

## LIST OF COURSES 2022

AIDAA is pleased to announce the **list of courses for 2022** in the framework of the institutional activities for members organized by the Educational Series and Academy technical committee.

Courses will be **online on Webex**, and exact dates will be announced for each course via dedicated web pages on [www.aidaa.it](http://www.aidaa.it). **Twenty-three courses** are scheduled to date, but a few more could be added.

**Participation fees** are indicated below, and registration platforms will be available soon.

At the end of each course, **attendance certificates** will be sent to participants.

For further info: [academy@aidaa.it](mailto:academy@aidaa.it).

| Title                                                                                                                                        | Speakers                                                                                                                         | Duration (hours) | Dates (quarter) |
|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------|
| Challenges and opportunities for the aerospace frontier research offered by the ERC and the MSCA programme                                   | C. Colombo and F. Topputo – Politecnico di Milano<br>A. Giacomello – Università La Sapienza<br>A. Pagani – Politecnico di Torino | 4                | 1               |
| Economic assessment of future environmentally sustainable high-speed vehicles                                                                | R. Fusaro, D. Ferretto, and N. Viola – Politecnico di Torino                                                                     | 8                | 1               |
| Multiscale techniques for nonlinear analysis of composite structures                                                                         | I. Kaleel – NASA Glenn<br>M.H. Nagaraj – University of Massachusetts Lowell                                                      | 8                | 2               |
| Sound transmission control through optimized composite sandwich lattice panels                                                               | C. Orlando and S. Valvano – Università di Enna Kore                                                                              | 8                | 2               |
| Boosting the commercialisation of space activities                                                                                           | L. Del Monte, A. de Clercq, and C. Eldering - ESA                                                                                | 4                | 2               |
| Optical methods for spacecraft attitude and orbit determination                                                                              | D. Modenini – Università di Bologna                                                                                              | 6                | 2               |
| High-speed civil aircraft on-board systems integration                                                                                       | N. Viola, R. Fusaro, and D. Ferretto – Politecnico di Torino                                                                     | 8                | 2               |
| Aerothermodynamic and propulsive investigations to support pollutant and greenhouse gases emissions estimation of future high-speed vehicles | M. Marini, P. Roncioni, G. Saccone, and L. Cutrone - CIRA                                                                        | 4                | 2               |

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|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---------------------|--------------------|
| Tethers in space: deorbiting and power generation                                                   | G. Colombatti – Università di Padova                                                                               | 4                   | 3                  |
| Toward smart air mobility: a model-based design approach                                            | E.L. de Angelis – Università di Bologna                                                                            | 6                   | 3                  |
| Basics of corrosion and protection of metals for aerospace                                          | F. Di Franco and A. Zaffora – Università di Palermo                                                                | 10                  | 3                  |
| High-order accurate numerical methods in aeronautics at the Exascale                                | V. Gulizzi – Università di Palermo                                                                                 | 8                   | 3                  |
| Nonlinear spacecraft attitude control                                                               | F. Celani – Università La Sapienza                                                                                 | 4                   | 3                  |
| Aircraft impact dynamics                                                                            | M. Guida – Università di Napoli                                                                                    | 4                   | 4                  |
| An overview on space debris protection best practices                                               | L. Olivieri – Università di Padova<br>L. Barilaro - Malta College of Arts, Science and Technology                  | 4                   | 4                  |
| Numerical models for the solution of multifield problems                                            | E. Zappino – Politecnico di Torino                                                                                 | 8                   | 4                  |
| Innovative propulsion system in service of small satellites                                         | D. Pavarin and F. Barato - Università di Padova<br>E. Toson – T4i                                                  | 4                   | 4                  |
| Planetary probes entry and descent science                                                          | A. Aboudan – Università di Padova                                                                                  | 4                   | 4                  |
| Introduction to the design of LEO nanosatellite orbits for local coverage                           | C. Bettanini – Università di Padova                                                                                | 4                   | 4                  |
| Numerical modeling of hypersonic flows                                                              | F. Bonelli – Politecnico di Bari<br>L. Sciacovelli - DynFluid Laboratory of Arts & Métiers Institute of Technology | 8                   | 4                  |
| The space environment interaction engineering: physics, test technology and experimental validation | A. Delfini – Università La Sapienza                                                                                | 6                   | 4                  |
| Full flight simulator: testing and research platform                                                | A. Alaimo and A. Esposito – Università di Enna<br>Kore                                                             | 8                   | 4                  |
| HMI design in aeronautics                                                                           | S. Bagassi and F. De Crescenzo – Università di Bologna                                                             | 6                   | 4                  |

## LIST OF COURSE PACKAGES 2022

AIDAA courses are part of the institutional activities of the Association for its **members**. As detailed below, an online payment platform will be available soon to purchase courses packages. For further info: **academy@aidaa.it**.

### PACKAGES FOR ORGANIZATIONS (UNIVERSITIES, DEPARTMENTS, COMPANIES, ETC.)

For each package it is possible to select **one of the two** options.

| ID | Price (EUR) | Content and benefits *                                                   |
|----|-------------|--------------------------------------------------------------------------|
| E1 | 650         | A. 5 accesses to each course<br>or<br>B. 100 tokens to access courses    |
| E2 | 1200        | A. 10 accesses to each course<br>or<br>B. 200 tokens to access courses   |
| E3 | 5000        | A. 50 accesses to each course<br>or<br>B. 1000 tokens to access courses  |
| E4 | 8000        | A. 100 accesses to each course<br>or<br>B. 2000 tokens to access courses |

\*Each package includes 1-year AIDAA Membership for the organization.

### PACKAGES FOR INDIVIDUALS

| ID | Price ** (EUR) | Content and benefits * |
|----|----------------|------------------------|
| I1 | 40             | 2 tokens               |
| I2 | 80             | 6 tokens               |
| I3 | 160            | Access to all courses  |

\*Each package includes 1-year AIDAA Membership.

\*\* For AIDAA members the price of I2 and I3 is 40€ and 120€, respectively.