



Instituto Universitario de Investigación  
**Biocomputación y Física  
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**Universidad Zaragoza**

## Santiago Lamata

He is a predoctoral student under the supervision of Jesús Gómez Gardeñes and David Soriano Paños since 2023. Since then, he joined BIFI to work on Complex Systems. Previously, he did his undergraduate degree in Physics and his master's degree in Physics and Physical Technologies at the University of Zaragoza.



## Researcher profile

Currently, he is an R1 researcher and participates in two research lines. The first one studies group interactions (higher-order), the influence and organization of groups, from the propagation of behaviors between social groups, to the synchronization of oscillating elements. The second line deals with coevolutionary dynamics. They investigate how pathogen mutation and competition between different viral strains affect the spread of epidemics, as well as the effectiveness of control measures.

## Importance of his research

Research on systems with group interactions extends the theoretical framework of complex systems beyond the study of pairwise interactions. Studying the influence on dynamics opens avenues towards possible applications in a set of complex systems in which collective behaviors and higher-order interactions are fundamental from societies to dynamics in the brain. On the other hand, it is also important to study the dynamics of viruses, as they pose a great risk to individual health and to the functioning of our society.

