



Faculty of Industrial Engineering & Robotics
and
**Center for Research and Training in Innovative
Techniques of Applied Mathematics in
Engineering Traian Lalescu (CiTi)**

**organise in blended learning format between
27 June – 11 July, 2023,
the Summer School MATH4ENG
in the framework of the EELISA Community DIGITAL4PPP**

European Engineering Learning Innovation and Science Alliance (EELISA) is the first alliance of Higher Education Institutions (graduate engineering schools, technology universities and full-spectrum universities) from different countries in Europe meant to define and implement a common model of *European engineer* rooted in society.

EELISA Community DIGITAL4PeoplePlanetPerformance has been launched in the framework of the EELISA European Universities Alliance

<https://community.eelisa.eu/communities/digital4ppp-people-planet-performance/>

aiming to

- (1) research and share practices for improving students' skills and competencies to pro-actively adapt, learn, network and innovate in businesses' digital transformation context
- (2) processes digital transformation to better valorise people's capabilities, but focusing customer, too, in close respect to the planet and the community where the business operates to increase and sustain performance
- (3) build the camp for sharing practices, testing innovative solutions, and learning together with students – professors – professionals in companies – researchers to motivate students to become more enthusiastic and passionate in the research of engineering solutions in a Digital 4 People Planet Performance thinking

In this context, a 2 weeks summer school is organized aiming to improve applied mathematics skills of students and graduates in the field of engineering sciences.

Between June 27th and July 11th, 2022, courses and applications are presented, as follows (preliminary):

Day (changes may intervene into the interval)	Section (changes may intervene)	Professor (changes may intervene)
27.06.2023	Registration and organisation	
28.06.2023	Linear Programming in Optimization Problems	Ovidiu BLAJINA
29.06.2023	Introductory session to biomathematics (Descriptive statistics and exploratory data analysis, hypothesis testing, correlation methods, regression and clustering)	Angela Jimeno MARTIN
30.06.2023	Advanced Statistical Methods and Algorithms with Applications in Engineering and Medicine	Angela Jimeno MARTIN
03.07.2022	Cryptology: from theory to practice, an integrated view ; Innovative techniques for data security. Applied cryptography in information security	Emil SIMION
04.07.2022	Optimization of Transport and Assignment Activities	Ovidiu BLAJINA
05.07-09.07.2022	Projects and applications	All professors schedule tutorials and consultancy for students
11.07.2022	Projects presentation	Committee

All modules will be taught in English for 6 hours daily followed by individual and/or teamwork. Participants will receive a Certificate of Attendance including the Summer School details and the Erasmus + European project context (EELISA).

The modules target students, PhD students, specialits interested in mathematics applications in the fields of engineering and applied sciences. For bachelor students (2nd and 3rd year), attendance may be considered as part of the summer internship and graded accordingly (no math exam 😊). Projects and applications will be customised in line with the students level so as to acquire technical and transversal skills and promote teamwork. In total, the Summer School activity facilitates for students a practical stage of 90 hours of activity, respectively 4 ECTS.

You may apply for an Erasmus+ scholarship (70 EUR/day) for your stay in Bucharest to be provided by your home University. No fees for the summer school will be charged.

Registration is open at [MATH4ENG event](#)