SEMINARIO

2 dicembre 2019, ore 13:45
Aula Buzano - DISMA

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SPECTRAL REPRESENTATION OF THE TRACE SPACES AND THE SOLUTIONS OF THE DIRICHLET BIHARMONIC PROBLEM ON LIPSCHITZ DOMAINS VIA MULTI-PARAMETER STEKLOV PROBLEMS

Abstract:
We consider the problem of describing the traces of functions in H^2 on the boundary of a Lipschitz domain in the N-dimensional Euclidean space. We provide a definition of those spaces, in particular of H^{3/2} by means of Fourier series associated with the eigenfunctions of new multi-parameter biharmonic Steklov problems which we introduce with this specific purpose. These definitions coincide with the classical ones when the domain is smooth. Our spaces allow to represent in series the solutions to the biharmonic Dirichlet problem. Based on joint work with Luigi Provenzano..