

CS 24 Seminar Summary

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For my first EECS-related research seminar, I decided to attend a TRUST Security Seminar about Human-Centered Computer Security and Privacy given by Tamara Denning from the University of Utah. Denning's seminar primarily covered the issues of how new technologies can impact the security and privacy of users, how we as computer scientists can design security solutions that minimize negative side effects, and how we can raise awareness of security and privacy amongst users.

One interesting insight made by Denning had to do with the privacy of identity. For example, say someone had been in a bad accident, and was completely unidentifiable upon rescue. Denning has been exploring different ways to mark humans for this exact scenario, so that despite being unable to facially recognize the person, we could confirm their identity with some type of crosscheck. However, she recognized the potential pitfalls of this, as an easily viewable marking could compromise the security/privacy of an individual.

Another insight that I had as she was explaining this was how other things aside from identity could easily be compromised, for example, medical records. If, for medical purposes, we began marking individuals with the different ailments they suffered, we risk their privacy being compromised if someone else were to see those. Denning did offer a solution, to implant humans with a tracker of some sort that wasn't as visible, however there was an oversight in that an implanted tracker still isn't necessarily completely secure. I still really enjoyed attending this seminar though, and would love to hear more from her about privacy issues surrounding virtual reality glasses, as it was a concept that I didn't grasp as well as the others presented.

For my second EECS-related seminar, I attended a Programming Languages seminar titled 'Tierless Programming and Reasoning for Software-Defined Networks' given by Shriram Krishnamurthi from Brown University. Krishnamurthi's seminar mainly explored a new programming language designed by him and a variety of other collaborators, called 'Flowlog'.

One insight made by Krishnamurthi was how Flowlog, as a tierless programming language, could simplify programs. Modern software is currently implemented across two tiers, the data tier, and the control tier. In addition, he mentioned that one could think of the persistent store on the controller as somewhat of a third tier. At its core, what he was trying to show is that modern software programming isn't completely efficient, and need a change.