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A lower bound for the two-variable Artin Conjecture

In 1927, Artin conjectured that any integer other than -1 or a perfect square generates the multiplicative group $\mathbb{Z}/p\mathbb{Z}^\times$ for infinitely many primes p . In a 2000 article, Moree and Stevenhagen considered a two-variable version of this problem, and proved a positive density result conditionally to the generalized Riemann Hypothesis by adapting a 1967 proof by Hooley for the original conjecture. During this talk, we present an unconditional lower bound for this two-variable problem obtained through the study of binary recurrence sequences. This is joint work with Ram Murty and Cameron Stewart.