

The College of Arts & Sciences
Department of Mathematical Sciences

Colloquium

Dr. Iosif Petrakis

University of Munich

Thursday, March 28th
Room 220, 60 West Charlton
4:00 – 5:00 pm

Constructive topology of Bishop spaces

A Bishop space is a constructive, function-theoretic alternative to the notion of topological space, and it is defined as a couple (X, F) , where X is a set, and F is a set of functions from X to the reals that satisfies certain closure conditions. The general aim of the theory of Bishop spaces is to study the usual topological notions using functions instead of sets.

After discussing briefly the basic features of Bishop-style constructive mathematics, we present the basic concepts and some fundamental results in the theory of Bishop spaces, like a Stone-Cech theorem, a Tychonoff embedding theorem, and a Stone-Weierstrass theorem for Bishop spaces. Using a notion of compact topological space introduced by Comfort, we survey the main results in the study of Comfort-compact Bishop spaces.

Refreshments will be served 3:15 – 3:45 pm in the Faculty & Graduate Student Lounge Room 4118 French Hall West