Low-cost small smart antennas for wireless communications

Smart antenna is the key technology for broadband satellite communications, terrestrial mobile communications (4G and 5G), radar and future Internet of Things. It can achieve electronically beam steering towards desired directions while forming nulls towards interferences. The traditional smart antennas are, however, very complicated, bulky and expensive, which make it difficult for civilian applications. For commercial applications, it is important to investigate novel smart antennas which can have small size, high efficiency and low cost. This talk will review the recent development of low-cost small smart antennas for terrestrial and satellite communications. Some case studies including low-cost small smart antennas for mobile terminals in terrestrial wireless communications, Ka-band smart antennas for satellite communications on the move, low-cost smart antennas for Ku-band satellite communications, etc, will be discussed. A conclusion will be given in the end.