COLLOQUIUM

UNIVERSITY OF PITTSBURGH

FRIDAY, JANUARY 20, 2017

704 THACKERAY HALL

3:30 P.M.

JEREMY AVIGAD

DEPARTMENT OF MATHEMATICS
CARNEGIE MELLON UNIVERSITY

THE HISTORY OF DIRICHLET'S THEOREM ON PRIMES IN AN ARITHMETIC PROGRESSION

ABSTRACT: In 1837, Dirichlet proved that there are infinitely many prime numbers in any arithmetic progression in which the first two terms have no common factor. Modern presentations of the proof are explicitly higher-order, allowing quantification and summation over certain types of functions known as "Dirichlet characters." I will discuss the history of the theorem, and explain how it illustrates profound ontological and methodological shifts in nineteenth century language and method.

Refreshments served at 3:00 p.m.
in the Math Dept. COMMON ROOM, Thackeray 705