FS987 7 September 2023

A DCAMM seminar No. 767 will be presented by

**Professor Antonio Filippone
School of Engineering,
The University of Manchester, United Kingdom**

The title of the lecture is

**Single & Contra Rotating Propellers: A summary of Aerodynamics Aero-acoustic Models**

**Abstract:**

In recent years there has been a resurgence of interest in propeller systems because of their lower environmental impact (higher

efficiency), as well as the advent of electrically powered vehicles. This new interest has generated a plethora of new configurations

and spurred a development in sophisticated methods of analysis, design, and optimisation.

The seminar is divided in two parts: Single-rotation propellers and rotors, of which we present the basic aerodynamic models

(vortex methods, rotor-on-rotor interference, wake models), alongside new configurations such as unequal blade spacing, folding

propellers and tiltrotors. In the second part, we discuss contra-rotating propellers, basic aerodynamic and aero acoustic models,

and present parametric cases and novel designs, including locked-rotors, and propellers with vanes.

|  |
| --- |
| DATE: **Friday, 22 September 2023**TIME: **11:00 – 11:45**PLACE: **Building 414, Room 061E** DTU, Technical University of Denmark  |

Danish pastry, coffee and tea will be served 15 minutes before the seminar starts.

All interested persons are invited.

Niels Leergaard Pedersen