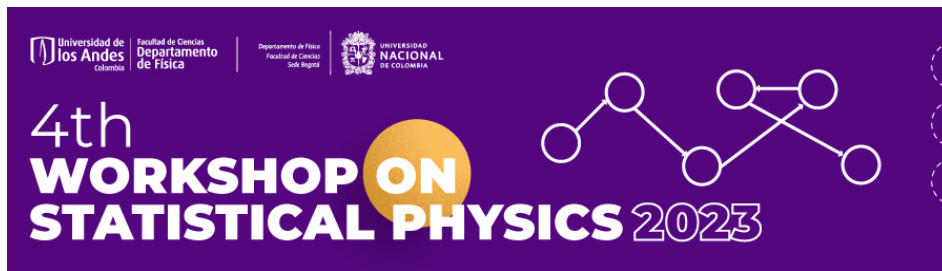


## 4th Workshop on Statistical Physics



Contribution ID: 31

Tipo: **Poster**

# Estudio de la secuencia de armado de un rompecabezas como un proceso de percolación

*jueves, 5 de octubre de 2023 17:40 (20 minutos)*

Jigsaw puzzles are a fascinating pastime that has given many hours of fun to people since its first appearance as an educational tool in geography in 1766. Multiple studies on human behavior, the way in which new knowledge is generated, cognitive styles, among others, have been carried out based on the process in which a puzzle is assembled. However, this work proposes a different approach in which the sequence used for assembling the puzzle is studied to determine whether it can be classified as a percolation process. Through the development of a web application, a collection of the sequences used by people to assemble the puzzles was made and with the tools of finite scaling, the critical density  $p_c = 0,73 \pm 0,04$  and the exponent  $1/\nu = 0,28 \pm 0,03$  and were obtained. These results are not consistent with the hypothesis that this process can be classified as invasion percolation, however, they are inconclusive due to the lack of data for large puzzles. As far as we know, this is the first work of this nature to study the process of jigsaw puzzle assembly as a percolation process.

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**Session Classification:** Poster session

**Track Classification:** Statistical Physics