

KENTUCKY SECTION
MATHEMATICAL ASSOCIATION OF AMERICA ANNUAL MEETING
Program for the Meeting

Friday, March 25

- 2:30 – 5:30 **Registration** BTC Lower Level Atrium
- 3:30 – 3:45 **Contributed Papers**
Laura Hochstetler (presenter), Catherine Kaminski, Nathaniel Winckler, Asbury University (u)
Repeaters: You could say that again. BTC 001
- Andy Martin, Kentucky State University (f)
Odd items from the complex history of the real number(s) i^i . BTC 002
- Howl Bean II, Murray State University (u)
Statistics in Baseball. BTC 003
- Michael A. Blankenship and Drew Pearson, Morehead State University (u)
Counting Radius N Hextile Knot Mosaics. BTC 004
- Margaret Yoder, Eastern Kentucky University (f)
Noticing Numeracy Now. BTC 005
- 3:50 – 4:05 **Contributed Papers**
Jiwhan Hong, James Breckel and Eungchun Cho, Kentucky State University (u)
Convergence of oscillating sequence. BTC 001
- Tom Richmond, Western Kentucky University (f)
Connectedness. BTC 002
- Joshua Bradley, Morehead State University (u)
Ranking base stations in the 4G Mobile Network. BTC 003
- Joel Archer, Robert DiMartino, Alasdair Wooffitt, Asbury University (u)
Snowboard Halfpipe Shape Optimization. BTC 004
- Marian Anton, Centre College (f)
How to use topology to safeguard a forest? BTC 005
- 4:10 – 4:25 **Contributed Papers**
Kevin Highley, Biswajit Panja, Morehead State University (u)/(f)
Wireless Sensor Network Android Application. BTC 001

Robert C. Powers, University of Louisville (f)
The Euler line, orthologic triangles, and homogeneous coordinates. BTC 002

Khant Minn, Julia Smith, and Stephen Wechman, Georgetown College (u)
The Ideal Snowboarding Halfpipe. BTC 003

Rebecca Gaul, Stephanie Lawrence, Zach Welchel, Asbury University (u)
Turning over a new LEAF: A look at the economical and environmental impacts of electric cars. BTC 004

Claus Ernst, Western Kentucky University (f)
Knots in viral capsids. BTC 005

4:25 – 4:50 **Break**

4:50 – 5:05 **Contributed Papers**
 Evan Trevathan, Murray State University (g)
 l^2 -Homology and the Utility Problem. BTC 001

Duk Lee, Asbury University (f)
Tears in Mathematics. BTC 002

Julie Lang, Morehead State University, (u)
A Mathematics College Readiness Project. BTC 003

Elizabeth Carter, Anthony Rios, Kurtis Mann, **Error! Reference source not found.**
 (u)
Sick Jump: Maximizing Vertical Air to Optimize Tricks on a Half-pipe.
 BTC 004

Lee R. Gibson, University of Louisville (f)
Active Learning in Elementary Statistics with Numerical Entry Clickers.
 BTC 005

5:10 – 5:25 **Contributed Papers**
 Lauren May, Morehead State University (u)
A Surreal Analysis of the Card Game Rook. BTC 001

Timothy Schroeder, Murray State University (f)
Fun with the Euler Characteristic. BTC 002

Cancelled

Steven McQuade, Anthony Bankemper, Matthew Kahmann, Northern
 Kentucky University (u)
*Angles and Momentum: The Mathematics of Snowboarding: Our Approach to
 Solving Problem A of the Mathematical Contest in Modeling.* BTC 003

Matias von Bell, Asbury University (u)
Repeaters Repeaters Repeaters. BTC 004

Bryce Norris, Murray State University (u)
Montezuma's Revenge: Learn Math to Save a Life. BTC 005

5:30 – 5:45

Contributed Papers

Kara Wilttrout, BJ Pugh, Joe Thacker, Asbury University (u)
Long Distance Relationships. BTC 001

Bangteng Xu, Eastern Kentucky University (f)
Some structure theory of table algebras. BTC 002

Amir Ahmadi, Morehead State University (u)
Model Development for Lignocellulosic Biofuels. BTC 004

Steven Wilkinson, Northern Kentucky University (f)
Cylindrical Helices. BTC 005

6:00 – 7:30

Banquet

Keen Johnson Ballroom

7:30 – 8:30

Invited Address

Sir Randolph Bacon III, Colin Adams' cousin-in-law
Blown Away: What Knot to Do When Sailing. Wallace 147

