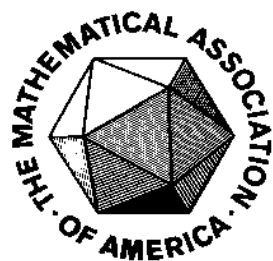


Student Contributed Paper Sessions

Eastern Pennsylvania and Delaware Section
and New Jersey Section
of the Mathematical Association of America

Villanova University

November 12, 2016



Session I-A: Graduate Student Talks (Driscoll Hall 221)

- 10:50 *The Littlewood-Paley Theorem: A Substitution for Orthogonality on L^p*
Danielle Smiley, Bryn Mawr College
- 11:10 *Corners in Tree--Like Tableaux*
Amanda Lohss, Drexel University
- 11:30 *Counting Colorful Tilings of Rectangular Arrays*
Sara Robertson, Villanova University

Session I-B: Graduate Student Talks (Driscoll Hall 244)

- 10:50 *Periods of Iterated Rational Functions over a Finite Field*
Charles Burnette, Drexel University
- 11:10 *Explicit Formula for the Mean Square of a Dirichlet L-function of Prime Power Modulus*
Frank Romascavage, III, Bryn Mawr College
- 11:30 *Lagrangian Fillings of Legendrian Knots*
Samantha Pezzimenti, Bryn Mawr College

Session I-C: Graduate Student Talks (Driscoll Hall 246)

- 10:50 *Analysis of Numerical Solutions to the Non-Linear Schrödinger Equation*
Matthew Moore, Delaware State University
- 11:10 *A Case-Study Analysis of Numerical Methods for Solutions of Initial Value Problems*
Yahui Xiao, Delaware State University
- 11:30 *Eigensurfaces and the Passenger Side Mirror*
Sarah Rody, Drexel University
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Session I-D: Undergraduate Student Talks (Driscoll 223)

- 10:50 *Analysis of Solar Energy in Delaware and Around the World*
Christina Hubert, Wesley College
- 11:05 *Investigating Restricted Rho*
Elijah Carrick, Gettysburg College
- 11:20 *Rho, Rho, Rho Your Boat: On the Minimum Size of a 3-fold Restricted
Sumset of an m -element Subset of \mathbb{Z}_p^r*
Bailey Heath, Gettysburg College
- 11:35 *Fibonacci Sequences*
Mia Vega, Alyse Parker, Oberon Wackwitz, University of the Sciences

Session I-E: Undergraduate Student Talks (Driscoll Hall 225)

- 10:50 *Modeling the 2013-2015 Ebola Outbreak in West Africa Using
Differential Equations of SIR Form and Markov Matrices*
Ronald Berna, Villanova University
- 11:05 *Mathematical Modeling of Epidemics*
Karla Keler, Delaware Valley University
- 11:20 *Another One Bites the Dust*
Brandi Henry, Eastern University
- 11:35 *The influence of Artificial Intelligence on chess.*
Stephen Seach, Patrick Reagan, Ryan D'Elia, University of the Sciences

Session I-F: Undergraduate Student Talks (Driscoll Hall 248)

- 10:50 *An Investigation of Edge-Distinguishing Graph Coloring*
Nathaniel Benjamin, Kutztown University
- 11:05 *Playing Partizan Combinatorial Games on Paths*
Devon Vukovich, Moravian College
- 11:20 *The Rubik's Cube*
Aaron Hogan, Colleen Walsh, Rebecca Colandrea, University of the Sciences
- 11:35 *An Efficient Filtering Algorithm to Construct New Non-Binary
Insertion/Deletion Codes*
Alex Drumm, Rowan University

Session I-G: Undergraduate Student Talks (Bartley Hall 024)

- 10:50 *A Recursive Formula For Hikita Polynomials on 3 Rows*
Debdut Karmakar, Drexel University
- 11:05 *Mathematics of Autonomous Cars*
Oleg Davydovich, Joey Harmon, Bryan Figula, University of the Sciences
- 11:20 *New Metrics of Economic Inequality*
Tasha Boland, Shantel Silva, Villanova University
- 11:35 *Harry Markowitz and Modern Portfolio Theory (MPT)*
Christine Emminger, Penn State Harrisburg

Session I-H: Undergraduate Student Talks (Bartley Hall 026)

- 10:50 *Fractals*
Ashley Cai, Nhu Truong , Judy Fang, University of the Sciences in Philadelphia
- 11:05 *Houdini's Escape*
Sara Juarez-Mendoza, Franklin and Marshall College
- 11:20 *Sepsis Safari: Predictive Data Analysis on Wild Data*
Alexander Murph, Alexander Robinson, Bucknell University
- 11:35 *A Mathematical Model for the Interactions Between Plasmodium Falciparum Malaria Parasite and Host Immune Response*
Jack Warner, Millersville University
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