



Few numbers and info  
about DII

Students: 7000  
Academic Staff: 130  
Non-Ac. Staff: 60  
PhD Candidates: 60

Bachelor and Master  
degrees in:

- Aerospace Engineering
- Mechanical Engineering for Energy and Environment
- Mechanical Engineering for Design and Production
- Mechanical Engineering
- Management of Defense Aerospace Systems
- Naval Architecture and Marine Engineering

Doctoral degree in  
Industrial Engr.: the 37th  
cycle is just started.

International  
Agreements: 34

Double degrees: 3

Erasmus Mundus Joint  
Master's Degrees: 1

ERASMUS+ KA203: 1

Research Projects: 10

## News / Head

Our past Head, Prof. Rita Mastrullo, was appointed as Deputy Rector. In the new elections, Prof. Nicola Bianco was elected on last December 2020 as new Head, succeeding to Prof. Antonio Moccia (2013-2019) and Rita (2020-2021).

Best wishes to both Nicola and Rita: these years are really challenging!

## News / The 2020 Internal Research Challenge

The department launched in the second semester of 2020 an internal competition among the young researchers. The submitted research proposals, 7 in total, were firstly and anonymously reviewed by national and international experts not belonging to our university (3 for each proposal); all the proposals were reputed of high quality and this was very important for our department. After an internal consensus meeting, the winner was Dr. M. Chiatto with his research proposal: "PLASMA SYNTHETIC JET ACTUATORS TO CONTROL AIRCRAFT YAW MOMENT – SCARY"

## News / New European Bauhaus

The department intends to actively participate to this interesting initiative of the European community: Prof. C. Ponsiglione is our delegate to this aim (cristina.ponsiglione@unina.it).

New European Bauhaus  
beautiful | sustainable | together

## News / VQR

The whole department was involved in the submission of the research products for the national cyclic evaluation: it involves the years 2015-2019. The results will be one of the items that make up the overall funding that is received from the research and education ministry. The evaluations will be carried out in the second semester of 2021 and the outcomes will appear in spring 2022. A tremendous job of foremost importance.

## COVID-19 / Updates

In the middle of spring the teaching community came back in classroom even if most of the students are still connected by remote. Meanwhile, almost all our community at Federico II has been vaccinated against COVID19 with 1<sup>st</sup> or even 2<sup>nd</sup> dose too. A more relaxed summer seems to arrive this year.

## News / SHIPMARTECH

On 1st November 2020 a new project "Upgrading and Harmonization of Maritime Engineering Master's Level Courses - SHIPMARTECH" started within the ERASMUS+ Key Action 203 – Strategic Partnerships for higher education. Coordinator of SHIPMARTECH project is the Univ. of Tallinn and partners universities are Napoli Federico II, Zagreb and Aegean (MYTILINI). Erasmus+ KA2 projects are intended to result in the development, transfer and/or implementation of innovative practices at organizational, local, regional, national or European levels. Within this frame, SHIPMARTECH has the following objectives:

- Upgrading and harmonization of Master's-level programmes in Marine Engineering/ Naval Architecture through the cooperation of four partner universities.
- Enhancement the quality of curricula.
- Enhancement the quality of courses via a more sophisticated and creative application of digital resources in blended and online teaching.
- Increased internationalization of students and lecturers.

The project will last 34 months and considers upgrading and harmonization of didactic material for 20 courses of Naval Architecture and Marine Engineering and an intensive pilot courses event. Interested lecturers may contact UNINA coordinator prof. E. Begovic (ermina.begovic@unina.it).



The usage of the “suspended coffee” started during the Second World War, when, in very hard times, people used to pay two cups of coffee: one for themselves and the other for someone who couldn’t afford it. To the question: “Would you like a cup of coffee, sir?” people used to answer with joy and happiness, also asking themselves when entered for a cup of coffee to give back. It is for this reason that nowadays this tradition has spread, not only in Naples, but also in the rest of Italy and of the world. In 2010, Gambinus café restored this act of kindness, in order to reintroduce one of the most important customs of the Partenopean culture.

