

1125-VP-2706      **Grigory Sokolov\*** ([gsokolov@binghamton.edu](mailto:gsokolov@binghamton.edu)), 660 Brotzman Rd., Binghamton, NY 13901,  
and **Georgios Fellouris**. *Decentralized change-point detection in correlated sensor networks*.

Consider a sequential change detection problem, where a number of correlated sensors monitor an environment in real time. At some unknown time there is a change in an unknown subset of sensors; we consider the problem of detecting the time of the change as soon as possible, while controlling the rate of false alarms.

We establish asymptotic optimality of several generalizations of the CUSUM rule under certain communication constraints, and conduct a case study to compare the proposed procedures to the oracle detection rules uninhibited by the aforementioned constraints.

This is joint work with Georgios Fellouris (Department of Statistics, University of Illinois at Urbana-Champaign). (Received September 20, 2016)