Award-winning Presentations
from the
MAA MathFest 2012 Undergraduate Student Paper Sessions
Madison, Wisconsin, August 2-4, 2012

Speaker(s) & Affiliation	Title	Session #	Award
Jack Stangl, Aaron Rodriguez & Rimi Bhowmik, University of St. Thomas	Characterization of Melanoma and Moles using Signature Curves, Invariant Histograms and Fractal Dimension	7	**Andersen (BIO - SIGMAA)**
Lukas Owens, Whitman College; Camilo Montoya, Florida International University	Invariants of Complex Hypersurfaces	21	**CUR**
Cara Cannon, Hope College	Mathematical Modeling the Growth and Spread of Marram Grass Populations in Vegetated Sand Dunes	1	**SIGMAA-EM**
Amanda Schuiling, Hope College	Using Mathematical Modeling and Statistical Analysis to Relate Development Time and Temperature in Bean Beetles	15	**SIAM**
Shelby Burnett & Ashley Chandler, Cal Poly San Luis Obispo	Symmetry of the Numerical Range	2	**MAA Outstanding Presentation**
Kirstyn Baker, Alma College; Caitlin Graff, Idaho State University; Anthony Graves-McCleary, Vassar College; Philip Thomas, Indiana University; Aashish Srinivas, Swarthmore College	Non-Trivial Pursuit: a game of cops and robbers	3	**MAA Outstanding Presentation**
Matthew Brems, Franklin College; Alexander Wagner, Vanderbilt University	Equal Circle Packing on a Square Flat Klein Bottle	4	**MAA Outstanding Presentation**
Erik Bates, Michigan State University; Blake Chamberlain, Susquehanna University; Rachel Gettinger, Saint Vincent College	Inverse Modeling of Dynamical Systems: Multi-Dimensional Extensions of a Stochastic Switching Problem	5	**MAA Outstanding Presentation**
Tim Shaffer, Youngstown State University	Determining the Primality of a Given Integer is Easy	6	**MAA Outstanding Presentation**
Ellen Sparks, Illinois State University	On 2-fold graceful labelings	8	**MAA Outstanding Presentation**
Harini Chandramouli, University of Pittsburgh; Nora Stack, St. Mary's College of Maryland; Brandon Reeves, Gonzaga University	Harmonic Functions and Walk on Spheres	9	**MAA Outstanding Presentation**

Tyler J Heaps, Augsburg College	Using Wavelet Transformations to Analyze Carbon Uptake	9	**MAA Outstanding Presentation**
Hope Snyder, Washington & Jefferson College	Conics in Taxicab Geometry and Extended Taxicab Geometry	10	**MAA Outstanding Presentation**
Andreana N Holowatyj, Benedictine University	Hextile Planar Isotopy and Reidemeister Moves	11	**MAA Outstanding Presentation**
Mark Kleehammer, SUNY Fredonia	Star Studded Mathematics	13	**MAA Outstanding Presentation**
Michael Frank, Courtney Sherwood & Lauren Tirado, Simpson College	A Mathematical Model of Prairie Restoration	15	**MAA Outstanding Presentation**
Alicia Velek & Samantha Tabackin, York College of Pennsylvania	A Classification of Quadratic Rook Polynomials	16	**MAA Outstanding Presentation**
Lindsey Brown, Baker University; Hoang Ha, Bryn Mawr College	Cost-Conscious Voters in Referendum Elections	17	**MAA Outstanding Presentation**
Farina Kanwal, Benedictine University	The Dynamics of an SVEIR epidemic model with Pulse Vaccination	19	**MAA Outstanding Presentation**
Margaret Peterson, College of Saint Benedict	Visualizing chaos with negative alpha values	21	**MAA Outstanding Presentation**