

## **abstract**

SPECIAL LECTURE

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

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We discuss sharp regularity results for the solutions of the polyharmonic equation in an arbitrary open set. Then we introduce an appropriate notion of capacity which allows to describe the precise correlation between the smoothness of the solution and the geometry of the domain.

We also address a long-standing open problem due to N. Riviere regarding the biharmonic functions in Lipschitz domains, and improve the previously known results in all dimensions higher than seven. This is joint work with V. Maz'ya.