

Local Correction algorithms for low-degree polynomials

In the problem of local correction, one aims to design an algorithm that can recover a structured object from its corrupted version by querying at a few locations. Examples of structured objects are low-degree polynomials, which have been studied extensively in error-correcting codes. In this talk, we will consider low-degree polynomials when the inputs are restricted to the Boolean cube. We will present a sub-linear query algorithm for the task of local correction and discuss a key ingredient of the algorithm.

This is based on a joint work with Prashanth Amireddy, Manaswi Paraashar, Srikanth Srinivasan, and Madhu Sudan. The paper can be found here: <https://eccc.weizmann.ac.il/report/2024/164/>.