1145-92-2432   **Joseph Benson*** (`jbenson4@macalester.edu`), **Andrew Bernoff**, **Mariya Bessonov**, **Simone Cassani**, **Danielle Ciesielski**, **Daniel Cooney**, **Veronica Ciocanel** and **Alexandria Volkening**. *A social force agent based model for pedestrian dynamics.* Preliminary report.

Pedestrian crowds display rich and complex walking behaviors. They separate into lanes when walking in opposite directions, form zipper-like lanes when crossing at an angle, and display stop-and-go waves in high density situations. We investigate a social force agent-based model that can reproduce the aforementioned scenarios. This talk will describe the details of the model, as well as ongoing work to study pedestrian dynamics in large classroom settings. This study may have applications to efficient classroom entrance and evacuation for large university lecture halls. (Received September 25, 2018)

1