SESSION TITLE	Demystifying Debugging and Disassembling Applications
SESSION QUICK ABSTRACT	Have you ever wanted to learn how to debug applications? Join us as we introduce the concept of debugging and disassembling, and perform lots of live demonstrations to demystify this practice!
SESSION ABSTRACT	Have you ever wanted to learn how to debug applications? Debugging and disassembling software requires lots of patience and practice, especially when bug hunting. Join us as we perform live demonstrations of debugging a range of items such as applications, libraries, and drivers using various tools. Learn how IDAPython can be used to save countless hours when disassembling with IDA.
SESSION DETAIL	Many information security professionals desire to have the skill-set to reverse engineer and debug applications. This can be an intimidating area to approach for most. The best way to gain these skills is to sit down and do it! Unfortunately, many do not put in the time required to become proficient. In this session we aim to introduce basic disassembly, the use of the IDA Pro disassembler, and debugging with Immunity Debugger and WinDbg. The goal is for students to leave inspired and further their studies. Sadly, many, if not most organizations fail to map any security into their application SDLC. Reversing and debugging is an acquired skill that greatly increases the value of the security professional. We will start by introducing the idea of disassembly and how basic instructions work. We will look at these instructions in a disassembler to see how the processor steps through and executes them. We will then look at basic debugging to see the instructions execute in real time, monitoring the outcome. We then move into debugging various file types, including drivers, applications, and libraries. Shifting focus, we will introduce a bug and look at proper breakpoint setup and live debugging to analyze the bug. Finally, we will take the bug through to exploitation to demonstrate the impact. Theoreticals are just that, theoretical. There is a good chance we will work some type of IoT devices into the session and how one would approach the reversing of such devices.