



Machine cognition lab

Лаборатория машинного понимания

Ultimate goal: Machine Consciousness

Machine consciousness

- Key in machine cognition
- Key in neurobiologically inspired systems
- Cutting edge in AI



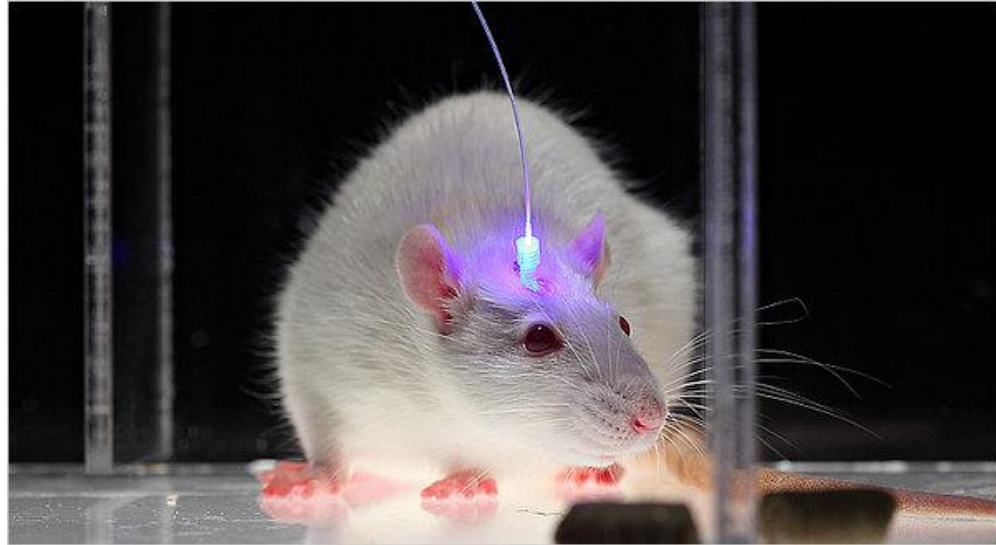
Domain

- Machine Emotions and motivation
- Computational neurophysiology
- Machine Common sense logic
- Memory
- Machine Consciousness
 - Awareness
 - Learning
 - Anticipation
 - Subjective experience
- Perception and understanding
- Creativity
- Dream/sleep, Intuition



Spikes

Joint projects with neurobiology lab: process big data of: cortical column of rat to find causality of the neurons spikes.



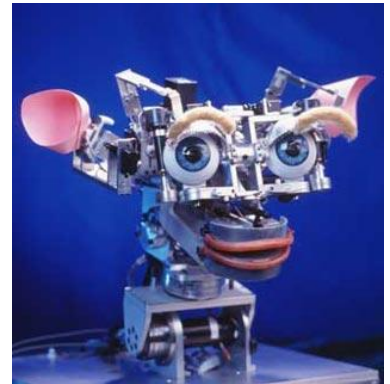
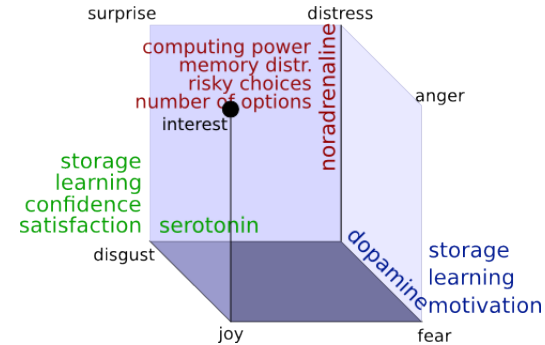
Helper

Joint project with
visualisation lab to
provide universal
and open source
tool for
neurobiological data
analysis.



