

CALL FOR PAPERS
IEEE Sensors Journal Special issue on

Magnetic Sensing Systems for Biomedical Application

Miniaturising magnetic based sensing systems for biological and chemical assays offer a prospect to modernize the bulky laboratory instruments into easy-to-use lab-on-a-chip platforms, bringing down the cost, size, and sample use by orders of magnitude. From recent growth in developing magnetic sensors and systems for portable, implantable and wearable technologies, it is clear that the topic has drawn significant attention, signalling the promising interest and need for a focused platform, which compiles knowledge on all relevant aspects of magnetic biosensing including the device, circuit and system level. Moreover, the state-of-the-art research to be presented in this Special Issue will provide a window for interested readers to see the great potential of the latest approaches towards magnetic sensors and systems.

The topics of interest include, but are not limited to:

- Portable, wearable, implantable magnetic sensing technologies for biomedical systems
- Design techniques for magnetic biomolecular and bioelectronics circuits and sensors
- Spintronics, spin-valve, magnetic tunnel junction, magnetic nanoparticles, ferrofluid, Hall and magnetoresistive (AMR, GMR and TMR) sensors for biomedical applications
- Magnetic diagnostics and magnetic resonance imaging (MRI)
- Magnetically based Lab-on-chip and biosensor circuits
- Innovative magnetic sensors for medical instrumentation
- Readout circuits for magnetic biosensing platforms
- Nuclear magnetic resonance (NMR) and electron spin resonance (ESR) miniaturizing systems
- Emerging magnetic material and devices in printable, flexible and stretchable bioelectronics
- Magnetomyography (MMG), magnetocardiography (MCG) and magnetoencephalography (MEG)
- Magneto-optical and magneto-plasmonic sensors for biomedical applications
- Magnetic biosensors modelling and simulation

Submission Guidelines

The main criteria for publication in the IEEE Sensors Journal are the quality of the manuscript and whether the reported novelty is in the area of sensors and sensor systems. Solicited and invited papers shall undergo the standard IEEE Sensors Journal peer review process. All manuscripts must be submitted online, via the IEEE Manuscript Central™, see <http://mc.manuscriptcentral.com/sensors>. When submitting, please indicate in the “Manuscript Type” roll-down menu, and also by e-mail to Ms. Lauren Young (l.young@ieee.org), that the paper is intended for the “Magnetic Sensing Systems for Biomedical Application” Special Issue. Authors are particularly encouraged to suggest names of qualified potential reviewers for their manuscripts in the space provided for these recommendations in Manuscript Central. For manuscript preparation and submission, please follow the guidelines at: <http://ieee-sensors.org/sensors-journal/>

Schedule

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| • Submissions deadline | January 31, 2018 |
| • Author notifications | April 30, 2018 |
| • Final manuscripts due | June 30, 2018 |
| • Publication | September 30, 2018 |

Guest Editors

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