3. An Adaptively Weighted Least-Squares Finite Element Method for Convection Dominated Diffusion PDEs

Myles Baker, Baylor University and Wabash College
Sarah Farell, Bard College and Wabash College

13. Evaluations of Cubic Twisted Kloosterman Sheaf Sums

Jeremy Booher, Harvard University
Anastassia Etropolski, Bard College
Amanda Hittson , University of Wisconsin – Madison

27. Dessins and Manturov Bracket Shuffles

Michelle Delcourt, Georgia Instititute of Technology

34. The Structural Property of Wavelet Sets

Zhiwei Wu, Bard College

35. The Isoperimetric Problem in Sectors with Disk Density

Alexander Diaz, University of Puerto Rico, Mayaguez Campus

42. A Unified View of Zonal Jets and Rossby Waves

Ken Zhao, Courant Institute, New York University

46. Numerical Modeling and Analysis of Fluid Structure Interaction in Biological Systems

Avis Foster, George Mason University

50. Conjectures on Twisted Kloosterman Sheaf Sums

Adam Goldberg, Danville, CA
Alex Perry, Columbia University

62. Investigation of the Loewner Trace

Sarah Anderson, Clemson University
Osman Chaudhary, Millersville University

67. Completions of Local Rings and Minimal Prime Ideals

Rachel Karpman, Scripps College

68. Classical and Virtual Pseudodiagram Theory and new bounds on Unknotting Numbers

Noel MacNaughton, Williams College
Sneha Narayan, Oberlin College
Oliver Pechenik, Oberlin College
Jennifer Townsend, Scripps College

77. Efficient simulation of fluid flow
David Hannasch, University of Nevada - Las Vegas
Shipra De, University of Nevada - Las Vegas

80. Symmetric Saddle Towers
Melissa Yeung, University of Chicago

88. Knot mosaics: When Knots and Tiles Meet
Joe Paat, Denison University
Jacob Shapiro, Denison University

101. Quantum Information: Entanglement and Stabilizers
Curt Cenci, Lebanon Valley College

109. Using A Modified Mathematical Algorithm for the Source Localization of Brain Signals
Shubham Debnath, University of Minnesota - Twin Cities

112. The Number of Independent Sets in a Regular Graph
Yufei Zhao, Massachussetts Institute of Technology

129. Applying the nudged elastic band method to topological data analysis
Atanas Atanasov, Columbia University

132. Discrete Homotopy Covers and Gromov-Hausdorff Convergence
Corey Jones, University of North Carolina, Asheville

143. RNA secondary structure prediction, lattice walks and the yellow fever virus
Damond Collier, Morgan State University

149. Birth-Death Processes and q-Continued Fractions
Rachel Kirsch, University of Maryland
Elise McCall, Masschussetts Institute of Technology

154. Tropical Quadratic Curves through Three Generic Points in $\mathbb{R}^2$
Sarah Brodsky, University of California, Berkeley

170. Classification of Real $\mathbb{Z}_2$-Graded Associative Algebras
Daniel Wackwitz, University of Wisconsin - Eau Claire

171. Matrix Problems in Coding Theory and Statistics
Andrew Wilcox, College of William and Mary

180. Minimal representations of even permutations as products of cycles of fixed length k.
Josh Maglione, California State University, Fullerton

185. Computer Optimization of Doubly Convergent Multiple Beam Electron Guns
William Tallis, North Carolina State University
Virginia Forstall, College of William and Mary

189. Controlling the Spread of a Disease Under the Uncertainty of the Model Parameters
Noah Daleo, Kennesaw State University

198. A Generalization of the Number of Points on a Family of Calabi-Yau Threefolds
Jonathan Root, College of the Holy Cross

208. Evenly Spaced Binomial Coefficients: A Purely Combinatorial Proof
Bob Chen, Harvey Mudd College

215. Condorcet-k Winners
Angela Wu, Swarthmore College
Sarah Wolff, Colorado College
Aaron Meyers, Bucknell College

236. Static Behavioral Effects on Gonorrhea Transmission Dynamics (MTBI-06-02M)
Liana Medina-Rios, Mount Holyoke College
Benjamin Morin, Arizona State University

237. The Dynamics of a Spatial Cyclic Competition System (MTBI-06-04M)
Don Tadaya, Arizona State University
Ioana Hociota, Arizona State University
Bryce van de Geijn, University of Texas
Jeff Merckens, University of Maine
Benjamin Morin, Arizona State University