

Special Issue

Microwave Radiometry and Quantum Computing for Brain Diagnostics

Message from the Guest Editor

Microwave technology, foundational in quantum computing, utilizes precise control of quantum states to manage quantum bits (qubits). This Special Issue explores the potential of leveraging these principles in the field of neuroscience, where such technology could enable novel approaches to imaging, diagnosing, and treating neurological disorders. By comparing the techniques used in quantum computing with potential applications in neural circuit manipulation and brain activity monitoring, this Special Issue explores both the promising synergies and the significant challenges at the intersection of these fields. This interdisciplinary exploration not only underscores the transformative potential of microwave technology in neuroscience but also addresses the ethical considerations and technological hurdles that accompany the integration of advanced quantum mechanics into biomedical contexts. The convergence of microwave technology with neural science opens up a pathway for breakthroughs in understanding and treating complex brain disorders, advocating for a cautious yet optimistic approach towards future research and application.

Guest Editor

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