

An accurate asymptotic estimate for the trace of the heat kernel of a Γ -pseudo-differential operator

By KAZUSHI YOSHITOMI (Tokyo)

Abstract. We study the trace of the heat kernel of an elliptic Γ -pseudo-differential operator. We obtain an asymptotic formula for it with an optimal error bound. Our work here refines and sharpens a result of Nicola and Rodino, in which its leading asymptotic is obtained.

KAZUSHI YOSHITOMI
DEPARTMENT OF MATHEMATICAL SCIENCES
TOKYO METROPOLITAN UNIVERSITY
MINAMIOHSAWA 1-1
HACHIOJI, TOKYO 192-0397
JAPAN

Mathematics Subject Classification: 35S05, 47G30.

Key words and phrases: Γ -pseudo-differential operator, heat kernel, trace.