



SCUOLA
NORMALE
SUPERIORE

SEMINARIO DI MATEMATICA

martedì 10 maggio 2016
ore 15:00

Scuola Normale Superiore
Pisa
Aula Tonelli

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Academia Sinica

Terrà un seminario dal titolo:

“A local index theorem for CR manifolds with S^1 action”

Abstract:

*Among those transversally elliptic operators initiated by Atiyah and Singer, Kohn's \Box_b operator on CR manifolds with S^1 action is a natural one of geometric significance for complex analysts. Our main result computes a local index density, in terms of *tangential* characteristic forms, on such manifolds including *Sasakian manifolds* of interest in String Theory. As applications of our CR index theorem we can prove a CR version of Grauert-Riemenschneider criterion, and produce many CR functions on a weakly pseudoconvex CR manifold with transversal S^1 action and many CR sections on some class of CR manifolds, answering some long-standing questions raised by Kohn and Henkin respectively. Moreover in some cases, we can reinterpret Kawasaki's Hirzebruch-Riemann-Roch formula for a complex orbifold with an orbifold holomorphic line bundle as an index theorem obtained by an integral over a smooth CR manifold which is essentially the circle bundle of this line bundle. This is joint work with Chin-Yu Hsiao and I-Hsun Tsai*

Tutti gli interessati sono invitati a partecipare.

Classe di Scienze
Matematiche e Naturali