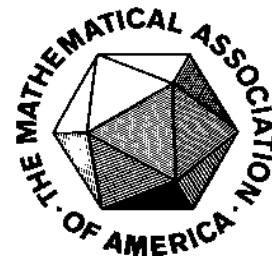
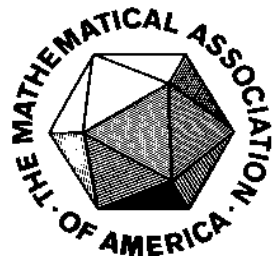


Student Contributed Paper Sessions

Eastern Pennsylvania and Delaware Section of
the Mathematical Association of America

Temple University

March 24, 2018



Session I-A: Graduate Student Talks (Anderson Hall 102)

- 2:00 *Principles of Graph Cuts and Their Applications to Image Segmentation and Object Detection*
Taposh Biswas, Delaware State University
- 2:18 *Joint Shape and Appearance Features for Registration of Remote-Sensing Imagery*
Azubuike Okorie, Sokratis Makrogiannis (PhD), Delaware State University
- 2:36 *Mathematical model for biofilm growth*
Yilin Wu, Temple University
- 2:54 *Asynchronous algorithms*
Xinli Yu, Temple University

Session I-B: Graduate Student Talks (Anderson Hall 105)

- 2:00 *On the Moduli Spaces of Metrics with Nonnegative Sectional Curvature*
McFeely Jackson Goodman, University of Pennsylvania
- 2:18 *Survey of weak hyperbolicity in groups*
Thomas Ng, Temple University
- 2:36 *Observations on the adjoint representation of Hopf algebras*
Ramy Yamine, Temple University
- 2:54 *Every finite division ring is a field*
Huilin Chen, Temple University

Session I-C: Graduate Student Talks (Anderson Hall 107)

- 2:00 *Convergence Rates of Spectral Distribution of Random Inner-Product Kernel Matrices*
Nayeong Kong, Temple University
- 2:18 *Be There or Be the Sum of Two Squares*
Brandi Henry, Temple University
- 2:36 *The whole is greater than the sum of its parts. Generating function.*
Khanh Le, Temple University
- 2:54 *On Fiberings 3-manifolds*
Isaac Craig, Bryn Mawr

Session I-D: Graduate Student Talks (Anderson Hall 108)

- 2:00 *On Godel's Incompleteness Theorems*
Zachary Cline, Temple University
- 2:18 *Cosmetic Surgery Conjecture*
Timothy Morris, Temple University
- 2:36 *Nanopteron-stegoton traveling waves in mass and spring dimer Fermi-Pasta-Ulam-Tsingou lattices*
Timothy Faver, Drexel University
- 2:54 *A table of definite integrals from the marriage of power and Fourier series*
James Rosado, Temple University
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Session II-A: Undergraduate Student Talks (Anderson Hall 23)

- 2:00 *Finding a Sum using Lots of Calc and a Little Complex*
John Kampmeyer, Elizabethtown College
- 2:12 *Zero Knowledge Proofs*
Taylor Stefovich, Elizabethtown College
- 2:24 *Improvements to Correlation Attacks Against Non-Linear Combiners*
Brian Stottler, Elizabethtown College
- 2:36 *A Simple Probability Paradox*
Angela Wesneski, Elizabethtown College
- 2:48 *Diophantine Approximations of Romik Systems*
Dan DeRemigi, Muhlenberg College
- 3:00 *Analysis of the spread of vector borne diseases with delay differential equations*
Yusuf Qaddura, Swarthmore College

Session II-B: Undergraduate Student Talks (Anderson Hall 24)

- 2:00 *Integers Who Can be Written as the Sum of Two Squares*
Eric Albers, Temple University
- 2:12 *An Algebraic Analysis of Impossible Constructions in Euclidean Geometry*
Sujay Rajkumar, Temple University
- 2:24 *Achieving incompleteness with self-reference*
Nart Shalqini, Franklin and Marshall College
- 2:36 *The Monty Hall Problem*
Fangzhou Wei, Franklin&Marshall College
- 2:48 *The Shape of a Mirror*
Anton Arapin, Franklin and Marshall College
- 3:00 *The Königsberg Bridge: A Puzzle from Graph Theory*
Yu Wan, Franklin and Marshall College

Session II-C: Undergraduate Student Talks (Anderson Hall 25)

- 2:00 *Coloring the Integers*
Shannon Golden, Kutztown University of Pennsylvania
- 2:12 *Sprague-Grundy Numbers of a Game with Dominoes*
Emily Thomas, King's College
- 2:24 *The Koch Axiom System*
Dylan Koch, King's College
- 2:36 *Axiom System Project*
Noelle Fromuth, King's College
- 2:48 *My Axiom System*
Kelsey Gabriele, King's College
- 3:00 *My Axiom System*
William Cameron, King's College

Session II-D: Undergraduate Student Talks (Anderson Hall 26)

- 2:00 *For $m = 2$, there is no perfect s -bases in finite cyclic group G for $s = 2$, and $s \equiv 2, 3 \pmod{4}$*
Tianyi Wang, Gettysburg College
- 2:12 *Characterizing subsets of abelian groups with size $\chi(G, h) - 1$*
Emma Gruner, Gettysburg College
- 2:24 *The minimum sumset size of restricted sumsets with limited number of terms*
Zijun "Candice" Kong, Gettysburg College
- 2:36 *Braid Groups and Free Groups*
Aidan Lorenz, Temple University
- 2:48 *Algebras and their Deformations*
Matthew Wynne, Temple University

Session II-E: Undergraduate Student Talks (Anderson Hall 27)

- 2:00 *Modelling the Mediterranean: Pycnoclines and Plankton*
Levi C Nicklas, Shippensburg University
- 2:12 *Euler's Exotic Infinite Series*
Jonathan Oster, Penn State Harrisburg
- 2:24 *Optimal Batting Order in Baseball*
Ronald Berna, Villanova University
- 2:36 *Turning Against One Another: An Analysis of Socioeconomic Inequality and Hate Crime*
Shantel Silva, Villanova University
- 2:48 *The Kelly Criterion 2.0*
Tasha Boland, Villanova University

Session II-F: Undergraduate Student Talks (Anderson Hall 28)

- 2:00 *Multi-commodity Flows in Planar Graphs*
Yingzi Wang, Arcadia University
- 2:12 *The Math of Machine Learning*
Terrell Nowlin, Temple University
- 2:24 *Idea to Reality: Starting a Student Organization*
Sarah Connahan, Temple University
- 2:36 *Non-Newtonian Fluids: Thixotropic Flow and Coiling*
Joe Azzarano, Gwynedd Mercy University
- 2:48 *Mandelbrot Set*
Robert DiPierro, Gwynedd Mercy University
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