

Special Issue

Recent Advances in Brain Lateralization

Message from the Guest Editors

Brain lateralization refers to the major involvement of one hemisphere of the brain in certain cognitive functions. With the advent of modern neuroscience methods, research showing that the two hemispheres are, in fact, closely linked and work together in complex ways. Moreover, lateralization in adult brains is not fixed and unchangeable and modulations or shifts of hemispheric lateralization can be triggered. One esoteric but intriguing question is the potential lateralization in the field of artificial intelligence (AI) and artificial neural networks. While AI offers only an approximate model of the brain, it may help to explain patterns of behavior observed with brain injuries and serve as a test bed for the degree to which hemispheric lateralization is malleable following simulated injury and model retraining. Thus, the focus of the current Special Issue is state-of-the-art research on human brain lateralization. Using modern neuroscience, artificial neural networks, and brain imaging methods, our aim is to revisit characteristics of brain lateralization, and its multiple roles in cognitive functions of both adult and pediatric populations.

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