INSTITUTUL DE MATEMATICA “SIMION STOILOW” AL ACADEMIEI ROMANE

Conferința lunară

Spectral geometry in the presence of a generic smooth function

Dan Burghelea

(Ohio State University)

Conferința va avea loc **Miercuri 16 octombrie 2019, ora 13:00**
la sediul IMAR, amfiteatrul “Miron Nicolescu”, parter

Abstract: Spectral Geometry (of a Riemannian manifold) relates the spectrum of Laplace-Beltrami operators (on functions and on differential forms) to the geometry/topology of the underlying manifold. Some of the nicest results involves the entire spectrum which is infinite and (in generic situations) inaccessible to calculations with arbitrary accuracy. Is it possible to select of this infinite set a finite part which is relevant enough to recover much of the above mentioned information and when so, at what price ?
A generic smooth function (Morse function) does this to some extent. This is a topic of a book in preparation and the present lecture is an overview of its contents.