MathFest 2015 – Undergraduate Student Paper Session Award Winners

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The MAA Undergraduate Student Paper Sessions during the Centennial Celebration of the MAA at MathFest 2015 were a great success with 134 presentations featuring 181 presenters. The tradition of recognizing student achievement at an ice cream social was continued. The winners of the various awards are as follows:

The Andersen Prize, awarded in memory of Janet Andersen by the Bio SIGMAA, recognizes an outstanding presentation and work in areas related to mathematical biology. This prize went to Paul Diaz and Eric Jones of Colorado School of Mines for their presentation “PIC Math: A Modified SEIR Model for the Spread of Ebola in West Africa.”

The Environmental Mathematics SIGMAA Award was awarded to Becky Chen of University of Richmond for the presentation “Mathematical Modeling of a 4-by-4 Nematode-bacteria Predator-prey System.”

The SIAM (Society of Industrial and Applied Mathematics) Award was awarded to Kinardi Isnata of Duquesne University for the presentation “A Variational Approach for High Dynamic Range Imaging.”

We also presented 24 MAA Outstanding Presentation Awards for students who gave especially noteworthy presentations in any area of mathematics on original or learned topics. The winners of these awards (in no particular order) were:

- Alex Edwards and James M. Beaver of the University of North Alabama for “Investigating Cardano’s Irreducible Case”
- Yuliya Semibratova and Alex Page of University of Illinois at Urbana-Champaign for “The Broken Stick Problem in Higher Dimensions”
- Emma Groves of Southwestern University for “Cholera as a Global Issue: Measuring the Effects of National Economic and Health Indicators”
- Asa Rubin of Trinity College for “Domination in the Generalized Hierarchical Product”
- Carsten Peterson of Yale University for “Generalized Numerical Semigroups of Minimal Embedding Dimension”
- Abigail Edgar of St. Edward’s University for “Minimum Agreement Proportion in Box Societies”
- Benjamin Krakoff of Yale University for “Counting Subrings of $\mathbb{Z}^n$ & related questions”
- Nathaniel Mayor of Harvard University and Mia Smith of Williams College for “When are Knots Hyperbolic?”
- Kristen Lawler of Marist College for “Lyapunov Function Arguments for Global Stability in Compartmental Epidemiological Models”
Robin Belton and Madison Hoffman of Kenyon College for “A Case Study in Placental Imaging”

Jonathon Spaw of Millikin University for “Locating Sets and Numbers for Disconnected Graphs”

Caleb Ki, Yen Nhi Truong Vu, and Bowen Yang of Amherst College for “Combinatorial Quantum Modular Forms”

Robert Dickens of University of Maryland – Baltimore County and Samantha Moore of University of Northern Colorado for “Packing Three Equal Circles on a Flat Klein Bottle”

Caitlin Lienkaemper of Harvey Mudd College for “Identifying Convex Neural Codes”

Gereltuya Erdenejargal and Oliver Orejola of University of Colorado Boulder for “C*-Algebra from k-Graph and 2-Cocycles”

Ethan Ackelsberg of Bard College at Simon’s Rock for “State Transfer in the Corona of Graphs”

Emily Hubbard of Arkansas State University for “Logistic Regression Analysis on the Effects of College Algebra on College Students”

Jiyi Jiang of Hope College for “Classifying Handwritten Digits Without Seeing Them”

Tyler Hoffman of McDaniel College for “Hausdorff Dimension of Generalized Fibonacci Word Fractals”

Robert Porter of Brigham Young University for “Origami Mathematical Applications and Rigid Reachability”

Muhammad El Gebali of The American University in Cairo for “A Combinatorial Interpretation of the LDU Decomposition of Totally Positive Matrices”

Logan Tatham of Brigham Young University for “A Topological Approach to the Existence of Solutions of Calculus of Variations Problems”

Justina R. Yang of Yang Academy for “Exploration of a Quantum Mechanical Particle in a Toroid”

Hriday Bharat Thakkar of Minot State University for “On the Numerical Solution of the Black-Scholes Option Pricing Model”

Congratulations to each of the winners. We also want to say a special thank you to all those that presented and to their advisers for all their efforts – job well done! We hope to see you again next year and hope that you will encourage your classmates to consider presenting at MathFest 2016!

Of course, the awards are not possible without the generous help of volunteer judges. The following people volunteered their time and expertise to judge the undergraduate student paper sessions:


Thanks so much to all of you and we hope all of you will help judge again next year.