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CIS RESEARCH SEMINAR

Thursdays 3-4

3 PM Thursday, Nov. 3 Dr. Zack Ives Wu & Chen

Peer-to-Peer Data Sharing for Integration and Collaboration

A major challenge lies in effective sharing of information among collaborating, yet autonomous, parties. These parties might be institutions, users, or even sensor devices (or combinations of sensor devices). They are characterized by having a diversity of perspectives (and hence heterogeneous schemas), dynamic data, and the possibility of intermittent connectivity or participation. The parties are peers in the sense that they are fully autonomous, they contribute and use resources as they choose, and they may join or leave at any point.

In this talk, I will provide an overview of our recent efforts to develop rapid, extensible, and flexible data sharing capabilities, using a peer-to-peer-inspired approach, in three different settings: SHARQ, which focuses on rapid sharing and querying of data; Orchestra, which addresses the challenges of propagating changes across interrelated databases; and Aspen, which focuses on sensor data integration, actuation, and management of confidentiality.

Joint work with Val Tannen, Susan Davidson, Insup Lee, Nick Taylor, TJ Green, Grigoris Karvounarakis, and Madhukar Anand.

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