Special Issue

Brain–Computer Interfaces: Development, Applications, and Challenges

Message from the Guest Editor

Brain–Computer Interface (BCI) technology is a rapidly evolving multidisciplinary research area with a wide range of applications in medicine, neurorehabilitation, robotics, gaming, assistive technologies, and human–machine interaction. This Special Issue aims to bring together recent developments in BCI systems and explore their integration into practical, real-world solutions. We invite high-quality original research articles, reviews, and case studies addressing the design, development, and application of BCIs. Particular attention will be given to innovative methods for signal acquisition, processing, classification, and the interpretation of brain activity, as well as their use in real-time control systems. Submissions are especially encouraged in the following application domains:

- Brain control of robotic limbs, avatars, exoskeletons, and assistive devices;
- Detection, prediction, and prevention of neurological and psychiatric disorders;
- Assessment and modulation of psychophysiological states (e.g., fatigue, stress, and attention);
- Monitoring of cognitive functions in both healthy and clinical populations.

Guest Editor

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Deadline for manuscript submissions

closed (30 December 2025)

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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