

Human mind has microwave electromagnetic nature and can be recorded and processed

Abstract

Introduction

In 2014 and 2015 Professor of neurology Andrey Bryukhovetskiy published a novel theory of the information-commutation organization of the human brain in Russia, China and the USA. The theory posits the hypothesis that the higher nervous activity (cognitive, intellectual, mnestic) of the humans and their mind are material and have microwave electromagnetic nature. The theory perceives the human mind as a result of dynamic extracortical information-commutation relations of the super-positions of the electromagnetic waves of ultra high frequency emitted by different areas of the human brain in the inter-membrane cerebrospinal fluid space of the human head at a certain period of time. The inter-membrane cerebrospinal fluid space of the human head (the space between the dura, arachnoid and pia mater filled with the cerebrospinal fluid) of about 10mm size, has all morphological attributes to realize the holography. It is a universal natural bioprocessor for processing, analysis and synthesis of the input data and their record or reproduction on the pia as on the biological holographic membrane. The theory suggested that the processes of the mind can be recorded and digitalized with the last generation contemporary microwave receptors of the UHF band.

Materials and optimized designs for human-machine interfaces via epidermal electronics

Abstract

Thin, soft, and elastic electronics with physical properties well matched to the epidermis can be conformally and robustly integrated with the skin. Materials and optimized designs for such devices are presented for surface electromyography (sEMG). The findings enable sEMG from wide ranging areas of the body. The measurements have quality sufficient for advanced forms of human-machine interface.

<https://ieeexplore.ieee.org/abstract/document/10896685>

Microwave Technique for Brain Monitoring: State of the Art, Promising Applications, Challenges, and Future Directions

Introduction

Advancements in microwave technology have opened new opportunities for brain monitoring and are paving the way for the creation of truly wireless wearable devices. The human brain is a vital organ that controls retention, feeling, sensory organs, and motor skills. It also regulates vital components such as breathing and core body temperature [1]. Monitoring key physiological phenomena related to the functioning and overall health of the brain is considered to be of paramount importance for both the clinical and research fraternity [2]. Sensing is proposed as one of the new verticals in 6G technology which will undoubtedly support microwave techniques for brain monitoring applications. Microwave technology is emerging as a promising candidate among other key technologies utilized in Wearable-Wireless (W2) brain monitoring systems as it can easily penetrate the human body without any harmful ionizing side effects. Small and thin flexible/textile antennas can be used for wearable sensing whereas directional antennas are optimum for non-contact sensing. Recent advancements in Beyond 5G (B5G) and 6G have accelerated this research by inculcating numerous healthcare and

biomedical applications in the microwave and millimeter (mm) wave spectrum. The major advantage of W2 technology is the possibility of monitoring brain health outside hospital settings in real-world situations.

<https://europepmc.org/article/PMC/PMC7937662>

Brain-to-brain communication: the possible role of brain electromagnetic fields (As a Potential Hypothesis).

Abstract

Up now, the communication between brains of different humans or animals has been confirmed and confined by the sensory medium and motor facilities of body. Recently, direct brain-to-brain communication (DBBC) outside the conventional five senses has been verified between animals and humans. Nevertheless, no empirical studies or serious discussion have been performed to elucidate the mechanism behind this process. The validation of DBBC has been documented via recording similar pattern of action potentials occurring in the brain cortex of two animals. With regard to action potentials in brain neurons, the magnetic field resulting from the action potentials created in neurons is one of the tools where the brain of one animal can affect the brain of another. It has been shown that different animals, even humans, have the power to understand the magnetic field. Cryptochrome, which exists in the retina and in different regions of the brain, has been confirmed to be able to perceive magnetic fields and convert magnetic fields to action potentials. Recently, iron particles (Fe_3O_4) believed to be functioning as magnets have been found in various parts of the brain, and are postulated as magnetic field receptors. Newly developed supersensitive magnetic sensors made of iron magnets that can sense the brain's magnetic field have suggested the idea that these Fe_3O_4 particles or magnets may be capable of perceiving the brain's extremely weak magnetic field. The present study suggests that it is possible the

extremely weak magnetic field in one animal's brain to transmit vital and accurate information to another animal's brain.

<https://www.mdpi.com/1422-0067/22/7/3772>

Manmade Electromagnetic Fields and Oxidative Stress—Biological Effects and Consequences for Health

Abstract

Concomitant with the ever-expanding use of electrical appliances and mobile communication systems, public and occupational exposure to electromagnetic fields (EMF) in the extremely-low-frequency and radiofrequency range has become a widely debated environmental risk factor for health. Radiofrequency (RF) EMF and extremely-low-frequency (ELF) MF have been classified as possibly carcinogenic to humans (Group 2B) by the International Agency for Research on Cancer (IARC). The production of reactive oxygen species (ROS), potentially leading to cellular or systemic oxidative stress, was frequently found to be influenced by EMF exposure in animals and cells. In this review, we summarize key experimental findings on oxidative stress related to EMF exposure from animal and cell studies of the last decade. The observations are discussed in the context of molecular mechanisms and functionalities relevant to health such as neurological function, genome stability, immune response, and reproduction. Most animal and many cell studies showed increased oxidative stress caused by RF-EMF and ELF-MF. In order to estimate the risk for human health by manmade exposure, experimental studies in humans and epidemiological studies need to be considered as well.

Radiofrequency electromagnetic radiation-induced behavioral changes and their possible basis

Abstract

The primary objective of mobile phone technology is to achieve communication with any person at any place and time. In the modern era, it is impossible to ignore the usefulness of mobile phone technology in cases of emergency as many lives have been saved. However, the biological effects they may have on humans and other animals have been largely ignored and not been evaluated comprehensively. One of the reasons for this is the speedy uncontrollable growth of this technology which has surpassed our researching ability. Initiated with the first generation, the mobile telephony currently reaches to its fifth generation without being screened extensively for any biological effects that they may have on humans or on other animals. Mounting evidences suggest possible non-thermal biological effects of radiofrequency electromagnetic radiation (RF-EMR) on brain and behavior. Behavioral studies have particularly concentrated on the effects of RF-EMR on learning, memory, anxiety, and locomotion. The literature analysis on behavioral effects of RF-EMR demonstrates complex picture with conflicting observations. Nonetheless, numerous reports suggest a possible behavioral effect of RF-EMR. The scientific findings about this issue are presented in the current review. The possible neural and molecular mechanisms for the behavioral effects have been proposed in the light of available evidences from the literature.

