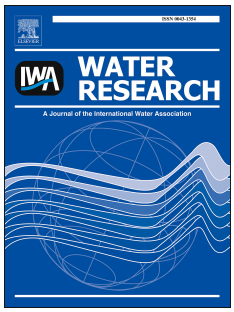
# Accepted Manuscript




Water quality assessment with emphasis in parameter optimisation using pattern recognition methods and genetic algorithm

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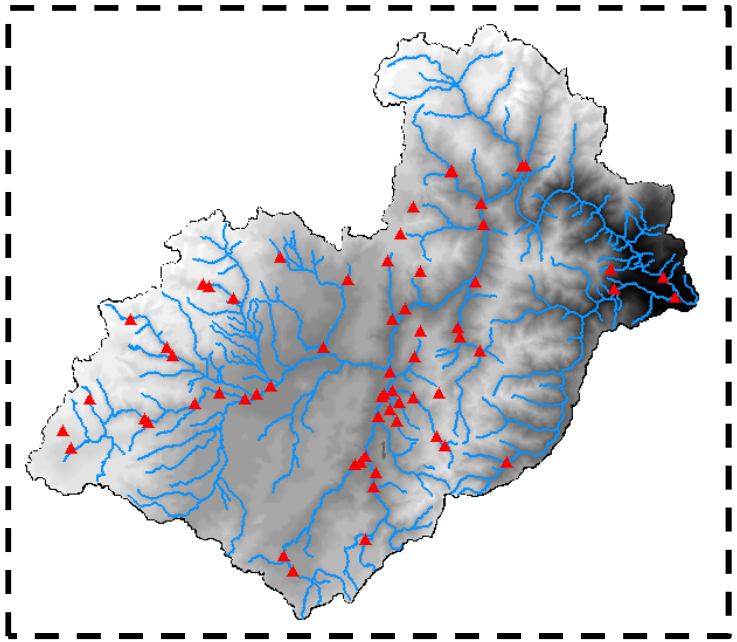
INPUT: Study site (Paute basin, Ecuador) + WQ monitoring network

study site (period 2008-2013)

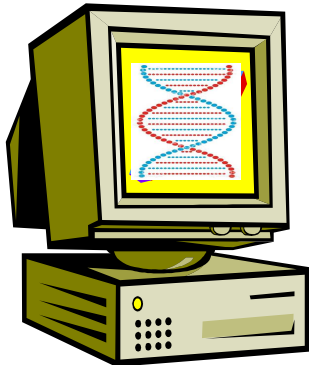


OUTPUT: Lar

$$\mathbf{X}=\begin{vmatrix} x_{11} & x_{12} \\ x_{21} & x_{22} \\ \dots & \dots \\ \dots & \dots \\ x_{n1} & \end{vmatrix}$$

INPUT: Large

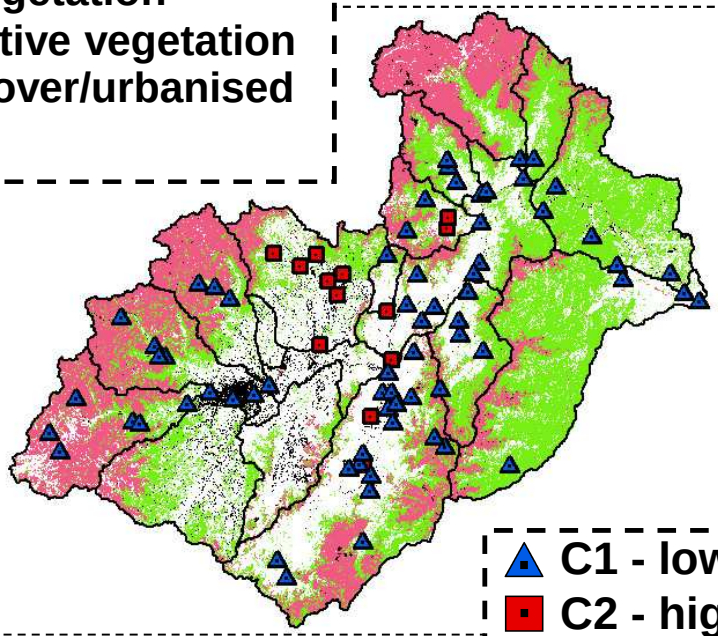
PROCESS: Data mining



- Pattern recognition
- Machine learning
- Genetic Algorithm

Q classes + key WQ parameters explaining WQ
i.e. reduction of parameter space dimension)

vegetation
native vegetation
cover/urbanised



C1 - low pollution
C2 - high pollution

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