Online multiple hypothesis testing

In the "online multiple testing" problem setup, we encounter a sequence of apriori unbounded length of different hypotheses (to test) or parameters (to estimate). As a motivating high-level example, think of a pharma company testing a sequence of drugs for a single disease over large periods of time, running different clinical trials on new patients for each. We must make relevant decisions (e.g., to reject or not, or produce a confidence interval, or to proclaim a +ve or -ve sign of a treatment effect) in a fully online fashion: we must commit to the decision made at each time step, oblivious of the future. The decisions must be made in such a way that a suitable error metric—like the false discovery rate, or false coverage rate, or false sign rate, or familywise error rate—is controlled at any time. I will cover my group’s work over the past 5 years in developing state-of-the-art algorithms for all these problems.

This is based on joint works with different sets of fantastic coauthors in chronological order: Fanny Yang (ETH), Tijana Zrnic (Berkeley), Martin Wainwright (Berkeley), Michael Jordan (Berkeley), Eugene Katsevich (Wharton), Asaf Weinstein (Hebrew University, Jerusalem), Jinjin Tian (CMU), David Robertson (Cambridge), Neil Xu (CMU).

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New time: 3:00 pm - 4:00 pm

Zoom meeting: Please also find a link in the email invite, with the password.
https://uncsph.zoom.us/j/92138801086?pwd=Y011NUNQcS9lZERjaVhbVZS3AwQT09