



Seminar on

Aerospace Actuation Systems: from conceptual design to practical applications

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January 31st - February 1st, 2018

Scuola di Ingegneria dell'Università di Pisa - Aula Conferenze "Pacinotti"



Day 1. January 31st 2018, h 9-13

Requirements, technologies, design

- 1 – Needs, historical background, future perspectives
 - from signal-by-cable to signal-by-wire
 - from power-by-muscle to power-by-wire, via power-by-pipe
- 2 - Design methods and tools
 - Systems engineering process
 - Model-based / Simulation-aided design
 - Best practices in modelling and simulation

3 - Test facilities

4 - Interactive discussion



Day 2. February 1st 2018, h 9-13

Practical applications and case studies

- 1 - Comparative analysis at architectural level
 - Application to pylon conversion actuation for Boeing/Bell V-22 and Agusta/Westland AW609 tiltrotors
- 2 - Modelling and simulation
 - Hydraulic servo actuators
 - Electro-hydrostatic actuators
 - Electro-mechanical actuators
- 3 - Preliminary design of dynamic loading system of actuators
 - Application to the testing of thrust vector control actuators of European launchers

4 - Interactive discussion



Teachers, researchers/engineers interested in the field, and all students of Aerospace Engineering MSc Degree Course are kindly invited to participate.

Registration link: https://docs.google.com/forms/d/e/1FAIpQLSd5LVbTpQiAfXlbeDt8WIED07nya_oHdM1kvR0mFH1pHuFQ9A/viewform (limited number of attendance requests will be accepted, due to the limited capacity of the Conference Room); **Reference contact:** Gianpietro Di Rito (Dipartimento di Ingegneria Civile ed Industriale) g.dirito@dia.unipi.it