Biased tug-of-war and the biased infinity Laplace equation

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We will discuss the random turn game biased tug-of-war and its connection to a partial differential equation involving the infinity Laplace operator and a gradient term. Peres, Schramm, Sheffield and Wilson used the random turn game tug-of-war to prove the most general existence and uniqueness results for equations involving the infinity Laplace operator. We will discuss the biased version in which the coin tossed is not fair but is suitably biased. We will then consider these equations subject to mixed Dirichlet and Neumann boundary conditions using.

This talk is based on joint work with Yuval Peres and Gabor Pete as well as work with Scott Armstrong and Charles Smart.

The talk will be at 10am, in room 226 Benedum Hall.