1163-AI-928  **Zeev Dvir\*** (`zdvir@princeton.edu`). *Locally Correctable Codes and the Sylvester-Gallai theorem.*

The famous Sylvester-Gallai theorem states that, any finite set of points in the real plane, not all on a single line, defines at least one 'ordinary' line (a line passing through only two points). In recent years, quantitative/robust variants of this theorem turned out to have a surprising applications in coding theory. In particular, they are closely related to codes with 'local' decoding procedures. In this talk I will explain this connection and survey some of the known results and open problems. (Received September 14, 2020)