

MATHEMATICS RESEARCH SEMINAR

3:00-3:50 March 25 and April 1

102 University Hall

AUTOMORPHIC FORMS AND METAPLECTIC GROUPS

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ABSTRACT: In 1952, Gelfand and Fomin noticed that classical modular forms were related to representations of $SL_2(\mathbb{R})$. As a result of this realization, Gelfand later defined GL_r automorphic forms via representation theory. A metaplectic form is just an automorphic form defined on a cover of GL_r , called a metaplectic group. In this talk, we will carefully construct the metaplectic covers of $GL_2(\mathbb{F})$ where \mathbb{F} is a nonarchimedean local field. After describing the structure of such groups, we will investigate a certain class of principal series representations and give a relationship between such representations over different metaplectic covers. The focus of this talk will not be on tedious details, but rather on describing the general structure and properties of metaplectic groups and their representations.