

המחלקה למתמטיקה, בן-גוריון

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## קולוקוויום

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ביום שלישי, 17 בדצמבר, 2019

בשעה 14:30 – 15:30

ב-101 Math

ההרצאה

### Fields. Finite over $GL(n)$ on Analysis Harmonic

חינתן על-ידי

Madison) - Wisconsin of (University Gurevitch Shamgar

תקציר: There are many interesting properties of finite groups that express themselves in terms of sums of characters. For example, the number of irreducible characters of a finite group  $G$  is equal to the number of conjugacy classes of  $G$ . This is a special case of the more general fact that the number of irreducible representations of  $G$  over a field  $F$  is equal to the number of conjugacy classes of  $G$  if  $F$  is a splitting field for  $G$ . This is a consequence of the fact that the irreducible representations of  $G$  are in one-to-one correspondence with the irreducible characters of  $G$ . The character theory of finite groups is a rich and beautiful subject, and it has many applications in number theory, algebra, and geometry. In this talk, we will discuss some of the basic results in character theory, and we will see how they are used to study the structure of finite groups. We will also discuss some recent developments in the theory of finite groups, and we will see how they are related to the theory of algebraic groups. Finally, we will discuss some of the open problems in the theory of finite groups, and we will see how they are related to the theory of algebraic groups.

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