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Report-sensitive spot-checking in peer grading system

Peer grading has many advantages: making large courses more scalable; providing students with faster and more detailed feedback; and helping students to learn by thinking critically about the work of others. A key strategy for motivating strategic students to provide accurate grades is spot-checking. Previous work has considered mechanisms that spot check each submission with a fixed probability. In this talk, I will discuss that the same incentives can be provided at lower cost by spot checking students based on the grades they report. I will show that our proposed mechanism outperforms the fixed-probability mechanism and indeed minimizes the required amount of spot checking. I will also discuss a surprising consequence of our main theorem, which is that the amount of TA work needed to incentivize students can be reduced by sometimes declining to compare student reports to TA reports even when TA reports are available.