

סמינר מדעי היסוד

יום ראשון 11.12.2011 בשעה 13:00-14:00 בפיקוס 200

**גב' אלונה מוחוב
אפקה ואוניברסיטת תל-אביב**

Approximation of set-valued functions by metric linear combination.

Abstract

One of the motivations for studying approximation operators for set-valued functions (SVFs, multifunctions) is the problem of the reconstruction of a 3D object from a finite number of its parallel cross-sections. This problem is equivalent to the approximation of a univariate SVF with 2D sets as images, from a finite number of its samples. This talk reviews known approximation operators and presents a new method for adapting linear approximation operators for real-valued functions to set-valued functions with general compact images. This adaptation is done by replacing linear combinations of numbers with new "metric linear combinations" of finite sequences of compact sets. The resulting operators are termed "metric analogue" operators for set-valued functions. Approximation estimates for the metric analogue operators are presented. As examples, metric Bernstein operators, metric Shoenberg operators and metric polynomial interpolants are discussed.

**מתאמים : פרופ' י. גולדמן, ד"ר ש. מיברג, פרופ' י. סטאנצ'סקו
ופרופ' ד. פישלוב**

אפקה- המכללה האקדמית להנדסה בתל-אביב, מבצע קדש 38, תל-אביב