

Creation and Optimization of Flow Technology Used in a GMO Laboratory

Dorottya Alice DOMOKOS

University of Agricultural Sciences and Veterinary Medicine,
3-5 Calea Manastur 3-5, 400372, Cluj-Napoca, Romania, dotyoka@yahoo.com

Abstract. Presentation techniques for modeling and optimization of processes such as neural networks, fuzzy techniques and genetic algorithms, and comparing modeling techniques and optimization processes to see which is the best method or methods you can use by itself or statutory must combine.

Keywords: neuronal networks, fuzzy technologys, genetic algorithms

ABSTRACT

An **artificial neural network (ANN)**, usually called "neural network" (NN), is a mathematical model or computational model that tries to simulate the structure and/or functional aspects of biological neural networks. It consists of an interconnected group of artificial neurons and processes information using a connectionist approach to computation. The utility of artificial neural network models lies in the fact that they can be used to infer a function from observations. This is particularly useful in applications where the complexity of the data or task makes the design of such a function by hand impractical.(Albeanu, 2005 and Dumitrache ei al., 1999).**Fuzzy techniques or matching** is a technique used in computer-assisted translation and some other information technology applications. It works with matches that may be less than 100% perfect when finding correspondences between segments of a text and entries in a database of previous translations. (Carstoiu, 1994). **The genetic algorithm (GA)** is a search technique used in computing to find exact or approximate solutions to optimization and search problems. Genetic algorithms are categorized as global search heuristics. Genetic algorithms are a particular class of evolutionary algorithms (EA) that use techniques inspired by evolutionary biology such as inheritance, mutation, selection, and crossover (also called recombination).(Dumitrache et al., 2000). Because during the projects that we can solve various problems arise such methods can be used either separate or cambinate this dependants of complexity of the problem.

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