

# Constructing features using a hybrid genetic algorithm

Ioannis G. Tsoulos\*

Department of Informatics and Telecommunications, University of  
Ioannina, Greece

## Abstract

A hybrid procedure that incorporates Grammatical Evolution and a weight decaying technique is proposed here for classification and regression problems. The procedure is divided in two main phases: in the first phase new features are created from the original ones and in second phase a hybrid genetic algorithm is used to train neural networks on the previously created features. The proposed procedure is applied on a wide range of classification and regression problems from the relevant literature and the results are reported and discussed.

**Keywords:** Genetic algorithm, machine learning, neural networks, Grammatical Evolution.

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\*Corresponding author. Email: itsoulos@uoi.gr