K-Theory, Quadratic Forms and Number Theory Seminar

Title: On group algebras of groups with cyclic derived subgroup

Speaker: Tibor Juhász (Institute of Mathematics, Eger, Hungary)

Date: Wed 23rd March 2011 at 3:00PM

Location: Mathematical Sciences Seminar Room

Abstract: Let G be a p-abelian group with cyclic derived subgroup, here p is an odd prime,and let F be a field of characteristic p. Denote by FG+ the set of symmetric, by FG- the set of skew symmetric elements of the group algebra FG, with respect to the canonical involution. In this talk we determine - the Lie derived length and the strong Lie derived length of FG; - the Lie derived length of FG+ and FG-, provided that G is nilpotent; - the Lie nilpotency indices of FG and FG+; - the derived length and the nilpotency class of the unit group of FG; - the derived length and the nilpotency class of the units of FG+, provided that G is torsion and nilpotent group.