



Neural Plasticity

Special Issue on  
**Neurostimulation**

# CALL FOR PAPERS

Neurostimulation encompasses a broad range of invasive and noninvasive techniques that aim for enduring alterations of neuronal activity or excitability. Applications of neurostimulation in medical research and practice build on growing evidence indicating that i) the human neural system can undergo neuroplastic changes that may be associated with altered functional outcomes or symptoms and pathological conditions; ii) various neurostimulation approaches can induce neuroplasticity in the means of enduring alterations of neural activity and connectivity; iii) neurostimulation can be used to attempt a reversal or prevention of maladaptive neuroplastic changes; and iv) facilitation of adaptive neuroplastic changes and reversal of maladaptive ones have been associated with functional improvement.

The field of neurostimulation has enormously expanded over the past decades in the means of i) understanding neural changes in the central nervous system that represent functional targets for neurostimulation, ii) underlying neurophysiological mechanisms, and iii) available evidence supporting clinical applications of various methods of neurostimulation. Hand-in-hand with growing knowledge, new open questions and challenges have emerged, facilitating technological progress, translational research, and clinical applications in this exciting biomedical field.

We invite investigators to contribute high-quality original research reports as well as review articles addressing recent advances, open questions, and future directions in invasive and noninvasive neurostimulation approaches in clinical research and practice.

Potential topics include, but are not limited to:

- ▶ Updates of specific approaches of invasive and noninvasive neurostimulation, such as motor cortex stimulation, deep brain stimulation, spinal cord stimulation, and transcranial electrical and magnetic stimulation
- ▶ Insight into underlying neurophysiological mechanisms
- ▶ Advances and challenges pertaining to dose determination, stimulation protocols, and patient selection
- ▶ The role of neuroimaging, EEG, and other methods in target-guiding and outcome assessment
- ▶ Technological and methodological advances, challenges, and open questions in outcome data collection and evaluation
- ▶ Modeling and prognostication
- ▶ Update on safety and ethics of neurostimulation

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/np/neuro/>.

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## **First Round of Reviews**

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