
Journal **Concepts in Structural Biology & Bioinformatics** (JSBB)

ARTIFICIAL INTELLIGENCE & BIOLOGY ARTICLES

Communication abstract – for the I2A University Day 2023, 19 April 2023, University of Saida, Algeria

Biomimetic: nature's promise for Artificial Intelligence

ADJOUJ Réda^{*1}

¹ Evolutionary Engineering & Distributed Information System Laboratory, University Sidi Bel-Abbes, Algeria

***Correspondence:**

ADJOUJ Réda – Email: adjreda@yahoo.fr

Received 19 April. Accepted and published: 05 May 2023

Abstract

Biomimetic, or imitation of the living, consists of taking inspiration from natural solutions and transposing their principles and processes to human engineering, and more particularly to artificial intelligence. The approach aims to favor "choices" proven by nature, in order to develop applications and solutions in artificial intelligence in better harmony with efficiency and feasibility. Biomimetic can therefore be summed up in a few words as the transfer of biological models and mechanisms to technology and in particular to computer science and artificial intelligence. Here, two concrete examples are illustrated:

The first is how to design an IDS (intrusion detection system) for a computer network bio-inspired by the offensive defense of bees. The second is how to solve the multi-objective shortest path problem by simultaneously taking into account several objectives and by exploiting the solution of the natural marking of the living (to indicate the possession of an area).

Key words: Bio-inspired, AI, IDS, shortest path