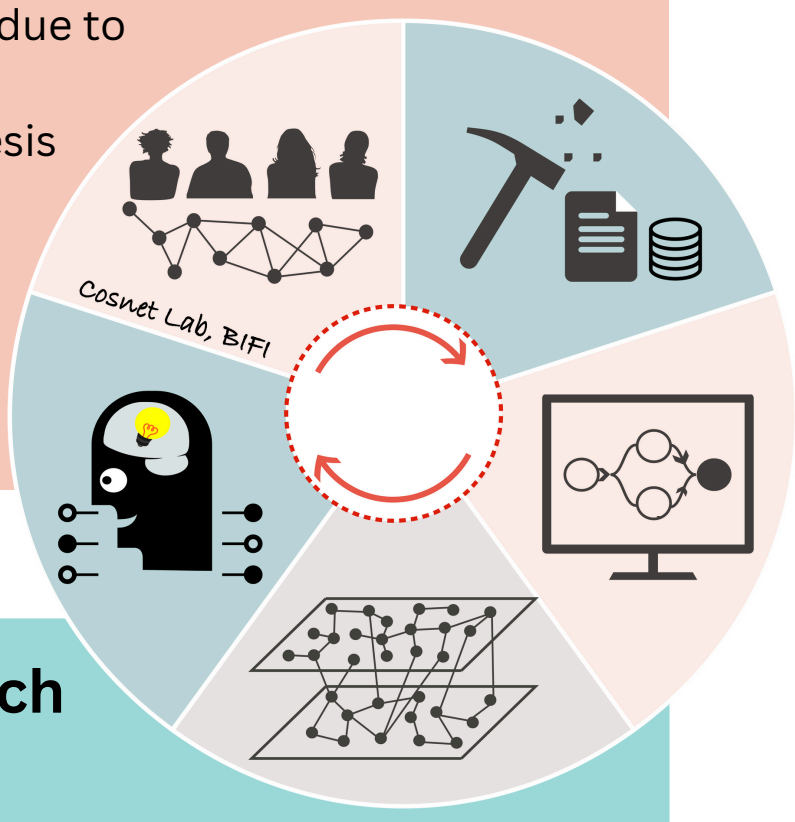
Instituto Universitario de Investigación
Biocomputación y Física de Sistemas Complejos
Universidad Zaragoza

Alberto Aleta

A physicist and computer engineer, he earned a doctorate in Physics. In 2020, he undertook a postdoctoral fellowship in Turin, specializing in complex systems applied to nutrition and collaborating with international experts. He returned to Zaragoza in 2023 under a Ramón y Cajal contract, joining the BIFI Institute's Cosnet group. His multidisciplinary background allows him to merge complex systems and computing, tackling scientific challenges from innovative and technological perspectives.

Researcher profile

Alberto investigates the influence of cyanobacteria on the growth of plants subjected to abiotic stresses caused by pesticides (lindane) or heavy metals (copper). Cyanobacteria are beneficial to plants under abiotic stress conditions, but whether this is due to the sequestration of stressors, their degradation or the synthesis of beneficial compounds such as phytohormones is still under investigation.



Why is his research important?

While the study of complex systems is often theoretical, its techniques apply to diverse practical problems. Our research on network contagion has notably enhanced epidemiological models, impacting public health beyond classical physics. By bridging fundamental research and practical applications, this multidisciplinary approach benefits both academia and industry. Beyond scientific results, Alberto prioritizes education, outreach, and university-business collaboration, actively fostering knowledge transfer to ensure that theoretical breakthroughs drive real-world innovation