The tradition of the “suspended coffee”, then, represents the humanity, the amazing feeling of love, comprehension, compassion, kindness and all the positive feelings that are part of this city and that we mustn’t forget.

*When someone is happy in Naples, instead of paying a cup of coffee for himself, he just pays another one for someone else; it’s like offering a cup of coffee to the rest of the world.”*

LUCIANO DE CRESCENZO

(source: Visitnaples.eu)

## T-TeC / Telespazio Technology Contest

The 2020 edition of the #T-TeC (Telespazio Technology Contest) saw the participation of 50 students, doctoral students and researchers from 32 departments of 20 universities in 15 European cities, who challenged one another with innovative ideas and solutions in the space and aeronautical field. The competition was divided into two categories:

- Light / integration of existing technologies in order to create new services; and
- Photon / development of new technologies.

In the first category, the team from our University, won the prize of 10000€ with the “MATES - Mars Telecommunications System” project, a telecommunications system for future robotic and crewed missions to Mars. The project was developed within the Space Mission Design course under the supervision of Prof. A. Renga and Prof. M. Grassi. This is the winning team: R. Basile (Team Leader), L. Andolfi, V. Bottino, F. Calandro, G. Capone, C. Casino, M. Cinque, C. Di Costanzo, A. Gallucci, A. Gigantino, P. Guida, F. Iavicoli, F. M. Riboli and C. Vela. Few words with the Team Leader, Riccardo Basile:



**Could you quantify the required efforts?** I would say that the first phases of the project, which were also the first experiences of smart working due to the pandemic, have been the most challenging in terms of difficulty even if this wasn’t the time when we produced the most part of the technical results we included in the final report. I find it difficult to quantify the effort: I’ll try by saying that the amount of work required for me has been a bit more in terms of sheer hours per day with respect to the typical individual exam, because of the need to follow the progress of every group in the team, especially when close to a deadline. When it came to preparing for the T-TeC, most of the work was basically already done. What we did to get ready for the presentation to give to the judging commission was to identify and highlight the most competitive aspects of our system based on the criteria Telespazio would evaluate.

**How was formed the team?** The team was formed at the beginning of the Space Mission Design course and it was quite a straightforward process. When the class was asked to form two 14 people groups, a small group of us who knew each other had already formed. It all came down to assigning the other students based on the remaining places to fill. So, the group was formed of people who knew each other as well as of people who didn’t. The fact that nobody knew every person they would have worked with in the following months is a very good thing in my opinion. This made for a realistic experience that let us all come closer to the actual workplaces where many of us will end up starting their careers after graduation.

**Which kind of difficulties the team has found in the time you worked all together?** I can quite confidently say that the most difficult thing of the journey has been making sure that all the parts of the team worked well together and were properly coordinated between each other. This was made clear in a couple of occasions when some of us performed part of the design of a subsystem without having been updated about the development others had done about another subsystem. Of course, having MATES been designed with a concurrent engineering approach, it was a problem since it meant that the people who weren’t updated basically had to perform calculations (along with the considerations that derive from them) all over again. Creating efficient organizational processes that didn’t allow that kind of things to happen was the most challenging part.

**What is the lesson learnt thanks to this experience?** When working in a team, it is very important to make sure that its members know well what, how, and when to communicate with each other during the design process. In our case those two instances when some people weren’t updated on the others’ work were luckily not too impactful, but I can see this aspect becoming a major issue in some situations, if underestimated; especially when the team has very limited time at its disposal.

**Was the coffee a key element for the success?** What kind of Neapolitan student would I be if I told you that a healthy dose of coffee was not necessary for any kind of success? I strongly recommend espresso without sugar to enjoy it the most!

## Conferences and Workshops 2021-2022

- SAE 2020: Big Data for Small Area Estimation / 5-7 July 2021 / <https://sae2020.org>
- IEEE MetroAerospace 2021, 21-23 June 2021, Piazzale Tecchio, [www.metroaerospace.org](http://www.metroaerospace.org)
- ISSM 9th / International Symposium on Scale Modeling / 3-5 March 2022: <https://issm9.sciencesconf.org>