



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

Jesús Gómez Gardeñes

He earned a degree in Physics from the University of Zaragoza in 2002, where he also completed his PhD and joined the BIFI Institute. He was a visiting researcher at Los Alamos National Laboratory and received awards from the Spanish Royal Society of Physics. After several postdoctoral stays, in 2008 he joined the Universidad Rey Juan Carlos (Madrid) as a Contract Professor. In 2011, he returned to the University of Zaragoza as a 'Ramón y Cajal' researcher and since 2023, he is Professor in the Department of Condensed Matter Physics.



Researcher profile

Since 2018, as an R4 researcher, he leads the GOTHAM lab group at the Institute of Biocomputation and Physics of Complex Systems of the University of Zaragoza. His research focuses on how complex systems generate emergent properties, using tools from Statistical and Nonlinear Physics. He analyses large databases to model and simulate collective behaviours, contributing to the understanding of these systems and their interdisciplinary application.

Importance of his research

His research impacts areas such as neuroscience, epidemiology, sociology and logistics, focusing on complex systems with multiple interactions. His work helps to describe, predict and optimise collective behaviours, applying to global challenges such as epidemics, climate change and transport networks. The tools developed contribute to mitigating crises and improving human cooperation, in collaboration with public and private entities.

