

## Special Issue

# Intelligent RF Microsystems for Next-Generation Communication and Sensing

### Message from the Guest Editors

The convergence of artificial intelligence (AI) with electromagnetics is fundamentally transforming the landscape of radio-frequency (RF) technologies. This synergy is giving rise to a new class of intelligent RF microsystems capable of self-optimization, cognitive sensing, and adaptive communication. These advancements are pivotal for next-generation applications, from ultra-efficient 6G networks and the Internet of Things (IoT) to personalized healthcare monitoring and implantable biomedical devices. By integrating AI algorithms directly into microsystems, we can overcome traditional limitations in performance, power consumption, and form factor. This Special Issue showcases cutting-edge research at the intersection of AI, micro/nano fabrication, and RF engineering. We invite original research papers, short communications, and reviews exploring novel methodologies, key developments, and innovative applications of intelligent RF microsystems. Topics of interest include, but are not limited to, AI-accelerated design of RF components, neuromorphic RF circuits, smart antennas, intelligent sensor nodes, and their applications in communication, sensing, and healthcare.

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