

1030-11-324

James W. Cogdell* (cogdell@math.ohio-state.edu), Department of Mathematics, Ohio State University, 231 West 18th Ave, Columbus, OH 43210. *L-functions and Functoriality*.

Automorphic L -functions, like all L -functions, can be quite mysterious. These L -functions attached to automorphic representations can be thought about from several points of view: (i) through their connection with arithmetic and Artin L -functions (the Langlands Conjectures); (ii) as given by explicit integral representations (Jacquet, Piatetski-Shapiro, Shalika, etc.); (iii) as occurring in the Fourier coefficients of Eisenstein series (Langlands, Shahidi). All three of these chains of thought come together in establishing Langlands Functoriality from classical groups to GL_N . In this lecture I would like to use this conjunction to discuss these three methods of realizing Automorphic L -functions and how they combine to give these cases of Functoriality. (Received August 06, 2007)