



## Neural Mechanisms and Patterns of Auditory Processes and Their Influence on Cognition

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### Message from the Guest Editors

Auditory perception is the ability to receive and interpret information through audible frequency waves transmitted through the ears or technological devices. With respect to this, cochlear implants and hearing aids play a fundamental role. Moreover, other sensorialities could influence or even support auditory perception and processing, in particular with reference to multisensory integration. Studies of auditory perception and cognition have been considered important in various branches; this leads to implications for typical development, aging, and also clinical settings. On the one hand, the exploration of the relationship between auditory perception and cognition provides benefits for developing various signal-processing applications and automatic speech recognition. These technologies are being matured, but there is still room for improvement...Moreover, hearing loss has been identified as potentially being one of the modifiable risk factors for dementia and cognitive decline. Several hypotheses have been proposed to explain the potential relationship between auditory and cognitive impairment, but the evidence is not clear.





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