Revenue Management in Crowdfunding

Crowdfunding, a mechanism in which funds are raised online using small donations from a large number of donors, has recently emerged as a popular approach for funding new ideas. We develop a model of crowdfunding dynamics that maximizes revenues for a project by optimizing pledge level requested from donors, and by setting the duration of the campaign. Our analysis based on the heterogeneity in backer arrival process fits with the observed crowdfunding pledging patterns. We calibrate the revenue losses from using exogenous fixed pledge levels or duration. We show that under the optimal project design, the pledge level decreases as the goal of the project increases, especially if the goal is too low or too high. We demonstrate how uncertainty can aid in the success of a project and in improving revenues. In particular, we show that projects with substantial goals can benefit from highly uncertain environments, more than projects with small goals.

Joint work with Sergei Savin and Jiding Zhang.