



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

## Cyril Jean Charles Rommens

He focuses on the computational physics of complex systems, with particular interests in information theory and artificial intelligence. In 2024, he commenced a PhD at BIFI in Zaragoza under the supervision of Prof. Yamir Moreno in the European network BeyondTheEdge. His research analyses the influence of higher-order interactions on complex dynamic behaviours. Outside of work, he is a musician in the post-punk band Shaemless, practises boxing, and is passionate about cinema.



### Researcher profile

As an R1 PhD candidate, Cyril studies complexity through the lenses of dynamical systems and multivariate information theory. His research explores how multivariate information measures capture high-order structures by analyzing the dynamics of coupled oscillators on hypergraphs. Cyril is particularly interested in how these frameworks reveal hidden dependencies in complex networked systems.

### Why is his research important?

Gaining knowledge on these topics will enable us to better understand and study the micro- and macroscopic behaviours of complex systems. One of his main interests lies in studying how information is processed and stored in biological and artificial intelligence systems. Nevertheless, an understanding of these techniques is also valuable in many other areas, such as evolutionary processes in theoretical biology.

