

SEMINARIO DE ANÁLISIS Y APLICACIONES

Viernes, 25 de febrero de 2011

11:30 h., [Aula Naranja](#) (ICMat, Campus de Cantoblanco)

Ana Primo

ICMAT

Local asymptotics for solutions to Heat equations with inverse-square potentials

Resumen: *Joint work with Veronica Felli (UNIMIB, Italy).*

Parabolic problems with singular inverse square potentials arise in the linearization of standard combustion models. The properties of the heat operator are strongly affected by the presence of the singularity. In this talk, the aim is to describe the exact behavior near the singularity of solutions to linear and subcritical semilinear parabolic equations with Hardy type potentials. By combining a parabolic Almgren type monotonicity formula with blow-up methods, a precise description in terms of the eigenvalues and eigenfunctions of the perturbed Orstein-Uhlenbeck operator is obtained. Moreover, as a byproduct, a unique continuation property is deduced.

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