

**Undergraduate Paper Session Award Winners**  
**MathFest 2013**  
**July 31-August 3, Hartford, Connecticut**

Submitted by Jennifer Bergner, Salisbury University

The MAA Undergraduate Student Paper Sessions at MathFest were again a great success with 96 presentations featuring 144 presenters. The tradition of recognizing student achievement at an ice cream social following the J. Sutherland Frame Lecture 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 **Kari Lemelin** of Unity College for her presentation “Mathematical Modeling of the Zombie Outbreak at Unity College.”

The SIGMAA EM award recognizes an exceptional presentation that involves work on a problem arising from environmental sources. This award was given to **Taliha Nadeem** of Benedictine University for the presentation “An Epidemic Model with Different Susceptibility Classes.”

The SIAM (Society of Industrial and Applied Mathematics) Award was given to **Beth Bjorkman** of Grand Valley State University and **Sean Gravelle** of Xavier University for the presentation “Graph Theoretic Models of Interdependent Preferences in Referendum Elections.”

We also presented 19 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:

- **Samuel Reid** of University of Calgary for “Contact Graphs of Unit Sphere Packings”
- **Cameron Pombert** of Benedictine University for “An Integrated Pest Management Model with Ivlev-Type Functional Response and a Prey Specific Disease”
- **Robert B. Torrence** of The College of William and Mary for “Playing *Lights Out* on Petersen Graphs”
- **Brian Lei** of Yale University, **Seung Hyun Lee** of Yale University, **Alec Arana** of Yale University, and **Michael Garn** of Yale University for “Developing a Theory of Bidding Chess”
- **Daniel Irvine** of University of Notre Dame for “Ubercrossing Number of Knots”
- **Austin Unsicker** of Brigham Young University for “Rigid Foldability of the Pseudo-Square Twist”
- **Robert Jordan Porter** of Brigham Young University for “Origami Math and Foldable Solar Arrays”
- **Francisc Bozgan** of UCLA and **Jane Wang** of Princeton University for “Weak Rational Ergodicity of Rank-one Transformations”
- **Sheridan Grant** of Pomona College for “Approximating Amoebae Using Archimedean Tropical Varieties”

- **Siqi Zheng** of Macalester College for “Necessary and Sufficient Conditions for Benford Sequences”
- **Gregory Convertito** of Trinity College for “Rationality of Calculus Optimization Problems”
- **Daniel Thompson** of Pomona College for “On the Properties of a Quasi-Fibonacci Polynomial Sequence”
- **Sandi Lavito** of CSU Stanislaus and **Tiffany Chu** of CSU Stanislaus for “Enrichment to Boost STEM Skills and Confidence in Students”
- **Robert D Dolan** of Western Connecticut State University for “Wavelet-Based Audio Watermarking Algorithm Using M-Bond”
- **Xinwei Chen** of Benedictine University for “The Geometry of Quasigroups”
- **Jordan Awan** of Clarion University of Pennsylvania, **Claire Frechette** of Brown University, and **Yumi Li** of Willamette University for “Geometry and Other Mathematics in the Card Game SET©”
- **Travis Fillmore** of Brigham Young University for “Modeling Properties of Compliant Mechanisms”
- **Jonathan D Cohen** of Duquesne University for “Pointwise Besov Space Smoothing of Images”
- **George Ison Thekkedath** of Trinity College for “Taxicab Geometry and Mass Transit Distance”

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 at MathFest again next year and hope that you will encourage your classmates to consider presenting at MathFest 2014!

Of course, the awards are not possible without the generous help of volunteer judges. The following people volunteered their time and expertise to judge an undergraduate student paper session: Kristine Roinestad, Andy Martin, Fariba Kashan, Daniel Wang, Danillo Diedrichs, Matt Hoffman, Yanping Ma, Kodwo Annan, Jean Marie Linhart, David Clark, Elizabeth Donovan, Megan Heenehan, Brian Loft, Nathan Reff, Lola Thompson, Azadeh Rafizadeh, Cornelia Van Cott, Christopher Sass, Sam Chamberlin, Russell Goodman, John Burke, Christina M. Selby, Thomas Sibley, Ellen Ziliak, Oksana Bihun, Lyn Miller, Heidi Hulsizer, Spencer Hamblen, Jody Sorenson, Joyati Debnath, Randy Cone, Rachelle Decoste, Anthony Delege, Jun-Koo Park, Robert Campbell, Nesity Tania, Eleanor Farrington, Susan Crook, Cheryll Crowe, Julianna Stockton, Malena Espanol, Aaron Clark, Claire C. McAndrew, Narayan Thapa, Jonathan Weisbrod, Violeta Vasilevska, Mary Wilkerson, Doug Chatham, Brian Heinold, Dora Ahmadi, Kseniya Fuhrman, Eric Kahn, Therese Shelton, Kathleen Lewis, Joel Foisy, Tom Wears, David Housman, Judy Walker, Karen Ricciardi, Mindy Calpadi, Robin Blankenship, Melissa Stoner, Cayla McBee, John Perry, Jonathon Dunbar, Jim Murray, Shelly Smith and Jeff Knisley.

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