Abstract:
With the increased availability of wearable activity and fitness trackers, the opportunities to encounter and reflect upon data from familiar and routine activities are increasing. In this talk, I will share from multiple years of design-based research with fifth and sixth-grade mathematics classrooms that have partnered with my research team to increase comfort and familiarity with elementary statistics content required by current state standards related to data and measurement. Namely, students are devising ways to describe data, talk about measures of center, understand distributional shape, and make inferences from data sets. The primary strategy has been to provide youth with wearable activity trackers and identify activities and experiences that youth can leverage to support statistical description and inference in classroom activities. Using a learning progressions assessment instrument from Lehrer, Wilson, Ayers, & Kim (2014), we have recently documented some of the learning gains for students on statistical reasoning. The opportunity that is emerging for personal data engagement, the attainable learning gains, and some video excerpts of student talk around their own school day activity data will all be discussed.

Bio:
Victor R. Lee is Associate Professor of Instructional Technology and Learning Sciences at Utah State University. His two primary strands of research involve studying and designing supports for “Quantified Self” in education and supporting Maker education activities in out-of-school settings. He is past recipient of an NSF CAREER award, a National Academy of Education/Spencer Foundation postdoctoral fellowship, and the AERA Jan Hawkins Award. Lee completed his doctoral work at Northwestern University.