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Explicit Deuring-Heilbronn phenomenon for Dirichlet L-functions

A Landau-Siegel zero is a possible real zero near $s = 1$ of a quadratic Dirichlet L-function modulo q. This zero conjecturally does not exist, but its possibility is a significant barrier to the equidistribution of primes in arithmetic progressions. The Deuring-Heilbronn phenomenon, pioneered by Linnik in 1944, can allow one to sidestep this barrier because it quantifies how other zeros of all Dirichlet L-functions modulo q are repelled based on the severity of the Landau-Siegel zero. In this talk, I will discuss a completely explicit Deuring-Heilbronn phenomenon for Dirichlet L-functions which is uniform in the entire critical strip, and improves over the previous best known explicit estimate due to Thorner and Zaman. This is joint work with Kübra Benli, Shivani Goel, and Henry Twiss.