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High-Frequency Electromagnetic Induction Sensors and Their Applications

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Deadline for manuscript submissions:

closed (30 June 2022)

Message from the Guest Editors

Electromagnetic induction (EMI) sensors have long been established. In high-frequency electromagnetic induction sensing (HFEMIS), the wavelength is still large and usual quasistationary approximation is valid. Thus, the benefits of induction sensing are still maintained, but the sensitivity to very small objects and low conductive materials is significantly increased. However, technical challenges are manifold when compared to a low frequency range.

The goal of this Special Issue is to invite high-quality, state-of-the-art research papers that deal with all aspects of the modelling and design of HFEMIS systems and their application.

Electromagnetic modelling of HFEMI sensors

Electronic system design including coil configurations, shielding effectiveness, low power operation, portability, processing power

Model-based measurement and inverse problem techniques

Applications in geophysical exploration

Applications in humanitarian demining, and detection of unexploded ordnances and improvised explosive devices

Applications in proximal soil sensing

Applications in nondestructive testing and evaluation Applications in industrial process and biomedical tomography













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Message from the Editor-in-Chief

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