ELSC-ICNC Seminar: Alexander Borst

June 14, 2012

On the topic of: In Search of the Holy Grail of Fly Motion Vision

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

Alexander Borst
Director, Max Planck Institute of Neurobiology, Martinsried, Germany

On the topic of: "In Search of the Holy Grail of Fly Motion Vision"

The lecture will be held on Thursday, June 14, 2012 at 17:00, at ELSC-ICNC: Silverman Bldg., 3rd Wing, 6th Floor, Edmond J. Safra Campus

Light refreshments at 16:45

Abstract:

Detecting the direction of motion is one of the most important and basic tasks of any visual system. In the fly, this computation is described in amazing detail by a specific model, the so-called 'Reichardt Detector'. Here, the various processing steps underlying motion detection are specified in purely algorithmic terms, i.e. temporal filtering, multiplication, subtraction. However, neither the neurons performing these processing steps nor the underlying biophysical mechanism have been discovered despite intensive research for almost half a century. Finding the neural implementation of the Reichardt detector has therefore become the 'Holy Grail' of fly motion vision. I will present recent progress made along this way, largely owed to the combination of genetic and electrophysiological methods in the fruit fly Drosophila.
It is now widely accepted that deciphering the enigma of the brain is the most challenging intellectual endeavor of the 21st century, "The Century of the Brain" - Join our quest and become a friend of ELSC.

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