

המחלקה למתמטיקה, בן-גוריון

קולוקוויום

ביום שלישי, 9 ביוני, 2015

בשעה 14:30 – 15:30

בMath-101

ההרצאה

Abelian Numbers, Complex Triples, Pythagorean Numbers Prime and Groups

חינתן על-ידי

(BGU) Yekutieli Amnon

תקציר: The story of Pythagorean triples is ancient and as one of the first mathematical results. We are looking for positive integers a, b, c such that $a^2 + b^2 = c^2$. In this talk I will discuss the Pythagorean theorem, the Pythagorean triples, and how to find them. We will see that for a given a , there are only finitely many b, c such that $a^2 + b^2 = c^2$. We will also discuss the connection between Pythagorean triples and complex numbers, and the connection between Pythagorean triples and prime numbers. The Pythagorean theorem is a well-known result in geometry, but it has many interesting applications in number theory and algebra. We will see how the Pythagorean theorem is related to the theory of quadratic forms, and how it is used in the proof of Fermat's last theorem. We will also discuss the connection between Pythagorean triples and the theory of elliptic curves, and how it is used in the proof of the Mordell conjecture.