

Speaker: **Aviv Yaish, Yale University**

Title: **Deconstructing and Rebuilding Trust in Decentralized Economies**

Abstract:

Financial systems are becoming increasingly digital and decentralized, demanding a practical fusion of distributed systems security and economic theory. A key enabler of this change, blockchain technology, promises more private and egalitarian economic mechanisms, built by facilitating consensus between pseudonymous actors. However, the theoretical security of these systems may mask significant real-world risks. In this talk, I will present recent advances in bridging this gap between theory and practice. First, I will discuss the resolution of a decade-old puzzle: the lack of observed attacks on major consensus mechanisms. I will then distill the lessons learnt into a holistic approach to designing robust systems and demonstrate its adoption in practice using several lines of work on the economics and security of modern digital markets, tackling problems including fee markets for distributed systems and pseudonymous markets where consumers may cheaply create new identities.