

Keynote Talk Abstract for 2022 IEEE the 8th International Conference on Computer and Communications (ICCC), Dec. 9-12

Title:

Terahertz Communications and Imaging

Terahertz (THz) technology is probably best known to the public as a powerful tool for imaging since it has been introduced for security and medical scanning and produced a lot of impressive images which are not available using other technologies. With the roll-out of the 5G mobile networks, the research into 6G wireless communications is heating up. It is envisioned that THz technology will be used for 6G and future wireless communications. In the talk, I review how THz technology has been employed for imaging and wireless communications, identify the state-of-the-art developments, and then examine and compare the common devices and issues for both applications. The possibility of integrating THz imaging/sensing and wireless communications is considered. The challenges and future perspectives are also presented and discussed. It is shown that THz technology is indeed a key enabling technology for both imaging and wireless communications in the future.