

Cuspidal automorphic forms constructed via Poincare series, their non-vanishing and applications

Plenary lecture

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In this lecture we describe our recent work on construction of certain classes of cuspidal automorphic forms of one variable, their non-vanishing and applications to the problems of construction of explicit embeddings of compact Riemann surfaces in projective spaces, and non-vanishing of automorphic L-functions in the critical strip attached to modular forms.

MSC2010: 11F11, 14H55, 30F35.

Keywords: Automorphic Forms, Poincare Series, Riemann surfaces,
L-functions.

Section: 3,5.