

Università degli Studi della Basilicata  
Dipartimento di Matematica, Informatica ed Economia

*Seminario Interdisciplinare di Matematica*

Si avvisano gli interessati che **Mercoledì 21 Settembre 2016, alle ore 12**, nell'Aula Seminari del Dipartimento (Aula n. 18),

**Marco M. PELOSO**  
(Università degli Studi DI MILANO)

terrà la conferenza dal titolo

**Spazi di Hardy e proiettore di Szegö**

**Summary.** In this talk I will discuss the problem of the (ir)regularity of the Szegö projection on worm domains.

If  $\Omega$  denotes a domain in  $\mathbb{C}^n$  the Szegö projection is the orthogonal projection of  $L^2(b\Omega)$  onto the subspace consisting of the boundary values of holomorphic functions in  $\Omega$  (when these notions are suitable defined). The Szegö projection can be thought as the boundary analogue of the Bergman projection on  $\Omega$ .

The smooth bounded worm domain exhibits many noticeable phenomena, in particular the irregularity of the Bergman projection in the Lebesgue and Sobolev scales. This irregularity was established by Barrett and then Christ, using a limiting argument starting from simpler, model worm domains  $D_\beta$  and  $D'_\beta$ .

We wish to discuss the plan of work in the case of the Szegö projection and what is known at this time. This entitles to some results in the case of the domains  $D_\beta$  and  $D'_\beta$ . These results are joint work with A. Monguzzi.



*Prof. Tom. Skirco*