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Automatic
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The Department of Automatic Control & Systems Engineering
is pleased to announce the following seminar:

A neuromagnetic study of human adaptability to an unusual auditory environment

Dr Atsushi Aoyama

Associate Professor,

Faculty of Environment and Information Studies,

Keio University, Japan

Wednesday, 03 June 2020 at 14:00

Via Google Meet

Host Academic: Dr Shuhei Miyashita, Lecturer in ACSE

Abstract

Human adaptability to a novel environment is one of the fundamental functions for humans to live in any situation. One effective tool for clarifying the mechanism of adaptability is an unusual sensory space that is artificially produced by apparatuses. Though adaptation to such space has been typically tested with vision, little has been examined about adaptation to an unusual auditory space. In this study, a left-right reversed stereophonic system was constructed using only wearable devices and participants were asked to wear it for about a month. Analysis of neuromagnetic brain activity for audiovisual stimulation showed that one-month exposure to the reversed audition causes recalibration of audiovisual spatial integration according to the new rule. It suggests that humans can adapt to a novel environment by updating the internal model of the integration.

Biography

Atsushi Aoyama is an associate professor at Faculty of Environment and Information Studies, Keio University, Japan. After receiving his PhD in fundamental science and technology at Keio University in 2006, he worked for Keio University as a research fellow of the Japan Society for the Promotion of Science, for Tokyo Denki University as an assistant professor, and for Keio University as a senior assistant professor. His specialty is measurement and analysis of neural information, currently targeting at clarifying the mechanism of multisensory integration.