moriah Wright	Cauchy's Condensation Test	

2007: San Jose Mathfest, San Jose State University, August 3 - August 5

Frank Ballone	Steganography and Steganalysis	
Leanna Cluff	Complex Functions and their Derivatives	
Jeff Cornfield	Napoleon Triangles	PME Best Talk Award
Tara Cruickshank	Representations of Complex Numbers	
Carrie Davis	The Mathematics of Free Throw Shooting	
Tyler Drombosky	Effective Condition Number	PME Best Talk Award
Krista Foster	Too Tall for Volleyball	
Nicholas Haught	The Cauchy-Riemann Equations and \bar{z}	
John Hoffman	Dawn of the Logistic Function	
W. Ryan Livingston	Statistics on American's Colleges	PME Best Talk Award
David Martin	Genetic Algorithms and the Traveling Salesman Problem	
Jared Ruiz	Elements of High Order From Finite Fields	
Doug Wajda	Differential Equations of Freefall and Skydiving	
Matthew Ward	Are the Gaussian Integers Friends?	PME Best Talk Award
Moriah Wright	Markov Transition Matrices	

2006: Knoxville, Tennessee Mathfest, University of Tennessee, August 9 - August 12

Carrie Davis	"Weighted Voting Systems"	
W. Ryan Livingston	"How Should we Invert this Matrix?"	
David Gohlke	"Introduction to and Applications of Markov Chains"	PME Best Talk Award
Leanna Cluff	"Probability on Death Row"	
David Martin	"A Solution to PME Journal problem 1113, Fall 2005"	PME Best Talk Award
Matthew Ward	"The Structure of the Clifford Algebra Cl_3 "	
Tara Cruickshank	"Statistical Analysis of the Percentage Body Fat in Men"	PME Best Talk Award
Tyler Drombosky	"Applications of Bootstrapping"	SIAM award for outstanding presentation.
Nick Gemuenden	"Modeling Simple Laminar and Turbulent Flames"	SIAM award for outstanding presentation.

2005: Albuquerque, New Mexico Mathfest, University of New Mexico, August 4 - August 6

Maria Salcedo	An Introduction to Knot Theory	PME Best Talk Award
Ted Stadnik	An Analytical Anomaly	
David Gohlke	Modeling Bacterial Growth in the Presence of Toxins	PME Best Talk Award
David Martin	An Alternate Demonstration of Euler's Formula	PME Best Talk Award
Tom Cochran	Math with Muscle	
Joseph Kolenick	American Mathematical Monthly Problem 11103	Outstanding presentation award from MAA (MAA talk)
Nicole Casacchia	Statistical Analysis of Downed Trees in a Riparian Valley	Best mathematical modeling award from SIAM

2004: Providence, Rhode Island Mathfest, Brown University, August 12 - August 14

Nicole Cunningham	Comparing the Eigenvalues of the Products of Matrices	PME Undergraduate Research Award
Steve Dinda	Watch the Birdie!	
Jeremy Hamilton	Fun with Incircles	PME Best Talk Award
Theodore T. Stadnik, Jr.	Bivariate Normal Estimation of Digitally Imaged Data	PME Best Talk Award

2003: Boulder, Colorado Mathfest, University of Colorado, July 31 - August 2

David Gohlke	Making Use of Geiger Counters	
Chris Jones	Mathematical Freedom	PME Best Talk Award
Sarah Grove	How to Parallel Park Using Multiple Processors	

Joel Lepak	Difference Sets Without Squares	
Maria Salcedo	Crystallographic Fractal Tilings	PME Best Talk Award
Steve Stanislav	Pick's Theorem	

2002: Burlington, Vermont Mathfest, Burlington, Vermont, August 1 - August 2

Tom Wakefield	Factorization and PSL ₂ (13)	PME Best Talk Award
Christopher Jones	Analysis of the Closure and Interior of Topological Spaces	
Sarah Grove	Where to Park?	
Robert Shuttleworth	Numerical Solutions of PDEs	PME Best Talk Award
Joel Lepak	Dynamics of Population Modeling	
Teresa Selee	The Assumptions and Strategies of Repeated Games	PME Best Talk Award
David Gohlke	The Mathematics of Soccer	
John Angelis	God Knows Markov	

2001: Madison, Wisconsin Mathfest, Madison, Wisconsin, August 2 - August 3

Bob Shuttleworth	Quaternions	
Tom Wakefield	Factorizable Groups	PME Best Talk Award
Enyinda Onunwor	Graph Theory: Decompositions	
Teresa Selee	International Parity Relations and Real Interest Rates	
Joel Lepak	Cook's Theorem	
Dave Gerberry	Scheduling Tournaments with Combinatorial Designs	PME Best Talk Award
Steve Mehlo	Tracing a Stirling Approximation - Derivations of Stirling's Formula	
Sarah Grove	Save a Lot or a Little?	

