PULSUS
WWW.PULSUSCONFERENCE.COM
35 YEARS IN ASSESING THE IMPACT OF HEALTHCARE RESEARCH

Brunello Tirozzi
J Nanosci Nanomed, Volume 06

5th World Congress on

Nanoscience

March 25, 2022 | Webinar

Artificial Intelligence - Introduction to the Neural Networks

Brunello Tirozzi

Department of Physics, University of Rome, Italy

Artificial Intelligence is an applied science. The idea arose when the number of data to manage and analyze grew exponentially. At the same, the necessity for a quick answer to decision processes grew up. Artificial Intelligence is based on the well-known algorithm of neural networks. The combination of different neural networks often one included in a larger one is considered to be deep learning. In order to make the seminar self-contained, we will start from the very beginning by explaining the concept of neurons, input-output layer, learning algorithms, cost function, synaptic weights. The stochastic nature of the learning algorithms will be shown and some properties of the convergence of the algorithm will be explained with particular reference to the Monte-Carlo algorithm and Simulated Annealing, The concept of the capacity of a neural network will be explained. Artificial Intelligence neural networks have more complex applications including the recent one on tokamaks physics and controlled nuclear fusion. This last issue is very important because of the energetic problem which became central in the last times.

Biography

Brunello Tirozzi is a professor in the Department of Physics, University of Rome. His research interests are Elementary Particle Physics, Statistical Mechanics, Dynamical Systems, Disordered Systems Renormalization Group, Neural Networks, Neurobiology, Asymptotic methods, fluid dynamics, typhoons, tsunami, Plasma Physics. He has published over 200 research papers and participated in various International Conferences.

brunellotirozzi@gmail.com