## COMPUTER SCIENCE SEMINAR

## Modeling Dyadic Interactions in Face-to-face Settings

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**Abstract:** Modeling Dyadic Interactions in Face-to-face Settings

Research in social psychology has extensively shown that in cohesive groups, individuals often respond to each other's prosody, facial expressions, and body movements. This effect where the behavior of two or more people involved in a face-to-face conversation become more synchronized with each other, so that they can appear to behave almost in direct response to one another, is termed interactional synchrony. The ability to computationally estimate interactional synchrony can therefore be explored to explain other deeper social psychology constructs. ??????? In this presentation, we discuss the analysis and synthesis of dyadic interactions under various social constellations, in the context of interactional synchrony. We demonstrate how this can be useful for evaluating rapport, exploring the role of entrainment in intimate partner violence, and understanding parent-infant interactions. We use various behavioral features such as facial expressions, head movements and speech prosody, which are treated as sampled time series signals, with sequence-based machine learning methods to make some useful predictions on real-life datasets. We also discuss some of our ongoing and future work in this and other areas.

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