Fluid Mechanics Group Jaén (TEP-235)

Coordinator: Jesús Carlos Martínez Bazán (cmbazan [arroba] ujaen [punto] es)

Image banner on the Fluid Mechanics Group Jaén research group.

The “Fluid Mechanics Group Jaén” comprises a multidisciplinary team of engineers and doctors with extensive experience in different Fluid Mechanics techniques, including theoretical aspects, experimental techniques and numerical simulations. The group also works with collaborators of recognized prestige from other universities, both Spanish and foreign. The research lines undertaken are focused primarily on multiphase flows, such as the processes of bubble generation and dynamic or the stability of fluid jets and the formation of drops. We also work on the stability and control of wakes of blunt bodies with application to the aerodynamic of terrestrial vehicles and civil aerodynamics, fluid-structure interaction and vibrations induced by vortices, the study of biological flows and the dynamic of fires in large-size chambers. In performing our work, we have advanced experimental and supercomputer facilities in place.

Research lines:

- Study of the mechanisms of drop and bubble formation, and devices for generating microdrops and microbubbles.
- Study of the stability and control mechanisms of fluid jets and wakes.
- Aerodynamic improvement of heavy vehicles.
- Fluid-structure interaction and vibrations induced by vortices.
- Biological flows.
- Dynamic of fires in large compartments.
- Two-phase turbulent flows.
- Characterization of plastics injection.
- Irrigation, olive grove, water quality, rationalization studies.

For more information please visit the following link.