8:30

Aftermath

Hall in front of Wallace 147

Saturday, March 26

8:00 – 11:00 **Registration** Wallace 432

8:00 – 11:00 **Refreshments** Wallace 433

8:00 – 11:20 **Book Exhibits** Wallace 434

8:20 – 8:35 **Contributed Papers**

Mathew M. Cropper, Eastern Kentucky University (f)
Tiling a Narrow Rectangle. Wallace 430

Rus May, Morehead State University (f)
A Count of Knot Mosaics. Wallace 431

Haddi Bayo, Kentucky State University (u)
You can't win with Nontransitive Dice! Wallace 448

Nitija Kharel, Northern Kentucky University (u)
Pearson's Chi Square Goodness-of-Fit Test for Binomial Distribution.
Wallace 449

Ryan Stuffelbeam, Transylvania University (f)
*Mixing Fiction and Mathematics: Integrating Creative Writing into a
Mathematics Course.* Wallace 447

8:40 – 8:55 **Contributed Papers**

Chris Christensen, Northern Kentucky University (f)
Lester Hill's Error-Detection Codes. Wallace 430

Andy Martin, Kentucky State University (f)
Well what exactly IS the Riemann hypothesis? Wallace 431

Joshua Bradley and Brad Schneider, Morehead State University (u)
Design and Implementation of a BlackBerry Friend Tracking App. Wallace 448

Keri Eustis, Kaity Bradley, George Lytle, Asbury University (u)
What Goes Up Must Come Down. Wallace 449

Stefan Schnake, Murray State University (u)
Frequent Hyperclicity of Differential Operators. Wallace 447

8:55 – 9:10 **Break**

- 9:10 –10:00 **2010 Distinguished Teaching Award Address**
 Robin Blankenship, Morehead State University
Conducting Undergraduate Research: Book Embeddings and Pebbling Numbers of Chessboard and Sudoku graphs, and Hextile Knot Mosaics of a Given Radius. Wallace 147
- 10:00- 10:25 **Elections**
- 10:30 –10:45 **Contributed Papers**
 Bruce Kessler, Western Kentucky University (f)
A “Peak” at the Algorithm Behind “Peaklet Analysis” Software. Wallace 430
- Bob Riehemann, Thomas More College (f)
Game Theory as a General Education Course. Wallace 431
- Ryan Curry, Centre College (u)
Cracking the K-13 Elliptic Curve Code. Wallace 448
- Xiaomei Zhan, Northern Kentucky University (u)
A simulation study of Type I Error Rates for Statistical Tests Comparing Three Independent Samples of Quantitative Data. Wallace 449
- Ted Porter, Murray State University (f)
The Frequent Hypercyclicity of the Laplacian Operator. Wallace 447
- 10:30- 11:25 Sue Cain, Robin Hill, Chyleigh Rose & Steve Newman
Panel Discussion: *The Common Core State Standards in High School Mathematics.* Wallace 446
- 10:50 –11:05 **Contributed Papers**
 Daniel J. Curtin, Northern Kentucky University
Negative and Imaginary Numbers in 16th Century Italy. Wallace 430
- Kristine Roinestad, Georgetown College (f)
Geometry of Fractal Squares. Wallace 431
- Ashley Gibbs, Kentucky State University (u)
Line Design and Curve Stitching. Wallace 448
- Jessica Smith & Zach Wagner, Morehead State University (u)
Hextile Knot Mosaics of $(p,p+1)$ -Torus Knots. Wallace 449
- William Rowe, Adam Ward, and Aaron Hill, Asbury University (u)
Snowboarders Getting High . . . Legally. Wallace 447

11:10 – 11:25 **Contributed Papers**

Joshua W. Lambert, Murray State University (f)

Better Estimating Biodiversity using Zero-Inflated Distributions. Wallace 430

Christine Shannon, Centre College (f)

An Interesting Probability Question Arising in a Psychology Experiment.

Wallace 431

Betsy Heines, Transylvania University (u)

Modeling Aeolian Sand Dune Morphology. Wallace 448

André Thomas, Kentucky State University (u)

Astro-conics: Proving the Law of the Heavens. Wallace 449

Steven McQuade, Northern Kentucky University (u)

March Madness: Probabilities and NCAA Basketball Pools. Wallace 447

11:30 – **Invited Address**

12:30 Laura Taalman, James Madison University

Functioning in Calculus. Wallace 147

12:35 – 1:45 **Luncheon and Business Meeting**

Student Cafeteria – Powell Bldg. 4th Floor

1:45 **KYMAA Executive Committee Meeting**