

1139-35-181

**Roman Shvydkoy\***, 851 S morgan st, m/c 249, chicago, IL 60607, and **Eitan Tadmor**.

*Topological models of collective behavior: local interactions imply alignment.* Preliminary report.

In this talk we will introduce a new alignment model based on Cucker-Smale agent based system, which has only natural local interactions yet exhibits the phenomenon of alignment. We also describe regularity results and new challenges these models pose for global wellposedness of fractional parabolic equations. (Received February 08, 2018)