Conference summary

The presentation led by speaker John Jeffery Prevos encompassed a variety of topics related to the field of electrical engineering, computer science and security. Initially, Mr. Prevos introduced himself as an electrical and computer engineer, currently an assistant professor in the Department of Electrical and Computer Engineering at the University of Texas at San Antonio. He also held leadership positions at the Open Cloud Institute and co-developed an open source cloud OpenStack in collaboration with NASA, while participating in server building and testing projects for Facebook. In summary, his work has focused on improving and securing cloud computing technologies.

Next, Mr. Prevos addressed the subject of "Secure Manufacturing". He highlighted the challenges faced by the American industry due to its excessive dependence and lack of autonomy, particularly highlighted by the 2019 pandemic. To remedy this situation, he collaborated with CyManII, a specialized institute in testing for businesses aimed at optimizing and developing manufacturing systems. Additionally, CyManII performs rigorous component checks to ensure their reliability and safety. The main goal of this institute is to increase the security of businesses and protect them against threats such as ransom attacks.

During his presentation, J. Prevos shared his expertise in hardware attacks, explaining the attack methods businesses are exposed to and how to prevent them. For example, he warned against the use of USB sticks in businesses, highlighting the risk of infection, and recommended favoring direct connections between machines. He also stressed the importance of securing the code from the start by using a hash, signing it and storing it securely so machines can access it.

Finally, Mr. Prevos' presentation addressed the subject of FPGA (Field-Programmable Gate Array) attacks, which target integrated circuits. These attacks aim to slow down circuit operation by monitoring voltage, then extract information by exploiting the induced delays.