

MATHFEST 2007
MAA Student Paper Sessions
Saturday, August 4, 2007
The Fairmont Hotel

Session 9		Fairfield	
8:30–8:45	Robert Simione	New York University	Alterations of Least-Squares for Linear Regression
8:50–9:05	Marc Kelechava	Boston University	On Lattice Path Enumeration and Epidemiology
9:10–9:25	Joy Holowicki	Benedictine University	Impulsive Two-Prey, One-Predator Model Dynamics
9:30–9:45	James Boston	Kenyon College	Parameterizing Caterpillars
9:50–10:05	Renee Tatge	Bethany Lutheran College	Statistical Analysis of Glowing Leaf Patches
10:10–10:25	Joshua Kelly	Truman State University	Vocal Identification of Free-flying Bats
Session 10		Glen Ellen	
8:30–8:45	Charise Kazmierczak	Ohio Northern University	Geometry of Rose Windows
8:50–9:05	Brian Chen	California State Polytechnic University Pomona	Constructability of Angles on Lattices
9:10–9:25	Hieu Hoang	San Jose State University	The Mother Worm Problem
9:30–9:45	Hanna Komlos	Rutgers University	Dynamics of the Dual Billiard Map
9:50–10:05	Daniel Kravatz	Millersville University	Double Bubbles in the 3-Torus
10:10–10:25	Daniel Guillot	Louisiana State University	Equal Circle Packings on a Torus
Session 11		Fairfield	
2:00–2:15	Rachel Bayless	Wheaton College	Statistical Analysis of Long Range Weather Trends
2:20–2:35	Alexander Shvonski	Wheaton College	ARIMA model for Weather Trends in New England
2:40–2:55	Trisha Carr	Wheaton College	Coliform Levels in Peconic Bay Estuaries
3:00–3:15	Nicholas apRoberts-Warren	Wheaton College	Confidence Intervals For Coliform in NY Estuaries
3:20–3:35	Danielle Williams	University of Texas Arlington	Exact Solutions to the Korteweg-de Vries Equation
3:40–3:55	Antonio Lopez	University of Texas Arlington	Korteweg-de Vries Equation: Animations
4:00–4:15	Chad Griffith	Sonoma State University	Using Gradients to Construct a Solar Electric Array
4:20–4:35	Gregory Shinault	California State Bakersfield	Modeling of Fuel Consumption
Session 12		Glen Ellen	
2:00–2:15	Tirasan Khandhawit	Duke University	On Torus Knots and their Properties
2:20–2:35	Hunan Chaudhry	Benedictine University	Regular Conformation Bounds of $(2n, 2)$ -Torus Links
2:40–2:55	Mary Wootters	Swarthmore College	Alpha Regular Stick Knots
3:00–3:15	Rachel Allen	Williams College	Applications of Supercrossing Numbers of Knots
3:20–3:35	Nikhil Agarwal	Brandeis University	Generalisations of the Bridge Number of Knots
3:40–3:55	Jonathan Schneider	University of Illinois Chicago	Symmetries of Knots
4:00–4:15	Chris Tou	Augustana College	Rational Tangles and Continued Fractions

MATHFEST 2007
PME Student Paper Sessions
Saturday, August 4, 2007
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Session 4		Belvedere	
8:30–8:45	William Stanton	Kenyon College	Stable Multiplier Sequences
8:50–9:05	Amanda Rohde	Rose-Hulman Institute of Technology	A Neighborhood Search Algorithm
9:10–9:25	Heather Peterson	Concordia University Irvine	Addition over Elliptic Curves
9:30–9:45	Erika Peterson	Concordia University Irvine	Reed-Solomon Codes
9:50–10:05	Jeff Swartzel	The University of Akron	2-D Packings of Elliptic Particles
10:10–10:25	Tyler Bryson	Linfield College	Competition Modelling in Biology
Session 5		Cupertino	
8:30–8:45	Vanessa Abrisqueta	St. Peter's College	Ramsey Theory of Finite Groups
8:50–9:05	Kevin Kreighbaum	Mount Union College	Weird Dice
9:10–9:25	Laura Homa	Mount Union College	Quantitative Analysis of Literary Styles
9:30–9:45	Frank Ballone	Youngstown State University	Steganography and Steganalysis
9:50–10:05	W. Ryan Livingston	Youngstown State University	Statistics on America's Colleges
10:10–10:25	Krista Foster	Youngstown State University	Too Tall for Volleyball
Session 6		Piedmont	
8:30–8:45	Melissa Barrick	Hood College	A Textbook Fit for a Princess
8:50–9:05	Chelsea Sprankle	Hood College	Maria Agnesi's <i>Analytical Institutions</i>
9:10–9:25	John Fulk	Texas A&M University	Intervals of Freedom and Wavelet sets
9:30–9:45	Moriah Wright	Youngstown State University	Markov Transition Matrices
9:50–10:05	Jason La Corte	Texas State University, San Marcos	Brouwer's Fixed Point Theorem in R^n
10:10–10:25	Lindsey Nagy	Hood College	Laura Bassi.....Who?
Session 7		Belvedere	
2:00–2:15	Jordan Yoder	Goucher College	Monosaccharides, Lipids, and Amino Acids
2:20–2:35	Andrew Matteson	Texas A&M University	A Kinetic Model of Tumor Dormancy
2:40–2:55	Jason Pfister	Texas A&M University	A Stochastic Model of Lesion Growth
3:00–3:15	Kristin Creech	University of Texas, Arlington	Finite Frames and Applications
3:20–3:35	Cangelose & Montgomery	Texas A&M University	Modeling migratory birds
3:40–3:55	Sara Jensen	Carthage College	Population Genetics
4:00–4:15	Rachel Grotheer	Denison University	The Knotted Tale of Two Graphs
4:20–4:35	Ellen Galo	St. Lawrence University	Analysis of the Chartres Labyrinth
Session 8		Cupertino	
2:00–2:15	Bruce Salter	Aquinas College	Wheel Rolling on Function Curves
2:20–2:35	Carrie Davis	Youngstown State University	The Mathematics of Free Throw Shooting
2:40–2:55	David Martin	Youngstown State University	Genetic Algorithms and the Traveling Salesman Problem
3:00–3:15	Doug Wajda	Youngstown State University	Differential Equations of freefall and skydiving
3:20–3:35	John Hoffman	Youngstown State University	Dawn of the Logistic Function
3:40–3:55	Stefanie Meyer	Sam Houston State University	A Complex History
4:00–4:15	Lea Cluff	Youngstown State University	Complex functions and their derivatives
4:20–4:35	Tara Cruickshank	Youngstown State University	Representations of Complex Numbers
4:40–4:55	Kensy Foushee	Meredith College	Branch Cuts & Integral Representations