## STUDENT TALKS

## 2018 Allegheny Mountain Section Meeting at Penn State Behrend

|  | Burke 101 | Burke 102 | Burke 103 | Burke 104 | Burke 105 | Burke 106 | Burke 204 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} 7: 15 \\ - \\ 7: 30 \end{gathered}$ | Billy Mellinger Penn State Greater Allegheny <br> A Serious Series Problem | Madison Babicka <br> Washington \& Jefferson College <br> So Many Primes (proofs)! | Aaron Worley <br> Penn State Altoona <br> Cubic Metallic Means | Augustine Fisher Northwest PA Collegiate Academy <br> Optimizing Routes Through a Network Containing a Speed Upgrade | Zack Linger <br> Fairmont State Univ. <br> Experiments Related to the Riemann Zeta Function | Chelsea Deluisio Edinboro Univ. <br> Proof of Menelaus Theorem |  |
| $\begin{gathered} 7: 35 \\ - \\ 7: 50 \end{gathered}$ | Rebecca Drucker Juniata College <br> Constructing Configurations of the Dr. Eureka Puzzle | Madison Lydic and Jordan Melko Washington \& Jefferson College <br> Cookie Monster Problem | Chenzhang <br> Zhou <br> Penn State Altoona <br> ODE Solver Based on Taylor Approximation | Wasim Jamshed Penn State York <br> MHD Flow and Heat Transfer of Casson Nanofluid with Slip Conditions, Thermal Radiation and Variable Thermal Conductivity | Carl Wahler and Anna Westall Fairmont State Univ. Using Monte Carlo Methods to Predict Satellite Directional Stability | Rachael Troutman Edinboro Univ. <br> Alice's Adventures in Mathematical Madness | Dylan Langharst and Marco Nunez Penn State Behrend <br> Deriving the Schrödinger Form for Various Orthogonal Polynomial Sequences |
| $\begin{gathered} 7: 55 \\ - \\ 8: 10 \end{gathered}$ | Stephanie Ringer Juniata College <br> Finding the Optimal Math Homework Review Method | Michael Wigal West Virginia Univ. <br> Characterization of subexponential posets for First-Fit | Matt Bruno Edinboro Univ. <br> An Overview of Elliptic Curve Cryptography | Jeremy Glasner and Josh Hnat <br> Washington \& Jefferson College <br> Expressing Polynomials with Binomial Coefficients | Dawn Sargent Fairmont State Univ. <br> Characterizing the Behavior of a Spring Pendulum with Monte Carlo Methods | Ava Hoag Westminster College <br> A Glimpse at Space Around Black Holes | Landon Han <br> Penn State Behrend <br> Optimal Forcing Location in Arrays of Coupled Oscillators |
| $\begin{gathered} 8: 15 \\ - \\ 8: 30 \end{gathered}$ | Jared Mountan, Matthew Adams, Bogdan Bordean, and Cy Milko Penn State Univ. <br> Neural Networks in Artificial Intelligence | Peter Conley Gannon Univ. <br> Inverse Domination: Search for a Counterexample | Alison Pearce Edinboro Univ. <br> The Median Concurrence Theorem | Bingliang Lu <br> Washington \& Jefferson College <br> The Unimodality of Binomial Coefficients and Northeastern Lattice Paths | Si Chen \& Tiantian Liu Univ. of Pittsburgh <br> Indicators of Pointed Hopf Algebras of pq Dimension over Characteristic p | Tyler Heintz Westminster College <br> Finding Unimodular Roots of Complex Polynomials | Kade Kolheffer Penn State Behrend <br> Horse Racing Analysis |
| $\begin{gathered} 8: 35 \\ - \\ 8: 50 \end{gathered}$ | Zeph Turner Juniata College <br> Estimating the Sources of Metagenomic Data Using Bayesian Statistical Methods | Shulai Yang <br> Washington \& Jefferson College <br> The Catalan Numbers and Its Applications | Hong Xin Penn State Behrend <br> Bridge Tournament Arrangement | Rachael Elliott Westminster College <br> An Application of k-modes Clustering to Institutional Advancement Data | Joseph Datz and Conner Stout Univ. of Pittsburgh <br> Leveraging Machine Learning to Model Hospital Patient Readmittance | Jacob Simmons Edinboro Univ. <br> Ciphers and Their Relation to <br> Polynomials and Modular Arithmetic |  |
| $\begin{gathered} 8: 55 \\ - \\ 9: 10 \end{gathered}$ | Lewis Dominquez Indiana Univ. of PA <br> Finite Sum Representations of Elements in $R$ | Kashmir Sainiak Washington \& Jefferson College <br> Plus and Equals | Lulu Liu <br> Penn State Behrend <br> Different Ways to Sum zeta(2) | Trevor Arrigoni Westminster College <br> On Inverse Semigroups of Self-Similar Graph Actions | Brian Gentry Univ. of Pittsburgh <br> Predicting High-Volume Prescribers of LifeSaving Medical Devices | Brandon Eschborn Edinboro Univ. <br> Perfect Numbers in Other Bases |  |

