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**Rahul Singh\*** (rahul@sfsu.edu). *Locally-Sensitive Epidemiological Modeling of Disease Outbreaks Using Social Media*. Preliminary report.

The behavioral patterns of afflicted individuals and their social-behavioral contexts are amongst the crucial factors governing the dynamics of diseases spread. However, the complexity of determining such information accurately has often stymied precise modeling of disease outbreaks; at the state-of-the-art, most computational models simplify the challenge by assuming contact networks that are homogeneous both in terms of their topology as well as infectiousness of nodes. In this talk I will present results of research being carried out in my lab that demonstrate how social media can be used as an emerging source of epidemiologically relevant information which can be used to construct disease propagation models that are significantly more discerning than their traditional counterparts. In particular, by considering epidemics governed by the susceptible-infected (SI) model, such as those arising in substance misuse, HIV, HCV, or their confluence, we demonstrate how highly sensitive population-level compartmental models can be constructed by taking into account specificities of afflicted individuals extracted from their social media activity. (Received August 29, 2018)