

# The Science of Team Science & Innovation Satellite at NetSci2022

Jul. 16 (Sat.), 8 AM-noon EST | 8 PM-midnight Beijing | Online (Zoom TBD)

## Introduction

The past century has been characterized by a dramatic increase in the scale and complexity of science and technology, growing specialization, and a transition from individual innovation to collaborative discovery. This shift has been driven by a high expectation for “team science”, that scientists in teams will achieve breakthroughs otherwise difficult to attain through individual or simple additive efforts. Yet, two problems at the foundation of team science call for thorough investigation lest this high expectation devolve into underdelivered promise. First, the challenges of collectively generating new ideas in teams, along with the funding biases that favor teams that apply existing paradigms to solve production challenges over those that propose unprecedented ideas that could alter knowledge flows can both stifle, slow down, and create imbalance in *the progress of science*. Second, *the growth of individual scientists* has become an overlooked topic at an age when most scientists spend considerable time working in teams, which is likely to constrain creative thinking, to curtail due credit, and to undermine career progression. Taken together, the steady increase in the size and complexity of research teams presents an urgent need to understand how individual scientists can learn, progress, and effectively innovate in teams. The satellite aims to achieve a collective understanding of these problems and their variations across fields by bringing together scientists, practitioners, policymakers, and beyond.

## Agenda

### 8:00-8:30 Introduction

8:00-8:10, Lingfei, *Welcome*, U of Pittsburgh

8:10-8:30 [Steve Fiore](#), *Science of Team Science: Past, Current, and Future*, UCF & [INSciTS](#) (2022 President)

### 8:30-10:00 Frontiers in the Science of Team Science (Host: [Junming Huang](#), Princeton U)

8:30-8:50 [Jinhyuk Yun](#), *Quantifying Team Chemistry in Scientific Collaboration*, [Paper](#), Soongsil U

8:50-9:10 [Fengli Xu](#), *Flat Teams Drive Scientific Innovation*, [Paper](#), UChicago

9:10-9:30 [Dongbo Shi](#), *Can the Brain Drain of Elite Scientists be Reversed? Evidence from China's Young Thousand Talents Program*, [Paper](#), Shanghai Jiao Tong U

9:30-9:50 [Yian Yin](#), *Adaptability and the Pivot Penalty in Science*, [Paper](#), Cornell University (incoming AP)

### 10:00-11:00 Editor Panel: Invisible Authors, Science Gatekeepers, or Both? (Host: [Patrick Park](#), CMU)

Mary Elizabeth Sutherland, *Nature*

[Ludo Waltman](#), *Quantitative Science Studies (QSS)*

[Kevin Boyack](#), *Journal of the Association for Information Science and Technology (JASIST)*

### 11:00-12:00 Scholar Panel: What is a social “mechanism”? How did you measure it? (Host: [Lingfei Wu](#), PITT)

[Lianghao Dai](#), Zhejiang U, Dept. of Sociology

[Bu Yi](#), Peking U, Dept. of Information Management

[An Zeng](#), Beijing Normal U, School of Systems Science

[Jiang Li](#), Nanjing U, Dept. of Information Management

[Erin Leahey](#), U of Arizona, School of Sociology

[Donna Ginther](#), U of Kansas, Dept. of Economics & NBER

[Yong-Yeol Ahn](#), IU Bloomington, Luddy School of Informatics, Computing, and Engineering

12:00 Concluding Remarks: Junming Huang, Princeton University