**The "big picture"**

- Functional specialization and computational theory (two balancing principles in the field).
- Canonical computation (linear sum, threshold or sigmoid nonlinearity, adaptation).
- Perception is an inference that has evolved/developed to match the statistics of the environment (Bayesian estimation with priors that embody statistics of environment).

Vision is an unconscious inference

optic tract
LGN optic radiation
visual cortex
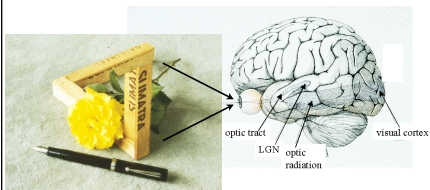
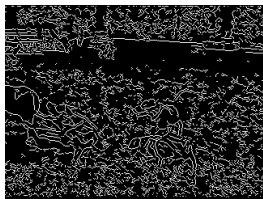**Visual inference: motion perception**
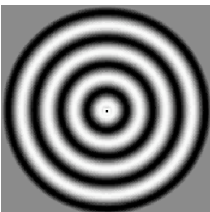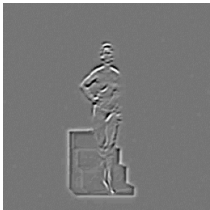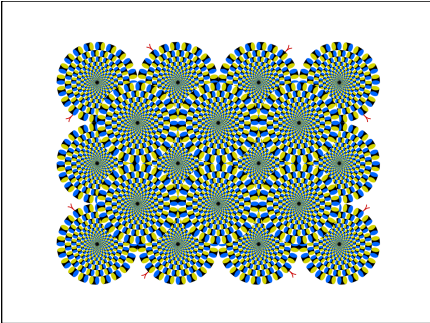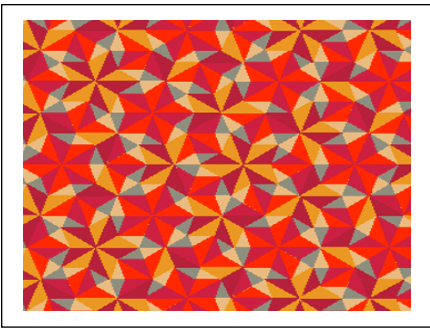
**Visual motion perception…
what is it good for?**

• Motion detection and segmentation: distinguishing moving objects from their background.

• Depth, navigation, and collision avoidance.
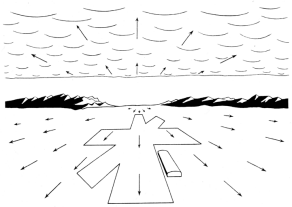
• Shape & recognition.

Motion segmentation

Depth and motion parallax

Optic flow

3D Shape from motion

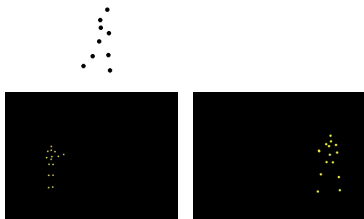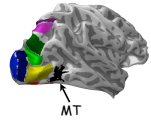**Recognition & biological motion**

Two guiding principles

Functional specialization

MT

Computational theory