Department of Mathematics, BGU

Colloquium

On *Tuesday, June ,9 2015*

At *14:30 – 15:30*

In *Math 101-*

Amnon Yekutieli (BGU)

will talk about

Pythagorean Triples, Complex Numbers, Abelian Groups and Prime Numbers

Abstract: The story of Pythagorean triples is an ancient one, as the name suggests. We are looking for triples (a, b, c) of positive integers that are the sides of a right angled triangle; namely they satisfy the Pythagorean Theorem. In this talk I will explain how to find all Pythagorean triples (reduced and ordered) with a given hypotenuse c. The method is simple and constructive. For instance, we will be able to find (by hand) the only triple with hypotenuse ,289 and the only two triples with hypotenuse .85

The relation between Pythagorean triples and complex numbers, prime numbers and Gauss integers is well-known. What might be new in the talk (but I can't vouch for it) is the connection to abelian group theory.