ELSC-ICNC Seminar: Avis Cohen

December 29, 2011

On the topic of: An Interdisciplinary Journey from Lamprey Spinal cord to Robots

ELSC & ICNC cordially invite you
to the lecture given by:

Avis Cohen
University of Maryland, College Park, Maryland

On the topic of:

"An Interdisciplinary Journey from Lamprey Spinal cord to Robots"

The lecture will be held on Thursday, December 29
at 17:00, at ELSC-ICNC: Silverman Bldg., 3rd Wing, 6th Floor, Edmond J. Safra Campus

Light refreshments at 16:45

Abstract:

I will review the path from the early studies of locomotion by the lamprey spinal cord that have led me to work with engineers and roboticists on issues of motor control in general. Early studies with dynamical systems mathematicians led to groundbreaking work on systems of coupled non-linear oscillators. These in turn led to further work on unraveling the details of the intersegmental coordinating system of the lamprey spinal cord, using the mathematics to make predictions that could then be tested to further refine or reject our hypotheses. Later, I was invited to become one of the organizers for the Telluride Workshop in Neuromorphic Engineering held annually. At these meetings, it became clear that principles gained from the lamprey spinal cord could be applied very productively to design and build smart engineered devices and robots. I will briefly overview some of the robotic designs that have come out of collaborations that sprang up from this work.
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