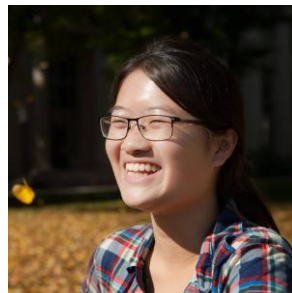


MASSACHUSETTS INSTITUTE OF TECHNOLOGY
DEPARTMENT OF MATHEMATICS

Simple Person's Applied Math Seminar (SPAMS)

Thursday, March 3, 2022

6:00pm – 6:45pm Room : 2 - 132



Rachel Zhang
(MIT CSAIL)

“Interactive Error Correcting Codes”

Abstract

Consider the task of communicating a message x to a receiver in an error resilient way. Classically, error correcting codes provide a non-interactive solution to this problem: the sender can simply encode x using an error correcting code, so that even if a constant fraction of the bits are adversarially corrupted, the receiver can still correctly learn x . In this talk, I will define the notion of an interactive error correcting code and show that over a binary alphabet, they can tolerate more adversarial erasures than can (non-interactive) error correcting codes. This is joint work with Meghal Gupta and Yael Tauman Kalai.