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# 學術報告

# Decentralized Location Privacy and Location Proximity Testing


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***Biography*: Martín Ochoa is an assistant professor at the Information Systems Technology and Design Pillar of SUTD, where he leads a research team in Software Security and Privacy and applications to Cyber-Physical Systems such as Internet-of-Things and Industrial Control Systems. Before joining SUTD, he was a post-doc at the Chair for Software Engineering of the TU München and has worked as a consultant in IT security for Siemens Corporate Technology in Munich. Martín studied Systems Engineering (San José, CR) and Mathematics (Rome). He continued his math studies in Munich (M.Sc.) and holds a PhD in Computer Science (TU Dortmund).**


With the surge of popularity of location tracking devices such as mobile devices there is a corresponding increasing number of applications taking advantage of Location Based Services, and integration of individual's location into popular apps. Recently, researchers have pointed out shortcomings in the implementation of such applications leading to serious location privacy leaks. A natural challenge arises in this situation: can users and third parties benefit from the ubiquity of location tracking devices while at the same time providing privacy guarantees? In this talk we present some of the technical challenges that need to be addressed in this domain and we discuss a line of research based on multi-party computation to provide strong mathematical guarantees for location proximity testing. We also review some open challenges and avenues for future work.