

Remark on the eigenvalues of the m -Laplacian in a punctured domain

Gulzat NALZHUPBAYEVA

In this research we extend results on regularized trace formulae which were established by Kanguzhin and his co-authors for the Laplace and m -Laplace operators in a punctured domain with the fixed iterating order $m \in \mathbb{N}$. By using techniques of Sadovnichii and Lyubishkin, Kanguzhin and his co-authors described regularized trace formulae in the spatial dimension $d = 2$. In this remark one is to be claimed that the formulae are also valid in the higher spatial dimensions, namely, $2 \leq d \leq 2m$. Also, we give the further discussions on a development of the analysis associated with the operators in punctured domains. This can be done by using so called 'nonharmonic' analysis.