



Talk information

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Title of the talk: OPENWIFI: THE OPEN WI-FI CHIP DESIGN AND ITS APPLICATION IN RESEARCH

Abstract of the talk:

Openwifi (<https://github.com/open-sdr>) is the 1st free and open Wi-Fi chip design that is compatible with Linux mac80211 framework. After it was released at the end of 2019, it has attracted many researchers and been used by many universities/institutes to showcase innovative research works (<https://github.com/open-sdr/openwifi/blob/master/doc/publications.md>). More and more researchers and hardware makers are joining this unique openwifi community/ecosystem. This presentation will introduce the project overview, technical aspects of the design, roadmap and the unique project position in the research community. Besides the general introduction, several promising applications/research-directions will be elaborated further: TSN (Time Sensitive Network) for low latency and high reliability communication; Wi-Fi sensing/radar and anti-sensing technique; Wi-Fi security research; etc. Finally, several ways to engage in and use the project will be discussed.

Biography of the speaker:

Xianjun Jiao received his bachelor's degree in electrical engineering from Nankai university in 2001 and Ph.D. degree in communication and information system from Peking University in 2006. Then, he worked as a developer and researcher in the leading wireless tech companies, such as Nokia, Microsoft and Apple. In 2016, he joined IDLab, a core research group of imec with research activities embedded in Ghent University and University of Antwerp. As a senior researcher at imec, he works on real-time Software Defined Radio (SDR) platform, such as the openwifi project: open-source Wi-Fi chip design. His main interests are high performance signal processing and parallel/heterogeneous computation in wireless communications. On his research track, many international patents/papers have been granted/published.