The cerebellum and hierarchical motor control

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Abstract: I will review the general structure of the human motor system and the roles attributed to the different parts of the system that play a role in movement. I will then consider more specifically the role of the cerebellum in the generation of movements and that adaptation of movements to changing conditions. We will explore this role with reference to a number of different kinds of movement, including arm movements and eye movements, and discuss also how this capacity can be manipulated to facilitate improved motor learning.

Biography: Opher Donchin is currently an Associate Professor in the BME department of BGU. He received his M.S. and Ph.D degrees from the Interdisciplinary Center for Computational Neuroscience (ICNC) at Hebrew University, Jerusalem. Following that, he was a postdoctoral scholar at the motor systems research lab of Prof. Reza Shadmehr of the Biomedical Engineering Department of Johns Hopkins. His research interests are in the fields of movement and motor control, with a specific emphasis on developing a connection between models and control theoretic approaches and the behavioral and physiological reality of human and animal movement.