Hankel transform, Langlands functoriality and functional equation of automorphic $L$-functions

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Abstract This is a survey on recent works of Langlands’s work on functoriality conjectures and related works including the works of Braverman and Kazhdan on the functional equation of automorphic $L$-functions. Efforts have been made to carry out in complete generality the construction of the $L$-monoid, and certain a kernel which is, we believe, related to the elusive Hankel kernel.

Keywords and phrases: Langlands functoriality, Hankel transform, functional equation

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Dedicated to the memory of Prof. Hiroshi Saito, with affection

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