# Assignment 1: *Generation of fuzzy rules from data*

*11753 - Computational Intelligence. Master in Intelligent Systems. Academic Year 22/23*

The main goal of this assignment is to implement the algorithm for the generation of fuzzy rules from numerical data that is proposed in the following paper:

*Ken Nozaki, Hisao Ishibuchi, Hideo Tanaka. A simple but powerful heuristic method for generating fuzzy rules from numerical data. Fuzzy Sets and Systems 86 (1997) 251-270*

Specifically, the following activities are proposed:

**a)** Implement the algorithm proposed in Section 4.1 for the derivation of linguistic rules. This algorithm must also include the necessary steps proposed in Section 3.

**b)** Propose a problem that could be modelled by using a fuzzy rule-based system.

**c)** Apply the algorithm to the proposed problem.

**d)** Analyze the behaviour of the algorithm and the obtained results depending on the parameter values.

You can implement the algorithms in the language that you consider most appropriate. The algorithms must be accompanied by:

1. All source files.
2. Each implemented function must be briefly explained in the report.

***Logistics***: Groups of 3 or 4 people. Deadline: November 4th, 2022.