

Special Issue

Advancements and Future Directions in Real-Time fMRI Neurofeedback Research

Message from the Guest Editors

Clinical applications of rtfMRI-nf have shown improved cognitive, emotional, and/or behavioral functioning in response to neurofeedback training. Although many advancements have been made in the rigor of rtfMRI-nf research, the following gaps remain: (1) Mechanisms of Action: The neural mechanisms underlying volitional control of brain activity, and subsequent brain-behavior linkages, remain unclear; (2) Long-Term Effects: There is limited evidence on the time course of neurofeedback learning; (3) Generalization of Results: There is insufficient evidence on whether neurofeedback leads to broad cognitive, emotional, or behavioral improvements across different contexts or individuals; (4) Sample Size and Replication: Larger. (5) Individual Differences: There is limited research on predictors of neurofeedback success

Original manuscripts and review papers addressing these knowledge gaps will likely advance basic science and clinical applications of rtfMRI-nf.

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Deadline for manuscript submissions

closed (31 October 2025)



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