CSDS 500 and ECSE 500
Fall 2021 Colloquium

11:30AM to 12:30PM
Thursday, December 2, 2021
Virtual

Zoom Webinar ID: 940 7438 8634
Passcode: 357363

" New Lower and Upper Bounds for Quantile Summary Algorithms"

Abstract: Finding the median, or more generally quantiles, is a core problem in data analysis. The question has been heavily studied in streaming and related models of computation, for over four decades. In this talk I will present some recent advances:
- Lower bounds for approximating quantiles in the deterministic comparison model, for additive error, which show that the best known algorithm is in fact optimal

- Upper bounds for relative error epsilon-approximations of quantiles, which improves over previous results and exceed the best known lower bounds by only an $O(\log(1/e)3/2)$ factor.

This covers joint work with Pavel Veselı, Justin Thaler, Edo Liberty and Zohar Karnin.

Graham Cormode
Warwick University, England

Bio: **Graham Cormode** is a research scientist at Facebook, and a professor in the Department of Computer Science at the University of Warwick in the UK. His research interests are in data privacy, data stream analysis, massive data sets, and general algorithmic problems. His work on statistical analysis of data has been recognized by the 2017 Adams Prize in Mathematics and as a Fellow of the ACM.

This is to certify that _____attended this seminar. Certified by _____.
Certificates of attendance and other evidence of CPD activity should be retained by the attendee for auditing purposes.

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