המחלקה למתמטיקה, בן-גוריון

קולוקוויום

ביום שלישי, 10 בינואר, 2017

בשעה *14:30 – 15:30*

ב*Math -101*

ההרצאה

with computations numerical in Universality studies Case data. random

תינתן על-ידי

Percy Defit (NYU)

תקציר: This is joint work with Govind Menon, Sheehan Olver and Thomas
Trogdon. The speaker will present evidence for universality in numerical computations
with random data. Given a (possibly stochastic) numerical algorithm
with random input data, the time (or number of iterations) to convergence
is a random variable, given a tolerance) within a (i.e., the halting time. Two-
component universality is observed for the fluctuations of the halting time, i.e.,
the
histogram for the halting times, centered by the sample average and scaled
by the sample variance, collapses to a universal curve, independent of the input
data distribution, as the dimension increases. Thus, up to two components,
the sample average and the sample variance, the statistics for the halting
time are universally prescribed. The case studies include six standard numerical
algorithms, as well as a model of neural computation and decision making.