The Origin of Tactile Feels

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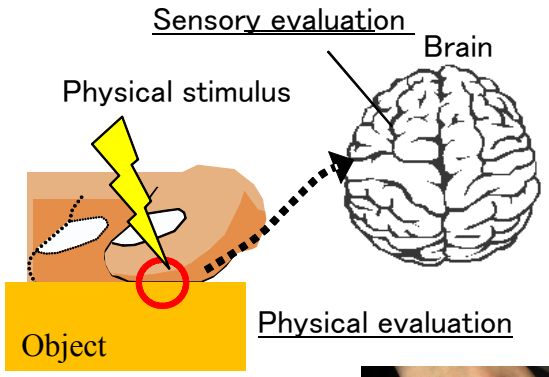
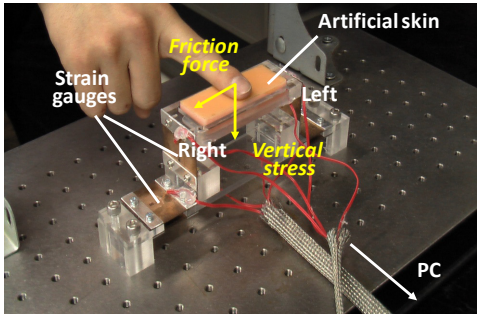


Fig. 1 Concept of the present study.

Fig. 2 A tactile evaluation system.



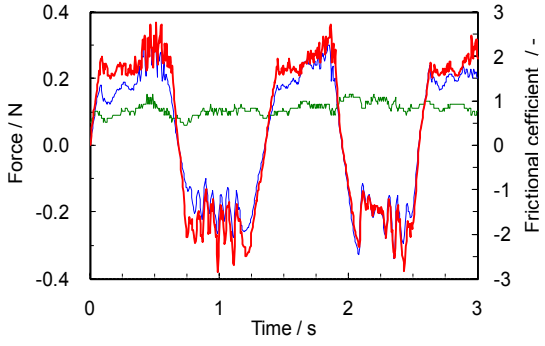


Fig. 3 Friction profile of water.
Red: friction coefficient
Blue: friction force
Green: vertical force

Content :

We can easily distinguish water from oils thorough our tactile sense, because of their characteristic tactile feel. We developed a tactile evaluation system that measures the friction and vertical forces using strain gauges on two plate springs. When subjects touch samples and evaluate their tactile texture by their fingertips, the friction forces are obtained simultaneously. If the physical origin of tactile feel is clarified, it will be useful in designing virtual reality systems as well as food, cosmetics, and textiles.

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