明治大学先端数理科学インスティテュート

MMS現象数理カフェセミナー

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Intervention in Ant Transportation by Invisible Forces

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Abstract : In behavioral research, it is important to investigate how behavior changes when interventions or manipulations are introduced while engaged in an activity. However, depending on the method of intervention, subjects may be inadvertently stimulated, leading to unintended reactions. To address this, we developed an experimental setup using an airborne ultrasonic phased array (AUPA) to intervene with invisible forces. The AUPA is a device used in the field of haptics to provide tactile sensations; with its multiple ultrasonic transducers, it can apply pressure within a small area. Using this AUPA, we conducted experiments to simulate changes in the load of food being transported by ants.





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