

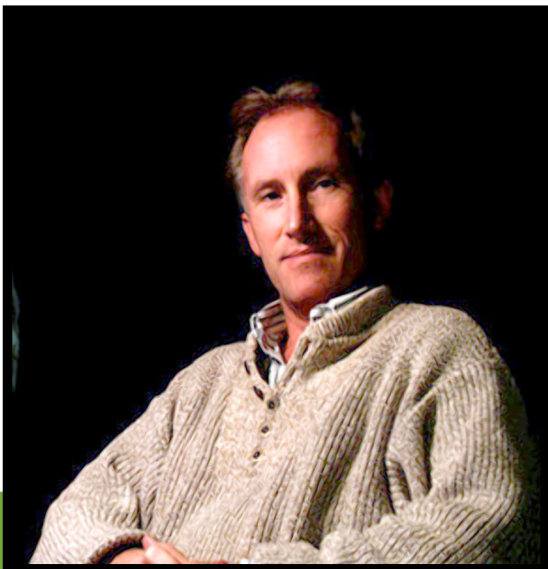
PUBLIC LECTURE

Mathematics Awareness Month

Unraveling the Knot of our Sensory Experience: How new mathematical tools are providing breakthroughs into how our nervous system senses the world

In the last 50 years, we have gained remarkable insights into the machinery of the brain. Recordings from single neurons in different individuals and different species have demonstrated what appear to be general rules for representing the natural environment. Is there a general theory of information processing that applies to biological systems? In this talk we will look at some of the new approaches to understanding neural processing by relating the mathematical structure of the natural world with the mapping of that structure by neural systems. It will be argued that not only are new mathematical tools (e.g., wavelets etc) providing insights but that new approaches to information processing can be gained through the understanding of biological systems.

**MAM
2007**



David Field

Cornell University Psychology

*Refreshments will be served at 3:45 PM
in the Mathematics Department lounge
(532 Malott Hall).*

Wednesday, April 18 @ 4:30 PM
Malott Hall, Bache Auditorium