Crowdsourcing is an increasingly powerful method where computation guides many amateurs' efforts in order to recreate an expert's abilities. However, across domains from design to engineering to art, few goals are truly the effort of just one person — even one expert. If we can now crowdsource simple tasks such as image labeling, how might computation coordinate many peoples' abilities toward far more complex and interdependent goals? In this talk, I present computational systems for gathering and guiding crowds of experts, including professional programmers, designers, singers and artists. The resulting collectives tackle problems modularly and at scale, dynamically grow and shrink depending on task demands, and combine into larger organizations. I'll demonstrate how computationally-enabled expert crowds can pursue goals such as designing new user experiences overnight, producing animated shorts in two days, and even pursuing novel research.

**BIO**

Michael Bernstein is an Assistant Professor of Computer Science at Stanford University, where he co-directs the Human-Computer Interaction group and is a Robert N. Noyce Family Faculty Scholar. His research focuses on the design of crowdsourcing and social computing systems. This work has received Best Paper awards and nominations at premier venues in human-computer interaction and social computing (ACM UIST, ACM CHI, ACM CSCW, AAAI ISWSM). Michael has been recognized with the NSF CAREER award, as well as the George M. Sprowls Award for best doctoral thesis in Computer Science at MIT. He holds Ph.D. and M.S. degrees in Computer Science from MIT, and a B.S. in Symbolic Systems from Stanford University. More information can be found on his [website](#).