

*Department of Mathematics,  
University of California San Diego*

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# Math 295 - Mathematics Colloquium

**Prof. Alexander Vladimirovsky**

Cornell University

## Agreeing to Disagree in Anisotropic Crowds

**Abstract:**

How do the choices made by individual pedestrians influence the large-scale crowd dynamics? What are the factors that slow them down and motivate them to seek detours? What happens when multiple crowds pursuing different targets interact with each other? We will consider how answers to these questions shape a class of popular PDE-based models, in which a conservation law models the evolution of pedestrian density while a Hamilton-Jacobi-Bellman PDE is used to determine the directions of pedestrian flux. This presentation will emphasize the role of anisotropy in pedestrian interactions, the geometric intuition behind our choice of optimal directions, and connections to the non-zero-sum game theory. (Joint work with Elliot Cartee.)

Host: Melvin Leok

**Thursday, April 19, 2018**

**4:00 PM**

**AP&M 6402**

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