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Titolo	How and Why Does Spatial-Hearing Ability Differ among Listeners? What Is the Role of Learning and Multisensory Interactions?
Pubbl/distr/stampa	Frontiers Media SA, 2016
Descrizione fisica	1 online resource (253 p.)
Collana	Frontiers Research Topics
Disciplina	612.8/5
Soggetti	Neurosciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	Spatial-hearing ability has been found to vary widely across listeners. A survey of the existing auditory-space perception literature suggests that three main types of factors may account for this variability: - physical factors, e.g., acoustical characteristics related to sound-localization cues, - perceptual factors, e.g., sensory/cognitive processing, perceptual learning, multisensory interactions, - and methodological factors, e.g., differences in stimulus presentation methods across studies. However, the extent to which these-and perhaps other, still unidentified-factors actually contribute to the observed variability in spatial hearing across individuals with normal hearing or within special populations (e.g., hearing-impaired listeners) remains largely unknown. Likewise, the role of perceptual learning and multisensory interactions in the emergence of a multimodal but unified representation of "auditory space," is still an active topic of research. A better characterization and understanding of the determinants of inter-individual variability in spatial hearing, and of its relationship with perceptual learning and multisensory interactions, would have numerous benefits. In particular, it would enhance the design of rehabilitative devices and of human-machine interfaces involving auditory, or multimodal space perception, such as virtual auditory/multimodal displays in aeronautics, or navigational aids for the visually impaired. For this Research Topic, we have considered manuscripts that: - present new methods, or review existing methods,

for the study of inter-individual differences; - present new data (or review existing) data, concerning acoustical features relevant for explaining inter-individual differences in sound-localization performance; - present new (or review existing) psychophysical or neurophysiological findings concerning spatial hearing and/or auditory perceptual learning, and/or multisensory interactions in humans (normal or impaired, young or older listeners) or other species; - discuss the influence of inter-individual differences on the design and use of assistive listening devices (rehabilitation) or human-machine interfaces involving spatial hearing or multimodal perception of space (ergonomy).