

Stuart GEMAN

Vendredi 17 Juin 2005
Conférence Analyse Bayésienne

14h00 – 14h45

On the Implementation of Hierarchy in the Ventral Visual Pathway

Pattern recognition systems that are invariant to shape, pose, lighting and texture are never sufficiently selective; they suffer a high rate of "false alarms". How are biological vision systems both invariant and selective? Specifically, how are proper arrangements of sub-patterns distinguished from the chance arrangements that defeat selectivity in artificial systems? I will argue that the answer lies in the particular nonlinear dynamics that characterize complex and other invariant cell types, and I will support the argument with results from computational and neurophysiologic experiments.

Stuart GEMAN
Division of Applied Mathematics
Brown University
Providence, Rhode Island 02912
geman@dam.brown.edu

