

INVITATION TO A GUEST LECTURE



Electrification of Aircraft Design

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Joby Aviation, Santa Cruz, CA, US

Date: Monday, 22.04.2024
Time: 15h00
Location: HS3, Hörsaaltrakt, JKU



Abstract:

Electric flight became viable with the advent of relatively lightweight batteries. Beyond unlocking ways to fly sustainably and emissions free, the technology of electric motors and the concept of distributed electric propulsion allowed for consideration of novel aircraft configurations. Such fundamental change in aircraft conceptual design is akin to the advent of the jet age. I will present the early evolution of electric aircraft from the perspective of a practising aerodynamicist operating in the early electric vertical take-off and landing aircraft era, in particular within the context of design and development of the Joby eVTOL vehicle. I will talk about the practical challenges involved and how the experience and knowledge from aerodynamic theory and methods can be applied to the novel ways in which such aircraft fly. I will provide a glimpse into where the methods for successful design of future vehicles of this kind need to be developed.

Bio:

Gregor Veble Mikić is head of Flight Research & Flight Physics at Joby Aviation. He obtained his Ph.D. in physics from the University of Ljubljana, Slovenia and was Associate Professor of Physics at the University of Nova Gorica. Before joining Joby, he was Head of Research at Pipistrel, where he led the design of the Panthera general aviation aircraft, and was responsible for the aerodynamics and performance of the battery powered Taurus G4, the aircraft that won the NASA Green Flight Challenge sponsored by Google competition in 2011. He worked on aerodynamic design of the Joby aircraft and its flight dynamics modeling.

Organisation: Dep. RF-Systems, JKU Linz, and Joby Austria

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