

## COLLOQUIUM

### *Assured Information Distillation in Social Sensing*

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**Abstract:** The advent of sensors and online social broadcast media (e.g., Twitter and Flickr) create a deluge of unfiltered, unstructured, and unvetted data about the physical environment. This opens up unprecedented challenges and opportunities in social sensing, where the goal is to distill assured information from social sources and devices in their possession. This talk will present a new analytical framework and theories to obtain reliable information with quality guarantees from large amounts of unreliable social sensing data. Noticeably, our analytical framework is the first to jointly model the complex interactions among three deeply coupled networks underlying the data; namely, the information, social and physical networks. The talk will also introduce a new information distillation system we built, called Apollo, which has been applied in a wide range of social sensing scenarios such as real event/disaster tracking, geo-tagging, smart road applications, and language/dialect classification. Apollo is now used by different branches at Army Research Lab (ARL).

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