

Automorphic forms and L-functions in higher rank

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We will focus on $\mathbf{GL}(n)$ with $n > 2$ as in my book: Automorphic forms and L-functions for the group $\mathbf{GL}(n, \mathbb{R})$. The aim is to give a self contained overview of the subject accessible to graduate students with a mathematical background consisting of classical analysis, complex variables, algebra, and modular forms. The following topics will be covered: Fourier-Whittaker expansions of automorphic forms, Hecke operators, analytic continuation and functional equations of the standard L-functions, converse theorems, Rankin-Selberg method, automorphic representations.