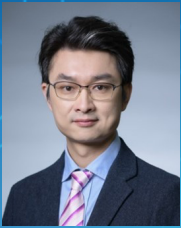


RESEARCH SEMINAR

Security Tax and System Solution with Hardware-Software Co-design



Prof. XIA Yubin

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Date : 11 Nov 2024 (Mon)
Time : 11:00 am - 12:00 pm
Venue : N003

Abstract

The performance overhead caused by operating system security has become increasingly significant, often referred to as the “security tax” of operating systems. In recent years, major chip vendors have continuously introduced hardware extensions related to security and isolation, offering new opportunities to reduce this security tax. This presentation will introduce a method for reducing the operating system security tax through a lightweight isolation mechanism based on hardware-software co-design, as well as the open-source security research platform for RISC-V, “Penglai”.

About the Speaker

Prof. Yubin XIA, Professor at Shanghai Jiao Tong University, Shanghai Outstanding Academic Leader, Excellent Instructor for the "Challenge Cup" National Special Award, named as "China's Innovative Figure in Privacy Computing Technology" by MIT Technology Review. His research areas include operating system and computer architecture. He served as a member of the program committee of a series of conferences, including OSDI, EuroSys, etc. He is the Director of the Shanghai Jiao Tong University-OpenHarmony Technology Club.