**TippersDB: A Middleware System for Developing Smart Space Applications**

In the talk, I'll present TippersDB, a middleware system designed to build sensor-based smart space analytical applications. TippersDB supports a powerful data model that decouples semantic data about the application domain from sensor data using which the semantic data is derived. By supporting mechanisms to map/translate data, concepts, and queries between the two levels, TippersDB relieves the application developers from having to know or reason about either the type or location of sensors or write sensor-specific code. In addition, it allows for multiple optimizations based on smart space semantics to improve query processing. In the talk, I will present TippersDB's data model, query-driven translation of sensor data, a summary of the system implementation, and a demonstration of the TippersDB system.

**Bio:**

[Sharad Mehrotra](https://nam04.safelinks.protection.outlook.com/?url=https:%2F%2Fwww.ics.uci.edu%2F~sharad%2F&data=04%7C01%7Cabhishek.dubey%40vanderbilt.edu%7C13ac7c7bccf7478d594108d8dc71ed33%7Cba5a7f39e3be4ab3b45067fa80faecad%7C0%7C0%7C637501729165005730%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=NrUfPaaaUafa5FPC3bOBK%2F23sbPQbR0deD6XZP517yc%3D&reserved=0) is a Chancellor's Professor of Computer Science at the University of California, Irvine, Fellow of the IEEE, and a Distinguished Member of the ACM, and a trustee of the VLDB Endowment. His primary research interests include scalable data analytics, data cleaning, big data, distributed systems, secure databases, privacy, and Internet of Things. He is a recipient of over 12 best paper awards including 2011 SIGMOD Best Paper Award, 2012 SIGMOD Test of Time award, DASFAA ten year best paper awards for 2013 and 2014, ACM ICMR best paper award for 2013, IEEE NCA Best paper award for 2019, IEEE SmartComp 2021, Percom best paper award, 2022, and Dean’s Award for Research in 2016, and a CAREER Award in 1998 from the US National Science Foundation (NSF).