

Convergence results for parabolic transmission problems across highly conductive layers with small capacity

MARIA ROSARIA LANCIA

Dipartimento di Metodi e Modelli Matematici
per le Scienze Applicate,
Università degli Studi di Roma “La Sapienza”,
Via A. Scarpa 16, 00161 Roma, Italy.
E-mail: lancia@dmmm.uniroma1.it

PAOLA VERNOLE

Dipartimento di Matematica,
Università degli Studi di Roma “La Sapienza”,
P.zale Aldo Moro 2, 00185 Roma, Italy.
E-mail vernole@mat.uniroma1.it

ABSTRACT. –A parabolic transmission problem across either a fractal layer S or the corresponding prefractional layer S_h is studied. Existence, uniqueness and regularity results for the strict solution, in both cases, are established as well as convergence results of the solutions of the approximating problems.