UNIVERSITY OF SOUTH FLORIDA

Major Research Area Paper Presentation

*Leveraging Channel State Information to Build Secure
Pairing System for IoT Devices
by
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For the Ph.D. degree in Computer Science and Engineering

The availability of channel state information (CSI) may enhance the security of IoT pairing process, without requiring any overhead equipment or sensors. Leveraging CSI may help to distinguish between the indoor and outdoor connections. In this presentation, we present a new system that utilizes CSI to establish a secure pairing protocol. This system localizes the devices requesting to pair before acceptance of that connection. Here, we built machine learning models to distinguish and localize devices based of the pattern of CSI. The best known accuracy of identifying the location (indoor vs. outdoor) of pairing device is 96.24% (AUC=0.993).

Wednesday, June 24, 2020
9:30 AM
Online (Collaborate Ultra)

THE PUBLIC IS INVITED

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