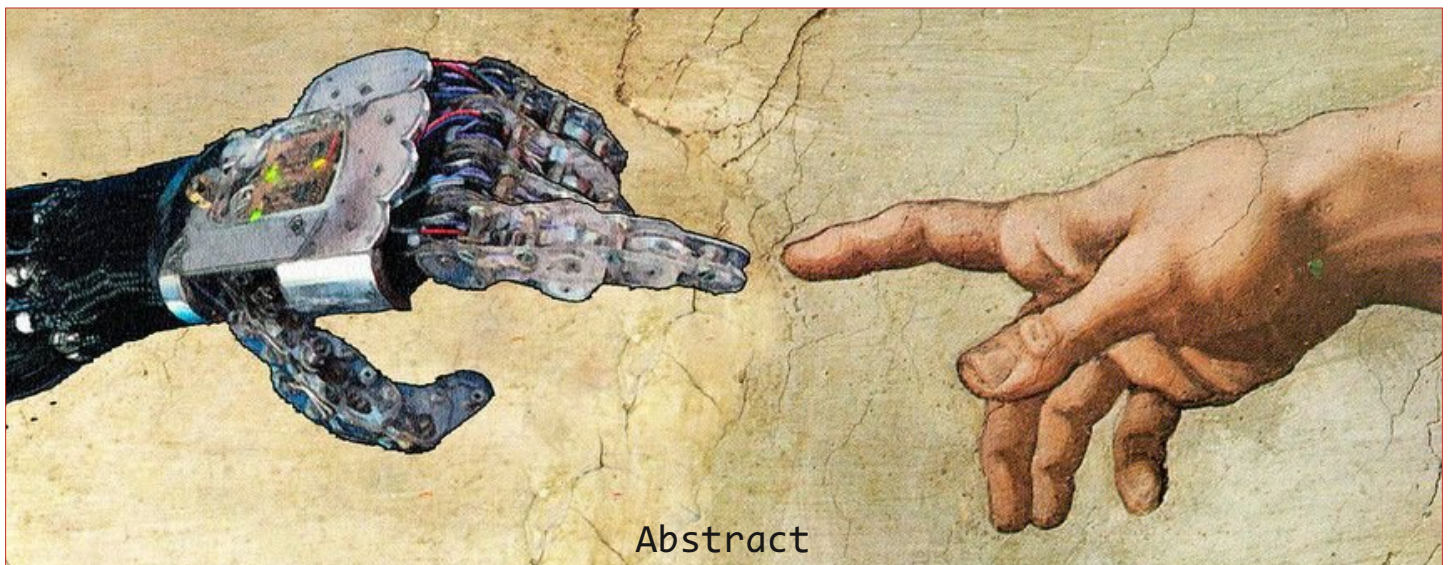## COLLOQUIO DI FISICA MATEMATICA

7 febbraio 2020 ore 15

Dipartimento di Matematica - aula Vitali

A rationale on artificial intelligence in shallow networks

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Abstract

In this talk I will paint a self-consistent scenario for information processing in shallow neural networks: I will present a minimal reference framework where what is learnt (e.g. via contrastive divergence on restricted Boltzmann machines) is then retrieved (e.g. via standard Hebbian mechanisms à la Hopfield). Then I will generalize this scheme by discussing three variations on theme: the tradeoff between dilution and multitasking capabilities, the tradeoff between storage and resolution and the mechanism of "sleeping and dreaming".