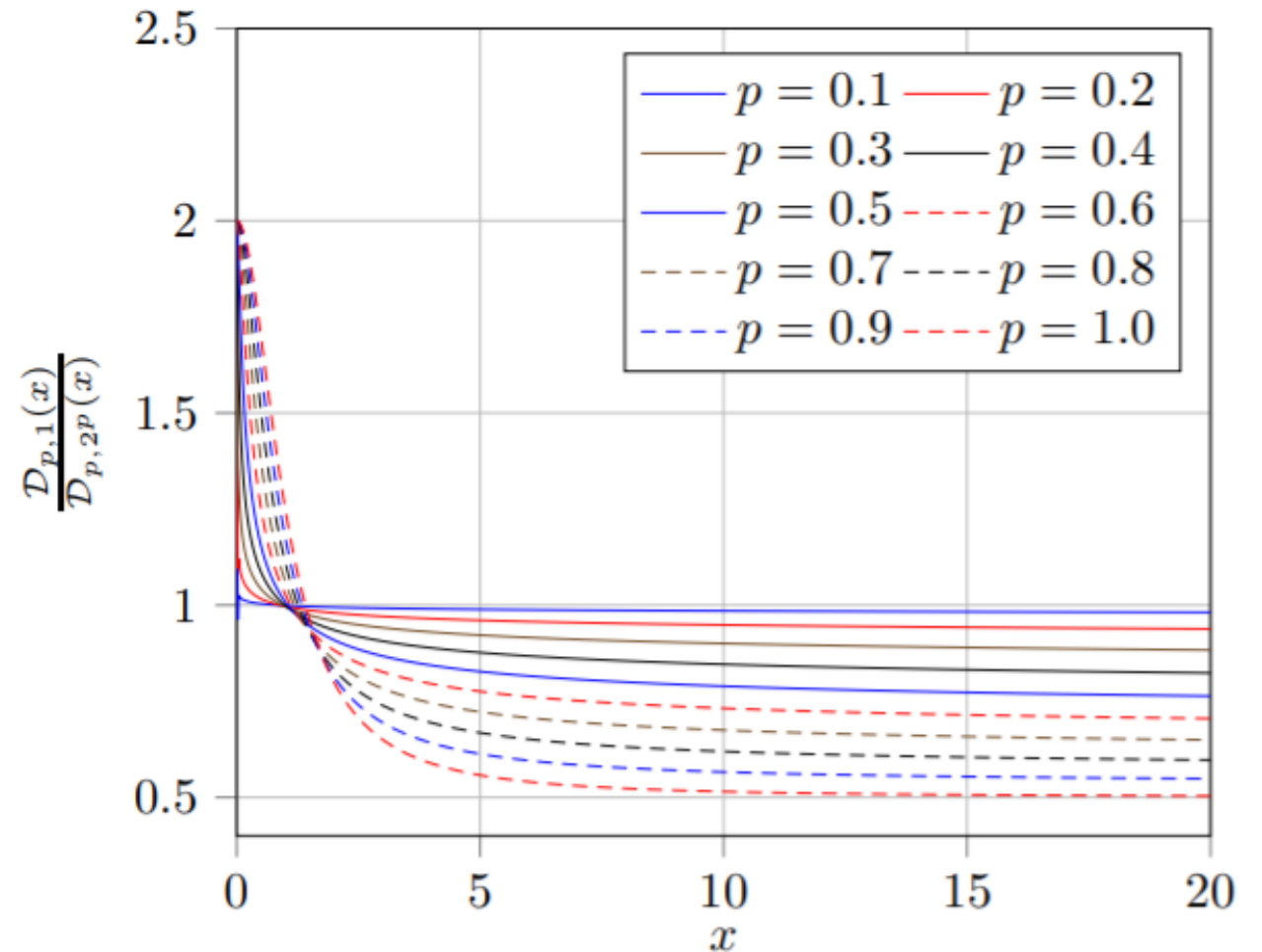


Private Fractional Frequency Moments Estimation with Polylogarithmic Space

- We proved that F_p sketch is differentially private as is when $0 < p \leq 1$.
- Proof sketch
 - Bound the distance between neighboring distribution
 - A new sensitivity notion: pure multiplicative sensitivity
 - Bound the ratio between neighboring densities
 - Check the right figure for intuitive understanding.



SCAN ME