

Primes in Arithmetic Progressions

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2, 3, 4, 5, 6, 7, 8, 9, 10, 11,...



5, 8, 11, 14, 17, 20, 23, 26,...

It was known already to Euclid that there exist infinitely many primes. A modification of Euclid's proof yields infinity of primes in some arithmetic progressions, but not all arithmetic progressions $ax+b$ with a,b co-prime integers. Dirichlet used analysis to prove that every such arithmetic progression contains infinitely many primes. The ideas going into the proof will be described.

Prof. T. N. Venkataramana got his Ph.D from Mumbai University in 1990, under the guidance of Prof. M. S. Raghunathan. He is currently a Professor at the School of Mathematics, TIFR. His research interests are in Lie groups and their discrete subgroups.

The talk is meant for undergraduate students and will only assume knowledge of some basic calculus.

ALL ARE WELCOME