On the best Lipschitz extension problem for a discrete distance and the discrete ∞-Laplacian

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This talk is concerned with the best Lipschitz extension problem for a discrete distance that counts the number of steps. We relate this absolutely minimizing Lipschitz extension with a discrete ∞-Laplacian problem, which arise as the dynamic programming formula for the value function of some ε-tug-of-war games. As in the classical case, we obtain the absolutely minimizing Lipschitz extension of a datum f by taking the limit as $p \to \infty$ in a nonlocal p–Laplacian problem.

Joint work with J Mazon and J Toledo.