

1047-11-430

Dan Goldston* (goldston@math.sjsu.edu), Department of Mathematics, San Jose State University, San Jose, CA 95192. *The Hardy-Littlewood Prime Tuple Conjecture and Gaps Between Consecutive Primes*. Preliminary report.

Gallagher proved that an appropriate form of the Hardy-Littlewood prime tuple conjecture implies that the primes are Poisson distributed around their average. Work of Brent, Erdős-Straus, and Odlyzko-Rubinstein-Wolf showed that by inclusion-exclusion one can use the Hardy-Littlewood conjectures to suggest asymptotics for the differences between consecutive primes in various ranges. The purpose of this talk is to describe preliminary work to determine more precisely how strong uniform versions of the Hardy-Littlewood conjectures can be used to answer questions on gaps between consecutive primes. This is joint work with Andrew Ledoan. (Received February 03, 2009)