August 5, 2021

Professor Abdulkader JOUKHADAR performed a visit to the University of West Attica in the period from 4 July 2021 up to and including 31 July 2021, in the context of the Erasmus+ Inter-Instructional Agreement between the University of West Attica (UNIWA) and the University of Aleppo (UAL). In the course of his visit, Prof. Joukhadar was occupied on a daily basis, carrying out teaching, development and scientific activities, including the following:

• delivering a series of lectures to-graduate (Masters) students;

• delivering presentations of UAL to UWA staff;

• holding informational meetings and planning further cooperation activities;

• leading technical workshops attended by UAL researchers and PhD candidates;

• performing joint research work with UWA staff;

• planning for new joint research and technological development projects. During his stay,

Prof. Joukhadar was provided with office facilities and secretarial support by the Department of Mechanical Engineering, and with a guest network, e-mail account and other IT services by the Network Operation Centre of UNIWA. A series of lectures in the context of the Master’s Programme **“New Technologies in Shipping and Transport”** of the Department of Industrial Design and Production Engineering have been delivered. Due to restrictions relating to the SARS-CoV-2 pandemic, the teaching sessions were carried out using remote (e-learning) facilities. Also, Prof. Joukhadar lectured and directed a series of workshops involving PhD candidates and associate and permanent UniWA staff.

Presentations and lectures addressed the following scientific topics

• Advanced control techniques for mobile robotics systems, including Unmanned Aerial Vehicles (UAVs)

• Advanced state estimation and parameter identification methods and algorithms, for nonlinear control systems (including UAVs)

• Meta-heuristic approaches and methods for controlling swarms and networking and cooperation between UAVs

• Intelligent techniques for collision avoidance and Simultaneous Localization and Mapping (SLAM).

During his stay, Prof. Joukhadar worked with UNIWA staff to facilitate the exchange of university staff and students between UAL and UNIWA. This cooperation covered several points, some of which are:

• Fine-tuning the practical requirements and organizational issues and processes for Erasmus+ exchanges (Visa, insurance, tests and procedures relating to Covid-19 etc.)

• Planning of visits of UWA academics to UAL for teaching and training activities

• Planning of visits of UAL doctoral students to UWA in the context of jointly supervised research

• Planning of visits of UAL academics from Engineering Departments of UAL: the Department of Mechatronics Engineering, Department of Mechanical Engineering, Department of Electronics Engineering, Department of Electrical Engineering.