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SESSION 180 - More Than Just a "Motor": Recent Surprises From the Frontal Cortex - Christian L. Ebbesen

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November 4, 2018, 1:30 PM - 4:00 PM

SDCC 28A

DESCRIPTION

Motor and premotor cortices are crucial for motor control. While classic primate studies have emphasized a role for motor cortices in movement generation, recent rodent studies implicate motor cortical neurons in sensory integration, behavioral strategizing, working memory, and decision making — underrated higher-order functions of the motor cortex that deserve better attention and study. This minisymposium will review recent findings, which highlight that the motor cortex is much more than just a “motor.”

Session Type

Minisymposium

Learning Objective 1:

In addition to motor control, motor cortices play a major role in sensory integration, behavioral strategizing, working memory and decision making.

Learning Objective 2:

Rodents are well suited for the study higher-order functions of motor cortices with genetic and molecular tools currently unavailable in primates.

Learning Objective 3:

In contrast to sharply delineated motor structures in primates, rodent cortical boundaries appear more blurry and cortical areas overlap more.

9 Presentations

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| <div></div> | | |
| 1:30 PM - 4:00 PM | 180 - Chair C. L. Ebbesen; Skirball Inst. of Biomol. Med., New York University School of Medicine, New York, NY. | Add to Itinerary |
| 1:30 PM - 1:35 PM | 180.01 - Introduction | Add to Itinerary |
| 1:35 PM - 1:55 PM | 180.02 - The role of rat frontal orienting fields in decision commitment C. D. Kopec; Princeton Neuroscience Institute, Princeton University, Princeton, NJ. | Add to Itinerary |

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| 1:55 PM - 2:15 PM | <p>180.03 - Whisker movement suppression and socio-sensory signals in vibrissa motor cortex</p> <p>C. L. Ebbesen; Skirball Inst. of Biomol. Med., New York University School of Medicine, New York, NY.</p> | <input type="radio"/> Add to Itinerary |
| 2:15 PM - 2:35 PM | <p>180.04 - Neural substrates of action timing decisions</p> <p>M. Murakami; Champalimaud Research, University of Yamanashi, Chuo-shi, JAPAN.</p> | <input type="radio"/> Add to Itinerary |
| 2:35 PM - 2:55 PM | <p>180.05 - Nominally non-responsive frontal cortical cells encode behavioral variables via ensemble consensus-building</p> <p>M. Insanally; New York University, NY, NY.</p> | <input type="radio"/> Add to Itinerary |
| 2:55 PM - 3:15 PM | <p>180.06 - <i>In vivo</i> spiking dynamics and encoding of forelimb movements in rat M1/M2</p> <p>A. Saiki; Neurobiology, Northwestern University, Evanston, IL.</p> | <input type="radio"/> Add to Itinerary |
| 3:15 PM - 3:35 PM | <p>180.07 - Spatio-temporal receptive fields in the rodent frontal orienting field</p> <p>J. C. Erlich; Institute of Brain and Cognitive Science, NYU Shanghai, Shanghai, CHINA.</p> | <input type="radio"/> Add to Itinerary |
| 3:35 PM - 4:00 PM | <p>180.08 - Closing Remarks</p> | <input type="radio"/> Add to Itinerary |