

INSTITUTUL DE MATEMATICĂ “SIMION STOILOW” AL ACADEMIEI ROMÂNE

Conferința lunară

The Architecture of Logical Interpolation

Razvan Diaconescu

(IMAR)

Miercuri 25 februarie 2015, ora 13:00

IMAR, amfiteatrul “Miron Nicolescu”, parter

Abstract: Interpolation is one of the most studied mathematical properties of logical systems. It has a strikingly elementary formulation (easy to understand even by non-specialists) and yet it is very difficult to obtain. In this talk we will explore together the subtle causes of interpolation. We will also discuss important reforms of the interpolation concept due to the abstract perspective brought in by the theory of institutions introduced by Goguen and Burstall about 35 years ago. From a different angle, this talk may be regarded as an introduction to the theory of institutions through the emblematic case study of interpolation. Besides its traditional role of mathematical foundations for important areas of logic-based informatics, currently the theory of institutions represents a dynamic research area in itself, at the junction between model theory, category theory, and computer science. It is also currently the most powerful mathematical tool in the deconstruction of the model theoretic phenomena.