Title: Orlicz spaces on hypergroups

Author(s): Vishvesh Kumar, Ritumoni Sarma and N. Shravan Kumar

For a locally compact hypergroup K and a Young function φ, we study the Orlicz space $L^{\varphi}(K)$ and provide a sufficient condition for $L^{\varphi}(K)$ to be an algebra under convolution of functions. We show that a closed subspace of $L^{\varphi}(K)$ is a left ideal if and only if it is left translation invariant. We apply the basic theory developed here to characterize the space of multipliers of the Morse–Transue space $M^{\varphi}(K)$. We also investigate the multipliers of $L^{\varphi}(\mathcal{S}, \pi_K)$, where S is the support of the Plancherel measure π_K associated to a commutative hypergroup K.

Address:
Vishvesh Kumar
Department of Mathematics
Indian Institute of Technology Delhi
Delhi - 110 016
India

Address:
Ritumoni Sarma
Department of Mathematics
Indian Institute of Technology Delhi
Delhi - 110 016
India

Address:
N. Shravan Kumar
Department of Mathematics
Indian Institute of Technology Delhi
Delhi - 110 016
India