

HYBRID UNIVERSALITY FOR L-FUNCTIONS WITHOUT THE EULER PRODUCT

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Abstract

We show the hybrid universality theorem for an axiomatically defined class of L-functions without the Euler product like the Lerch zeta-functions, twists of Lerch zeta-functions and periodic Hurwitz zeta-functions. More precisely, we prove that any analytic functions can be approximated by these L-functions shifted by $i\tau$ and, simultaneously, some finite set of given real numbers can be approximated by $a_1\tau, \dots, a_n\tau$, where a_1, \dots, a_n are real numbers linearly independent over \mathbb{Q} .

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