Bio-Inspired Computing

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We will review some of the most developed evolutionary algorithm such as Genetic Algorithms, Particle Swarm Optimization, Ant Colony Optimization and we will compare them to some biological inspired computational methodologies such as Immune Algorithms. A class of algorithms, IMMALG, will be presented along with several experiments that show that bio-inspired computational methodologies are very competitive in as different fields as combinatorial optimization, multi-objective optimization and even, going back to biology, protein structure prediction problem.