The Fullerton College Mathematics Colloquium
presents

Ryan Trias

Fullerton College

"Carmichael's Totient Function Conjecture"

Abstract:

Most people know what a quotient is, but not so for the word "totient." Euler's totient function ϕ is defined by the rule that $\phi(n)$, for any positive integer n, is the number of positive integers that are less than n and who have no common factors with n. In 1907, Ralph Carmichael stated, and claimed to have proven, that for every such n, there is another positive integer m such that $\phi(m) \neq \phi(n)$. In 1922, he retracted his proof, thus leaving a problem to us that remains open to this day.

Mr. Trias is a Math 250A student who is also an ENGAGE in STEM Summer Research Intern working with Dr. Clahane. He has given talks at the Math Colloquium and the Pacific Coast Undergraduate Math Conference, winning a "Meritorious Poster Award" in the Freshman/Sophomore Division at the most recent Southern California-Las Vegas Sectional meeting of the Mathematical Association.

Dr. Dana Clahane

Fullerton College

"The Elliot-Haberstam Conjecture"

Abstract:

Euler's totient function is also involved in the statement of the conjecture in the title of this talk. However, this conjecture is more complicated to state than Carmichael's Totient Function Conjecture is. Nevertheless, Dr. Clahane will ensure that everyone is able to clearly understand this more complicated conjecture, which has several important implications. For example if the Elliot-Haberstam Conjecture is indeed true, then it is known that in that case, there are infinitely many pairs of primes that differ at most by 16!

Thursday, October 18, 2012
12:45-2:50pm
North Science Building, Room 623
Fullerton College
321 E. Chapman, Fullerton CA 92832-2095

Cookies and punch provided by ENGAGE in STEM, administered by the Fullerton College Office of Special Programs.