

Speaker: Alex Kontorovich

Title: Toric Orbits in the Affine Sieve

Abstract: We give a heuristic model for the failure of "saturation" in instances of the Affine Sieve having toral Zariski closure. Based on this model, we formulate precise conjectures on several classical problems of arithmetic interest, and test these against empirical data. As a special case, we give new conjectures about prime factorizations of Fibonacci and Mersenne numbers. This is based on joint work with Jeff Lagarias.