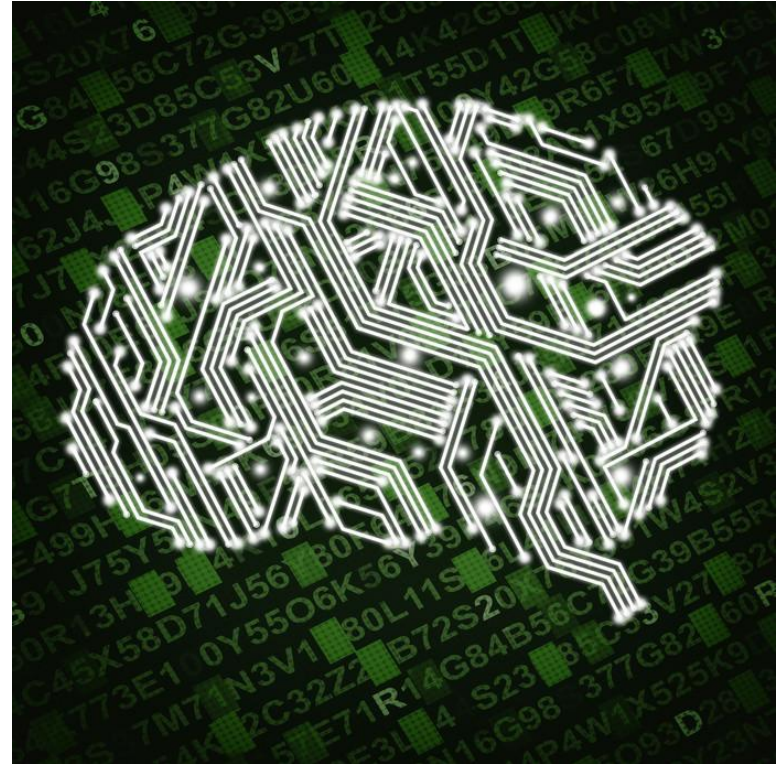
NEUCOGAR

Neuro cognitive architecture
Validation of the
neuropsychological model of
Lövheim: model of computational
emotions. Answering the
question: “How can we make
machine feel emotions?”



Calvin

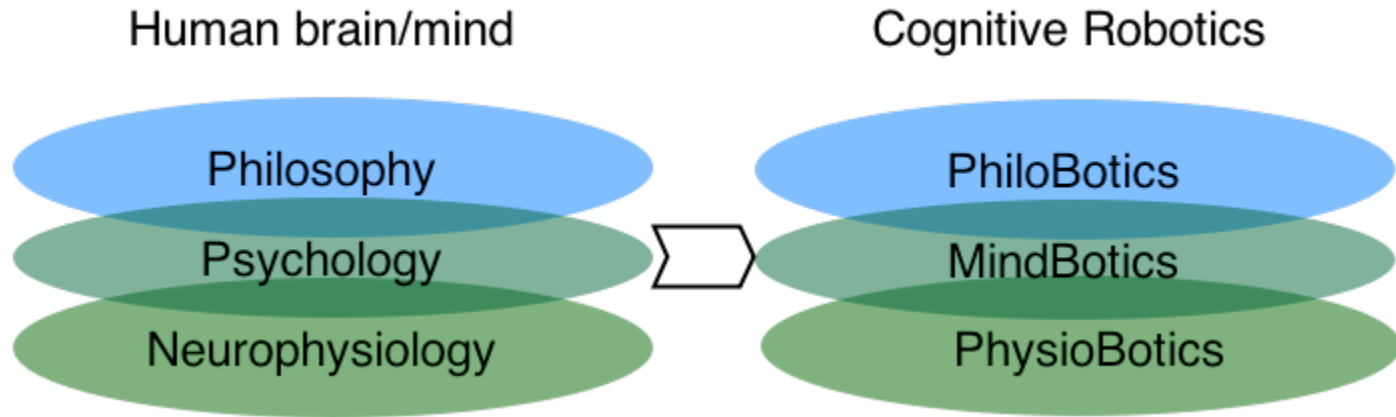
Joint project with ARS chair to create the new elemental basis for non-Von Neumann architecture of computers more effective and robust in real life environment.



Applications

- Robotics
 - Social Robotics
 - Real Time complex environment interaction
- Human behaviour simulation/validation
- Human computer interface
- Human masses simulation
- Social collaboration automation
- Computer games

New domains definitions



Thank you