

From random walk trajectories to random interlacements

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Resumo/Abstract:

In this course, we intend to explore some of the recent advances in the study of random walk trajectories. This subject has received great attention in the last decades due to its innumerable applications and theoretical importance.

Motivated by a question of H.J. Hilhorst on random walk trajectories and corrosion of materials, A.S-Sznitman recently introduced the model random interlacements. This process describes the asymptotic picture left by a random walk on a finite graph and is closely related with potential theory and percolation. The main objective of this course is to introduce the above topics in a self contained fashion.