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Modular zeros in the character table of the symmetric group

In 2017, Miller conjectured, based on computational evidence, that for any fixed prime p the density of entries in the character table of S_n that are divisible by p goes to 1 as n goes to infinity. I'll describe a proof of this conjecture, which is joint work with K. Soundararajan. I will also discuss the (still open) problem of determining the asymptotic density of zeros in the character table of S_n , where it is not even clear from computational data what one should expect.