

ALGEBRA  
SEMINAR

*Pseudo-reductive groups*

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**Abstract:** A pseudo-reductive group is a smooth connected affine algebraic group over a field  $k$  which does not contain any nontrivial smooth connected normal unipotent subgroups defined over  $k$ . Such groups arise naturally as the quotient of any smooth connected affine algebraic  $k$ -group by the maximal smooth connected normal unipotent subgroup defined over  $k$ . For study of general affine algebraic groups it is important to know the structure and classification of pseudo-reductive groups. In a joint work with Brian Conrad and Ofer Gabber we have determined the structure and classification of these groups. In my talk I will explain the classification, and also mention group theoretic and arithmetic applications.

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