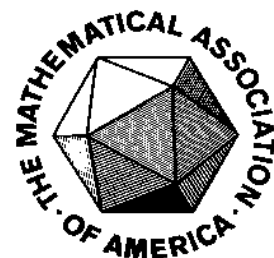
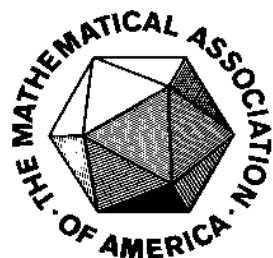


# Student Contributed Paper Sessions

Eastern Pennsylvania and Delaware Section of  
the Mathematical Association of America

University of Scranton

April 26, 2014



## Session I-A: Undergraduate Student Talks (LSC 233)

- 10:45 *Applications of Graph Theory in Real Life*  
Abigail Baltz, Milos Djordjevic, Dong Bin Choi, University of the Sciences in Philadelphia
- 10:57 *A Mathematical Model of the Cardiovascular System*  
Joshua Ray Jimenez, University of Scranton
- 11:09 *Mathematical Model of Mesenchymal Stem Cell Differentiation*  
Brittany Boribong, University of Scranton
- 11:21 *Modular Arithmetic and the Number Derivative*  
Brianna Weiner, Arcadia University
- 11:33 *A Monte Carlo Analysis Comparing ANCOVA, Gain Scores, and Post-test Only Methodologies*  
Veronika Bailey, Yevgeniy Olkhov, Arcadia University
- 11:45 *Three-way ANOVA with Follow-up Simple Effects Analyses*  
AnnJosette Ramirez, Arcadia University

## Session I-B: Undergraduate Student Talks (LSC 334)

- 10:45 *Mathematical Theory of Dynamic Task Allocation in Social Insects*  
Ivan L Kent, University of Scranton
- 10:57 *A Short Introduction to Vaught's Conjecture*  
Francis George, University of Scranton
- 11:09 *A Monte Carlo Simulation Approach to Determine the Greatest Post-Season Players*  
Abigail Stryker, Muhlenberg College
- 11:21 *Penny Auctions, Decision Weights and Revenue*  
Jarrett Felix, Muhlenberg College
- 11:33 *Congruence Conditions of Integral Apollonian Packings*  
Benjamin Nassau, Muhlenberg College
- 11:45 *Zaremba and Hensley: Continued Fractions and Congruence Obstructions*  
Emily Nguyen, Muhlenberg College

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### **Session II-A: Undergraduate Student Talks (LSC 233)**

- 2:45     *Exploring an Iterated Function on Integer Partitions*  
James Siene, King's College
- 2:57     *An Axiom System*  
Abby McManus, King's College
- 3:09     *A New Algorithm for Computing Inverses in Modular Arithmetic*  
Shen Lu, Christina Doran, Lebanon Valley College
- 3:21     *Reducing Pest Damage in Agroecosystems Using Optimal Control Theory*  
Cara Sulyok, Ursinus College
- 3:33     *Symmetries in the Fibonacci Sequence, mod  $m$*   
Patrick Flanagan, Joshua Updike, Shippensburg University

### **Session II-B: Undergraduate Student Talks (LSC 334)**

- 2:45     *Proving Bolzano-Weierstrass Theorem and Sequence Convergence*  
Brittany Kowalewski, Wesley College
- 2:57     *Writing Codes for a Computer-Assisted Program*  
Riza Bautista, Wesley College
- 3:09     *Do You Know Different Forms of Induction?*  
Yitong Huang, Franklin and Marshall College
- 3:21     *Chaos Theory and Fractals*  
Yichao Li, Franklin & Marshall College
- 3:33     *Constructing 17-gon*  
Alex Zhang, Franklin and Marshall College

### **Session II-C: Graduate Student Talks (LSC 433)**

- 2:45     *Maya Calendars in the Classroom*  
Megan Rehm, Millersville University
- 3:09     *The Wizardry of Whitney's Theorem*  
Samantha Pezzimenti, Hannah Schwartz, Bryn Mawr College
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