Seminar/Talk

Stake-governed random tug-of-war

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Imagine a version of chess, where each player has 100 Forints, and, instead of alternating moves, before each turn they stake some portion of their fortunes, then flip a coin that is biased according to the stakes, and the winner of the coin toss makes the next move.This would of course be too difficult to analyze mathematically. Instead, consider random tug-of-war on graphs, which is a probabilistic game that was introduced by Peres-Schramm-Sheffield-Wilson (JAMS 2009) to aid the analysis of the infinity-Laplace equation, a singular elliptic PDE. We introduce the stake-governed version of this game, and solve it on finite rooted trees, by finding the Nash equilibria for the stakes and moves. Joint work with Alan Hammond.

Wednesday, April 27, 2022 04:30pm - 05:20pm
Heinzel Seminar Room (I21.EG.101), Office Building West

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