

APPLIED MATHEMATICS COLLOQUIUM

“On Rationality and Optimality in Navigating Crowds”

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Abstract: In this talk, I will discuss the qualitative features and consistency of several pedestrian flow models. One recent popular approach is to derive a coupled system of nonlinear PDEs via the "mean field games" theory: a conservation law models the evolution of the pedestrian density, while a Hamilton-Jacobi-Bellman PDE is used to determine the directions of pedestrian flux. My focus will be on anisotropic interactions between the pedestrians and their implications for the resulting system of PDEs. Joint work with Elliot Cartee.

**Monday March 30, 2015
4:30 PM
Room E17-122**

Applied Math Colloquium: <http://www-math.mit.edu/amc/spring15/>
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