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Kexue Zhang* (kexue.zhang@ucalgary.ca). *Event-Triggered Control for Nonlinear Time-Delay Systems.*

This talk focuses on the event-triggered control problem of nonlinear systems with time delay. We present a novel event triggering scheme with two tunable design parameters, based on a Lyapunov-Krasovskii functional result for input-to-state stability of time-delay systems. The proposed event-triggered control algorithm guarantees the resulting closed-loop systems to be globally asymptotically stable, uniformly bounded, and/or globally attractive for different choices of these parameters. Sufficient conditions on the parameters are derived to exclude Zeno behavior. This is joint work with Bahman Gharesifard (Queen's University) and Elena Braverman (University of Calgary) (Received January 15, 2021)