2000: Los Angeles Mathfest, University of California, Los Angeles, August 3-5

Katie Fleming	What Does a 40% Chance of Rain Really Mean?	
David Gerberry	Mark McGwire Meets Mathematicians	
Sarah Grove	The Best Seat in the House	
Joel Lepak	Searching for a Perfect Voting System	PME Best Talk Award
Jodie Matulja	Statistical Analysis of Mastery Learning	
Teresa Selee	Stolz' Theorem: L'Hopital's Rule for Sequences	
Robert Shuttleworth	Virtual Visualizations	
Ryan Siskind	Separated at Birth?	
John Slanina	A Risky Algorithm: The Relative Risk vs. the Odds Ratio	
Tom Wakefield	The Irrationality of e and Pi	PME Best Talk Award
Sara LaLumia	Convergence of Infinite Series	PME Best Talk Award

1999: Providence Mathfest, Brown University, July 31 - August 2

Ben Keck	Sound Investments	
Sara LaLumia	Mathematics at the Market	PME Best Talk Award
Ben Jantson	Carving the Great Pumpkin	PME Best Talk Award
Jason Jantson	Fosomax, Miacalcin, or Didronel?	
Teresa Selee	How does a Bouncy Ball Bounce?	PME Best Talk Award
Robert Shuttleworth	The Running of the Bulls; When Will it End?	
John Slanina	The Mathematics Behind Microscopic Temperature Sensors	
Tom Wakefield	The Goat and the Silo	

1998: Toronto Mathfest, University of Toronto, July 15-18

Ben Jantson	We have to use What?	
John Slanina	Carving the Great Pumpkin	PME Best Talk Award
Vincent Lucarelli	Picking Digital Clocks with Elliptic Curves	
Erika Lyn Faires	Instant Insanity Six	MAA Talk
Joe Ferguson	Fractals, Geometry and their Dimensions	PME Best Talk Award
Phil Wilson	Relative Risk Estimation for Low Birth Weight Babies	MAA Talk
Jodie Matulja	A Long Line of Dead Men	
Adam Messner and Vincent Lucarelli	Need for Speed	
Rob King	Lottery Games in Ohio	
Jason Jantson	Quick Cash from QuickDraw	MAA Talk

1997: Atlanta Mathfest, Georgia Tech, August 1-4

Billie Jo Gronskei	Excuse Me	MAA Talk
Jeff Clouse	Is Coca-Cola an Underachiever?	~~ Best Talk Award ~~
Vincent Lucarelli	Why is 9 Prime?	~~ Best Talk Award ~~
Kathleen Hale	The Wahoo Twirlers	MAA Talk
John Slanina	Some History and Special Cases of Fermat's Last Theorem	
Christy Conn	A Possible Win for Wile E. Coyote	
Ben Keck	Improving Your Golf Game With Mathematics	
Jodi Faloba	How to keep the Golden Years Golden	
Robert Komara	An Atomic Application of Singular Differential Operators	MAA Talk
Adam Messner	Aesthetically Pleasing, Acoustically Atrocious	(not in our original records)

1996: Seattle Mathfest, University of Washington Seattle, August 10-12: First Year for MAA Talk Awards((Check this)

Scott E. Clark	Extensions of the Tower of Hanoi	~~ Best Talk Award ~~
Vincent Lucarelli	The KGB, Espionage, and RSA Encryption	~~ Best Talk Award ~~
Kim Jordan	Graceful Creatures of the Sea	~~ Best Talk Award ~~
Nakia Rimmer	Cubic Splines vs. Lagrange Polynomials for Multistep Approximation Methods	~~ Best Talk Award ~~ (MAA talk)
Robert Komara	Delgarno-Lewis Methods for Second Order Energies of Neon	
Bryan Treusch	Days of the Week from Dates	

