Abstract: Advanced Driver Assistance Systems (ADAS), autonomous functions, and connected applications bring a revolution to automotive systems and software. In this talk, several research topics in the domain of automotive systems and software will be introduced: (1) graph-based modeling, scheduling, and verification for intersection management, (2) security-aware design and analysis considering timing, game theory, and intrusion detection, and (3) some system engineering approaches to improve design quality, accelerate design development, and prevent redesign or recall. Current achievements and research challenges will be covered in the talk.

Brief Bio: Chung-Wei Lin is an assistant professor at the Department of Computer Science and Information Engineering (CSIE), National Taiwan University (NTU). He received the B.S. degree in computer science and information engineering and the M.S. degree in electronics engineering from NTU. He received the Ph.D. degree in electrical engineering and computer sciences from the University of California, Berkeley. He was a researcher at the Toyota InfoTechnology Center, USA, from 2015 to 2018. His research includes cyber-physical systems, connected and autonomous vehicles, security, system design methodology, and model-based design. He won ACM Transactions on Design Automation of Electronic Systems (TODAES) 2016 Best Paper Award.

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