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Wearable systems and sensors for wireless communication 5G, IOT and medical Systems

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Wearable systems and antennas are used in wireless Communication systems, wearable Healthcare systems, IoT and 5G systems.

Communication, medical and cellular industry is in continuous growth in the last few years.

Low profile compact antennas are crucial in the development of Communication and Wearable systems. Several small Passive and Active wearable systems and antennas will be presented in the lecture. Design considerations, computational results, and measured results on the human body of several compact wideband printed sensors with high efficiency will be presented in the lecture.

Wearable healthcare systems and sensors can measure heartbeat, sweat rate, body temperature, blood pressure, perform gait analysis and other physiological parameters of the person wearing the healthcare device. Gait analysis is a useful tool both in clinical practice and biomechanical research. Gait analysis using wearable sensors provides quantitative and repeatable results over extended time periods with low cost and good portability, showing better prospects and making great progress in recent years.

Recent Publications

1. Sabban, A. Novel Wearable Antennas for Communication and Medical Systems; Taylor & Francis Group: Boca Raton, FL, USA, 2017.

2. Sabban, A. Low Visibility Antennas for Communication Systems; Taylor & Francis Group: Boca Raton, FL, USA, 2015.

3. Sabban, A. Wideband RF Technologies and Antennas in Microwave Frequencies; Wiley: Hoboken, NJ, USA, 2016.

4. Sabban, A. New Wideband Printed Antennas for Medical Applications. IEEE Trans. Antennas Propag. 2013, 61, 84–91, doi:10.1109/tap.2012.2214993., January 2013.

5. A. Sabban, "Active Compact Wearable Body Area Networks for Wireless Communication, Medical and IOT Applications". MDPI ASI, Applied System Innovation Journal. 1(4), https://doi.org/10.3390/asi1040046. December 2018.

Biography

Albert Sabban received the Ph.D. degree from Colorado University at Boulder, USA, in 1991. His reasearch interests are wearable sensors and systems for medical applications, system, biomedicak and communication engineering. From 1976 to date he worked as senior researcher and project manager in hightech and biomedical companies. From 2010 he worked as a senior lecturer and researcher in Colleges in Israel. He published over 100 research papers and hold a patents in the antenna area. A. Sabban wrote and editted 8 books on wearable systems, green technologies and antennas. He also wrote 8 chapters in books on wearable systems and green technologies.

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