ODSEK ZA KOMPLEKSNE SNOVI

Seminar

of the Department of Complex matter F7

Monday, 30.9.2019 at 13:00

Physics seminar room

Neuromorphic Computing

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Data acquisition (sensors) and manipulation (memory, computation, communications, data mining) in its many forms drives and fuels our civilization. Biology has evolved complex intelligent systems that can acquire and manipulate data in a very efficient and comprehensive fashion. On the other hand, scientific and technological developments have led to the invention of highly sophisticated data acquisition and manipulation machines, which have been continuously improving over the last 50 years. Since biological systems can, in many cases, outperform artificial systems a natural question arises. Can biology provide, some high level, guiding principles useful for the development of revolutionary, new concepts for the development of artificial, intelligent systems?

I will describe attempts to answer the US White House Nanotechnology-Inspired Grand Challenge for Future Technology: *"Create a new type of computer that can proactively interpret and learn from data, solve unfamiliar problems using what it has learned, and operate with the energy efficiency of the human brain".*

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The lecture will be held in English.

Cordially invited to attend.