Hi everyone! I’m here to present joint work with Guy Aridor and Shan Sikdar on the effect of recommender systems on filter bubbles – individuals consuming increasingly similar goods, that is, less diverse content - and user homogenization – individuals consuming similar goods to each other.

Existing empirical work has found that filter bubble effects arise naturally *without recommendation*. We propose a simple model to account for this fact.

In our model, users face uncertainty about how much they value the available products. Their preferences are described by an idiosyncratic component and a common component and users consume a product per period over a finite horizon. The value of a product is more strongly correlated with more similar, nearby products in the product space with more dissimilar ones.

We then use this model to analyze the effect of recommendations. We model recommendations as simply providing users with information on which products to consume given knowledge of other users’ valuations and of consumers’ reported values of products consumed in the past. We contrast this with the no recommendation setting and with an ex-post optimal oracle setting.

Using simulation, we show that these informational consumption spillover effects do induce a narrowing effect in absence of recommendations.

We find that not only recommendation mitigates the narrowing effect as it eliminates the negative correlation between diversity and realized utility that users’ consumption patterns exhibit absent of recommendations.

However, recommendation coordinates individuals in similar portions of the product space, leading to higher user homogeneity than either the no recommendation or the oracle cases.

We conclude in our model recommender systems induce user homogeneity but, opposite to what is generally thought, they may mitigate filter bubbles.