

DIGITAL TWINS AEROSPACE 4

TOR VERGATA

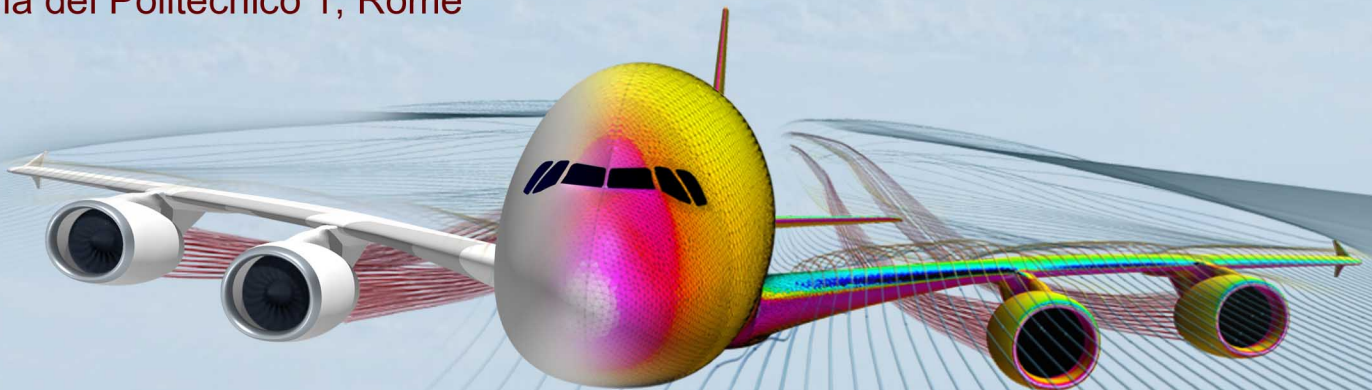


UNIVERSITÀ
DEGLI STUDI
DI ROMA

CAE modelling of future mobility

December 14, 2022, 9.00 - 14.00

University of Rome "Tor Vergata", aula Leonardo
via del Politecnico 1, Rome



Agenda

09.00 - Registration

09.20 - Marco E. Biancolini (University of Rome "Tor Vergata")

Welcome

09.30 - Antonio Maglione and Ubaldo Cella (Vere Novo Technologies s.r.l., University of Rome "Tor Vergata")

From the drawing board to the Digital Twin: 40 years in aerospace engineering

09.55 - Domenico Quagliarella (Department of Fluid Mechanics, Italian Aerospace Research Centre "CIRA")

A mixed intrusive and non-intrusive approximation technique for efficient robust aerodynamic shape design

10.20 - Mauro Minervino and Renato Tognaccini (CIRA, Department Industrial Engineering, Univ. Naples Federico II)

Induced drag and vorticity in viscous and inviscid flows

10.45 - Agostino De Marco and Vittorio Trifari (Department Industrial Engineering, Univ. Naples Federico II, SmartUp Engineering)

JPAD Modeller, a knowledge-based geometric pre-processor for aircraft digital twins in preliminary design workflows

11.10 - Coffee break

11.40 - Viviana Ferretti, Pietro Tadini, Alessio Gizzi and Simone Porzi (Combustors Engineering, Avio s.p.a.)

M10 cryogenic liquid rocket engine of VEGA-E upper stage

12.05 - Giorgio Travostino and Paolo D'Alesio (Piaggio Aerospace)

How the Digital Twin Defined the Wind Tunnel Arrangement for high lift systems: the Clean Sky 2 MOTHIF project

12.30 - Giovanni Lombardi, Yuri Evangelista and Marco Feroci (Istituto di Astrofisica e Planetologia Spaziali "IAPS INAF")

The role of high fidelity CAE multi-physics design at INAF

12.55 - Gianluca Maglione (NATO Centre for Maritime Research and Experimentation "CMRE")

Digital Twin for autonomous vehicles: a prototype application for NATO maritime exercise

13.20 - Closure session

Digital Twins are virtual representations of physical objects used to predict how the final product will operatively perform in its lifecycle. The workshop reviews the historical evolution of the numerical tools to face aerospace design problems and highlights the state of the art of design methodologies.

The participation is free. For information and to receive the link to follow the event remotely please contact Dr. Ubaldo Cella: ubaldo.cella@uniroma2.it

