

המחלקה למתמטיקה, בן-גוריון

קולוקוויום

ביום שלישי, 7 במאי, 2019

בשעה 14:30 – 15:30

ב-101 Math

ההרצאה

diffusion, recurrence, walks: random Stationary billiards examples,

חינתן על-ידי

Rennes) of (University Conze Jean-Pierre

תקציר: The billiards in plane with obstacles are dynamical systems with periodic behavior. Their description is simple but features intricate "wind-tree" model, introduced by Paul Ehrenfest and Tatiana in 1912. The example of a ball moving on a plane with obstacles is a natural question: how fast does the ball return to a point? (recurrence), how far does it go? (diffusion), what is the set of scatters reached by the ball? The billiards modeled as dynamical systems with infinite invariant measure. The position of the particle can be viewed as a stationary random walk, $\sum_{i=1}^n X_i$, where X_i are independent random variables.

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random classical the for while collisions, two between vectors displacement the
variables. random independent are increments the walks
invariant infinite with systems about facts general some after talk, the In
stationary a of diffusion) (or growth and recurrence of notions the measure,
model. "wind-tree" the particular in examples, by illustrated be will walk random