

Dilluns 9 de desembre del 2013, 15:00h

Aula Petita (CRM).

Composition of paraproducts

MARI CARMEN REGUERA
(University of Birmingham, England, UK)

ABSTRACT:

Let b be a function in $L^2(\mathbb{R})$ and let us consider the multiplication operator by b , $M_b f := bf$. Using the decomposition of f and b in the Haar basis, we can write the multiplication operator $M_b f$ as the sum of three operators, each of which is known by the name of paraproduct. These paraproducts, that at first look like made-up objects, are the discrete version of very classical operators that appear in Harmonic Analysis, Operator Theory and even PDEs. In this talk we study the composition of such operators and his connection with Sarason Conjecture in operator theory and the A_2 Conjecture in harmonic analysis. This is a joint work with S. Pott, E. Sawyer and B. Wick.