



Colloquium SFB 779 out of turn

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Mechanisms of tactile-motor integration

**Wednesday, October 2, 2019 at 3
p.m.**

**Leibniz Institute for Neurobiology
Brennekestr. 6, 39118 Magdeburg
Ebbinghaus Lecture Hall (ground floor)**

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Abstract:

Mechanisms of tactile-motor integration

Tactile localization is often regarded as a prime example of multisensory processing. Touch is sensed on the skin; but because our body parts constantly move around, a touch at a given skin location will be at different points in external space depending on body posture. It is a widely accepted idea that touch is automatically recoded from skin to external space, independent of whether or not this is currently required. This idea has usually been presumed to entail that a precise location in external space is derived by combining skin location and posture information. I will present experiments that cast doubt on this framework of tactile localization and suggest, instead, that information concerning touch is coded purely skin-based and that the modulatory role of external space in touch may depend on motor planning rather than on tactile-(multi-)sensory processing. These experiments call into question a rather long-standing set of experimental methods to investigate tactile localization. I will offer some ideas on how old and new findings can be reconciled in an extended framework of tactile-spatial processing that differentiates goal-directed actions and categorical decisions based on tactile input.