

ABSTRACT:

Self-Powered LiFi for 6G Networks - Advances and Challenges

Light fidelity (LiFi) uses visible light of readily available lightening infrastructure to provide high speed internet and illumination. LiFi is also characterised a fully green technology which harness its optical signal energy using solar cells based receivers to self-power and used in the last mile access 6G and beyond networks. Also, recently, LiFi based positioning is an active area in research for 6G technology and it has great promise for real-life applications. This is largely due to the wide range of potential applications accelerated by leveraging, industry 4.0, the internet of things (IoT) and the demand for a more customised experience in indoor spaces. Additionally, the wide adoption of smartphones and wearable devices by the public meant that LiFi can be provided to any user for localisation and guiding purposes. However, with the advances in this technology for indoor applications such UAVs, there are still many challenges to practical implement it at different system levels. This talk will cover the recent research in self-power LiFi and LiFi based 3D positioning or localisation, particularly its advances and challenges.