## Kentucky Section of the Mathematical Association of America <br> Centre College - March 29-30, 2019

Friday, March 29 - Contributed Talks/Invited Address/Others (f: faculty; g: graduate; k: K-12 educator; o: other; u: undergraduate)

| 2:00-4:30 | Registration: Young Hall (YH) First Floor Lobby |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3:15-4:15 | Carl Lee (UK - f) and Ian McCauley (Dunbar High School - o) A Virtual Math Museum (Young Hall 139) |  |  |  |  |  |
|  | Young Hall 110 | Young Hall 111 | Olin Hall 123 | Olin Hall 124 | Olin Hall 128 | Olin Hall 129 |
| 3:05-3:20 | Karolyn Stewart (Cin. Child. Hosp. - k) Chronic Health Conditions: <br> Implications for Math Education | Jerod Weber and Amelia Floehr ( $\mathrm{NKU}-\mathrm{u}$ ) <br> Examining the Impact of Dragons in the Real World | Virginia Hallman, Eleni Buss, and Jahred Hull (Asbury - u) Time to Leave the Louvre | Will Britt and Jeffrey Heath (Centre - u, f) Effective Teamwork: The Analytics of Basketball Lineups | Rob Donnelly (MuSU - f) <br> Which Unit Shapes Have Area Less Than Pi? | Ryan Stuffelbeam <br> (Transylvania - f) Farey Sequences and Diophantine Approximation |
| 3:25-3:40 | Axel Brandt <br> ( NKU - f) <br> Polynomials for <br> Peace: Avoiding <br> Scheduling Conflicts | Rebekah Habeger <br> (Asbury-u) <br> Where to Raise <br> Your Dragon | Enyu Li and <br> Christopher Turner <br> (Asbury - u) <br> Evacuate the Louvre | Chase Cavanaugh and Jeffrey Heath (Centre-u, f) Basketball Shooting Efficiency and the Shot Clock | Justin Taylor (MuSU-f) <br> Eigenvalues of Differential Operators | Justin Garagnani and Michael Kelly (Transylvania - u, f) Optimal Advertising Strategies for Use in Popular Media |
| 3:45-4:00 | Nicholas Gaubatz <br> (MuSU-u) <br> A Parametrized <br> Solution of <br> Length-four Wavelets | Michael Belcher (WKU - u) <br> Mathematical <br> Modeling of Diabetic Foot Ulcers Using Optimal Design | Doug Chatham <br> (MoSU - f) <br> Applying the <br> Hastings-Metropolis <br> Algorithm to Chessboard <br> Placement Problems | Bob Powers <br> ( U of $\mathrm{L}-\mathrm{f}$ ) Strategy-Proof Voting Rules | Jessica Lugo (MuSU - g) Optimal Control of a Tumor Model with Delay | Steven Wilkinson and Lisa Holden ( $\mathrm{NKU}-\mathrm{f}$ ) Computing <br> Certification Exams for Students |
| 4:05-4:20 | David Roach (MuSU - f) <br> Visitors from the 4th-dimension: <br> Visualizing the Length-four <br> Parametrized <br> Wavelets as Points in 4-space | Abdullah Ateyeh <br> (WKU - u) <br> Finding the Most Influential Factors Which Control the Healing of Chronic Wounds | Katelyn May (MuSU-u) <br> Colorings and Sudoku Puzzles | Trevor Leach <br> ( U of $\mathrm{L}-\mathrm{g}$ ) <br> Aggregating <br> Preference on <br> Permutation Closed <br> j-rich Domains | Andrew Long and Jacob Englert (NKU-f, u) Climate Change in Togo, West Africa: 3 Degrees C Hotter (or so) by the End of the Century | Michael Lamar <br> (Centre - f) <br> A Statistical <br> Learning Model for <br> Rating-Scale Data |
| 4:30-5:30 | Domi | Klyve (Central Was | ited Address (Young gton University) | lecture hall - YH 1 <br> Fights! The Seedy U | belly of Mathematica | istory |

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|  | Young Hall 101 | Young Hall 102 | Young Hall 110 | Young Hall 111 | Young Hall 112 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5:45-6:00 | Timothy Schroeder <br> (MuSU - f) <br> Mock Reflection Surfaces | Nadine Innes $(\mathrm{MuSU}-\mathrm{u})$ Time Series Analysis: Forecasting Treasury Bill Interest Rates | Schugart, Dorff, Donovan, Wiglesworth, Hoard, and Pack | Bekkah Trachtenburg (Bellarmine - u) Toxin Effects on a Competitive Species | Duk Lee <br> (Asbury - f) <br> Fly! Fly! <br> My Paper Airplane! |
| 6:05-6:20 | Rus May (MoSU-f) Risk Analysis | Wesley Stratton (MuSU-u) <br> Predicting Interest Rates Using Integrated Autoregressive Moving Average Time Series Model | Undergraduate Research in Mathematics and the Center for Undergraduate Research in Mathematics: A Panel Discussion | Sarah Townsend, Dakota Owens, and Caleb Engler (Asbury - u) <br> Modeling the Spread of Opiates Through KY and 4 Other States | DJ Price <br> (WKU-u) <br> A Complete List of Minimal Diagrams of an Alternating Knot |
| 6:30-7:15 | Banquet (Old Carnegie, Evans Lively Room) |  |  |  |  |
| 7:30-8:30 | 2018 Distinguished Teaching Award Address (Old Carnegie, Evans Lively Room) David Coulliette (Asbury University) What Do (Computational) Mathematicians Do? |  |  |  |  |

