DISTINGUISHED LECTURE in BIOLOGICAL ENGINEERING

“Reverse Engineering Wiring Principles of the Fly Eye: How Flies Avoid Double, Double, Double Vision”

Wednesday – September 16, 2015 – 2:15 p.m.
EPFL – room SV1717a

Prof. Steven J. Altschuler

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host: Félix Naef

Abstract:

How do complex neural circuits assemble during development? The wiring of compound eyes to the brain of flies provides a fascinating model system for studying this question: each point in visual space is captured by multiple photoreceptors, each in a different ommatidium, which wire to the same synaptic unit in the brain.

We will describe recent studies that combine intravital imaging and data-driven computational modeling to identify three simple self-organizing principles that underlie this wiring process.

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