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## FEATURED SPEAKER



APRIL 15

### **Crowds, Citizens, and Professionals: A Research Program on the Changing Institution of Science**

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Science has for a long time been dominated by professional scientists who work individually or in well-defined teams, operating within a distinctive institutional setting. However, new types of projects involve crowds of individuals who self-select in response to open calls for participation, often including non-professional “citizens”. Such involvement can entail narrow micro-tasks (e.g., coding images of galaxies on the platform Zooniverse), can require valuable specialized skills (e.g., to solve Protein Folding Problems), and may involve crowds in direct collaboration with professional scientists across all stages of the research process. Citizens now also shape research agendas by proposing research questions, advising policy makers and funding agencies, or supporting projects directly through crowdfunding.

In this seminar, I will discuss three projects within our broader research program on Crowd and Citizen Science. The first project provides descriptive insights into crowd contributions on the largest CS platform Zooniverse, and estimates the financial value of these contributions using counterfactual wages as well as costs on commercial crowdsourcing platforms. The second project investigates whether and how crowds can generate high value research questions. Using two field studies in the medical sciences, we characterize research questions generated by the crowd and compare them to professional research questions with respect to novelty, scientific merit, and practical impact. The final project starts from the observation that non-professional citizens are increasingly involved in judging science and deciding which projects will be funded: We study how citizens evaluate research proposals, especially with respect to their potential “social impact”. We also investigate how such judgments relate to the personal relevance of the research topic as well as individual characteristics such as income and level of education. Building on these studies, I hope to discuss with the audience opportunities and challenges for involving crowds in scientific research, as well as implications for scientists and policy makers.

#### **Suggested Readings:**

- [Crowd science: The organization of scientific research in open collaborative projects](#)
- [Crowd science user contribution patterns and their implications](#)