



ΚΥΚΛΟΣ ΣΕΜΙΝΑΡΙΩΝ ΣΤΑΤΙΣΤΙΚΗΣ ΣΕΠΤΕΜΒΡΙΟΣ 2018

Achillefs Tzioufas

University de Sao Paulo

An introduction to certain recent advances on the contact process particle system

ΠΕΜΠΤΗ 27/9/2018

13:00

**ΑΙΘΟΥΣΑ T108, 1ος ΟΡΟΦΟΣ
ΝΕΟ ΚΤΙΡΙΟ ΟΠΑ, (ΤΡΟΙΑΣ 2)**

ΠΕΡΙΛΗΨΗ

The talk aims firstly at acquainting the audience with the field of percolation and interacting particle systems. We will commence by briefly over-viewing necessary background, by means of illustrating the macroscopic behavior of basic models in juxtaposition with their microscopic interactions definitions, or local dynamics. Regarding super-critical contact processes on integer lattices, we discuss the shape theorem and the entirely coupled region in all dimensions. We further discuss the regeneration scheme regarding extremal particles, as well as the recent central limit theorem for the cardinal of this process in dimension one. In order that no prior specialized knowledge of the field is required, the main ideas involved in the proofs will be merely touched upon. Some of the applications that percolation models find, including basic examples from ecology and epidemiology, will be briefly discussed to the end of motivating the main body of the talk.



AUEB STATISTICS SEMINAR SERIES SEPTEMBER 2018

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THURSDAY 27/9/2018

13:00

**ROOM T108, 1ST FLOOR,
NEW AUEB BUILDING, (TROIAS 2)**

ABSTRACT

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