**Emergence of metapopulations and echo chambers in mobile agents Michele Starnini1, Mattia rasca2 & Andrea Baronchelli3**

* The further introduction of **confirmation bias in social interactions**, defined as the *tendency of an individual to favor opinions that match his own*, leads to the emergence of echo chambers where different opinions coexist also within the same group.
* All of these models describe individuals that occupy the nodes of a lattice or network and are endowed with a visible trait that rules their interactions (e.g., skin color). They address the question of how different microscopic interaction rules impact the spatial distribution of these individuals. **Crucially, the visible trait is modeled as a fixed and immutable characteristic of the individuals**. In this paper, we relax the assumption of a fixed trait of the individuals and focus on the interplay between spatial mobility and opinion dynamics. **We consider mobile agents characterized by a continuous variable, or “opinion”, that evolves in time depending on the microscopic interactions between individuals. The model we propose incorporates.**
* **Mobility: Individuals move in a two dimensional space; Homophily: Individuals have a tendency to interact more with others who share their opinion; Social Influence: Interactions between individuals tend to increase their similarity.**