Daniel Mira is the Head of the Propulsion Technologies Group (PTG) from the Computing Applications for Science and Engineering (CASE) Department of the Barcelona Supercomputing Center (BSC). Dr Mira's research is focused on the generation of advanced simulation software to conduct high-level research in propulsion and power applications. The PTG Team is composed by 12 researchers working in all disciplines involved in high-fidelity simulations of aerothermal systems, from physical modelling and numerical methods to High-Performance Computing (HPC) algorithms and data-driven methods. The key activities of the group are focused on the development on hydrogen-based technologies for aircraft propulsion including disruptive concepts based on dual-fuel and sustainable aviation fuels (SAF). These activities are conducted as part of several National (AHEAD, 2021-24 PID2020-118387RB-C31; ORION, 2021-23 PDC2021-121066-C22), aircraft emissions in the Clean Sky JU ESTiMatE project coordinated by BSC, and HPC-based methodologies for high-fidelity combustion simulations in the Center of Excellence in Combustion (CoEC), also coordinated by BSC. The PTG Team is well-integrated in the international ecosystem of aircraft propulsion with collaborations from representative research centers and universities (Institute of Combustion Technology at DLR Stuttgart, CERFACS, CORIA, TU Damstardt, University of Cambridge, or ETH Zurich) and aeroengine manufacturers like Rolls-Royce, Safran Aircraft Engines and GE Aviation.