1995: Burlington Mathfest, University of Vermont, August 6-8

Alayne Clare	Check Digits and License Numbers	~~ Best Talk Award ~~
Scott E. Clark	The Triangle Peg Game	~~ Best Talk Award ~~
Vincent Lucarelli	Examining the Brachistochrone Problem With Maple V	MAA Talk
Jason Martin	The Secret Behind the Keebler Cards	

1994: Minneapolis Mathfest, University of Minnesota

Mike Ameduri	Analysis of Covariance	
Kimberly Jordan	Mathematics Anxiety	MAA Talk
Jerry Priddy	A Linear Programming Formulation to Optimize Sawmill Operations	
Alan B. Shettel	Bernoulli Numbers in Series Summations	
Kendra Sinopoli	Re-marking Dice	
Jason M. Spangler	Fault Tolerance in Parallel Processing	
Christina T. Tsiapas	A discussion of Simple Continued Fractions and Their Applications	
Lisa White	Applications of Fractals in Geology and Geophysics	

1993: Vancouver Mathfest, Vancouver, British Columbia

Frank Castro	The analytic hierarchy process with Bayes' Theorem	
Vladimir Dimitrijevic	A marble drop method for solving linear programs	~~ Best Talk Award ~~
Julie Labbiento	A matrix-balancing problem	
Cheryl McClellan	Some proofs without words	
Traca Slusher	Continued fractions	

1992: Miami University Mathfest, Miami University

Sharyn A. Campbell	Statistical Tests for Markov-Dependence	MAA Talk
Vladimir Dimitrijevic	Elaboration on Usefulness of Constructively Limited and Irresolvable Demonstrations	
Shelly L. Martin	Patchwork Mathematics	
Traca E. Tithof	Probabilities Associated with Plinko	
Christina T. Tsiapas	A Tool for Solving 2-Dimensional Systems of Equations	

1991: Orono Mathfest, University of Maine

Jim Baglama	Approximating e^{At} Using Chebyshev Polynomials	
James M. Banoczi	Global Climate Modeling	
Hester Brothag	Easy Calculations	
Sharyn Campbell	The Allometry of Richard III	
Dimitros Chalop	Dimitros Drives You Nuts	
Heather DeSimone	Change Ringing	~~ Best Talk Award ~~
Linda Hughes	Anatomy of Perfect Pitch	~~ Best Talk Award ~~
Marguerite Nedreberg	The Markov Process in Clinical Decision Making	~~ Best Talk Award ~~

1990: Columbus Mathfest, The Ohio State University

James Baglama	Applying Extrapolation for Archimedes's Approximation for Pi	
James M. Banoczi	TEX for Senior Projects	
Beth-Allyn Eggens	The Sum of the First n Integers	
Richard Kinkela	Approximation of the Trajectory of a Golf Ball	~~ Best Talk Award ~~
Lisa Muccillo	Modern Cryptographic Methods	
Brenda L. Shultz	Fibonacci Numbers	

1989: Boulder Mathfest, University of Colorado: First year from PME Talk Awards

Jim Banoczi	Solving Diophantine Equations Using Continued Fractions	
Beth-Allyn Eggens	Change for a Dollar- How Many Ways?	~~ Best Talk Award ~~
Jeffrey Osikiewicz	An Elementary Analysis of Conformal Mappings of Simply Connected Domains	

1988: Providence Mathfest, Providence, Rhode Island

Lorie Ceremuga	The Storm-Liouville Mathematical System	
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1987: Salt Lake City Mathfest, University of Utah

no participants

1986: Berkeley Mathfest, University of California

Antony Clacko	Approximating the Solution to Ordinary Differential Equations using Taylor Polynomial Expansions	
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1985: Laramie Mathfest, University of Wyoming

Anthony Clacko	Historic Geometric Problems Involving Compass and Straightedge Construction	
Henry L. Culver	Some Applications of the Gray Code	
Raymond E. Flanery, Jr.	Using Extrapolation to Obtain Approximations of Pi	
Terri Wienczek	Figurate Numbers	

1984: Eugene Mathfest, University of Oregon

Deborah Whitfield	Solving Non-Linear Systems of Equations	
Jeffrey Michael Kubina	A Way to Generate Arbitrarily High-Order Root-Finding Methods	

1983: Albany Mathfest, State University of New York, August 9-11

no participants

1982: Toronto Mathfest, University of Toronto, August 21-26

Kriss Schueller	Forward and Backward Eigenvalues	
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