



Researcher position – Unmanned Air Traffic Management

Expires: 31 December 2020

The SEAL Aeronautica S.L. (SEALA) invites applications for one Research and Innovation position in the framework of a H2020-funded project AURORA (Grant Number 101007134). The successful applicant should have a PhD degree (or close to completion) or Master's degree in aeronautical engineering, aerospace, mathematics, physics, control and systems or a related subject. The applicant will be incorporated in the SEALA RTD department.

The selected candidate will:

- Become a member of the research team of the AURORA project and the SEALA RTD department at RDIT in Parc UPC | BarcelonaTech
- Carry out research activities associated to the SEALA RTD department, e.g. dynamic airspace & free route airspace applications design, automated air traffic control for conflict management, reconfigurable aircraft global path planning & guidance algorithm design, 4D trajectory-based operations application development, Guidance-Navigation-Control (GNC) algorithm design and evaluation for automated air traffic management, design & analysis of dynamic RNP application, support to concept & feasibility studies, implementing intelligent machine learning techniques to help solve a range of complex system control problems.
- Lead and support the team members in the preparation of the reports of the project
- Lead and support the team members in the preparation of research funding proposals
- Lead, coordinate and participate in dissemination activities of the project, including technical papers to be submitted to international conferences and peer-reviewed journals

QUALIFICATIONS AND EXPERIENCE

We are looking for a highly motivated, enthusiastic, energetic person, aiming at significantly improving his or her career perspectives in both public and private sectors. The successful applicant should have a PhD degree (or close to completion) or Master's degree in aeronautical engineering, aerospace, mathematics, physics, control and systems or a related subject. Upon successful completion of the fixed-term contract, a renewal might be considered depending on the achieved performance and the available funding opportunities by that time.



Required skills:

- Outstanding oral and writing English skills
- Good publication record in top scientific peer-reviewed journals
- Good knowledge of control theory, adaptive and reconfigurable flight control, and state estimation & distributed control
- Experience with flight software development and autocode to C/C++
- Basic knowledge of using MATLAB/Simulink
- Effective verbal and written communication skills, and ability to work in an international team

Valuable skills:

- Intermediate hands-on experience in development or usage of open-source sharing of time-critical/real-time information between the flight controller and off-board components and/or lightweight messaging protocol for communicating with drones (e.g. RTPS/ROS2 Interface and/or MAVLink, respectively)
- Knowledge of analytical skills in the areas of optimization or machine learning are a benefit
- Designing and implementing test environment with GNC system both as SIL and HIL
- Familiarity with exchanging structured information in the implementation of web services in computer networks (e.g. SOAP or REST)
- Familiarity with Aeronautical Information Exchange Model (AIXM 5.1)
- Familiarity with ARINC 834 STAP Communication Protocol
- Experience from participating in national and international research projects with partners from academia and industry is also an advantage
- Career distinctions

The successful applicant would have to work autonomously and be an excellent team player.



CONDITIONS

A full-time, fixed term contract is offered, in total duration of 36 months. The starting date is January 2021. The rank and salary will be determined according to qualifications and work experience. The salary will be in the range between 30.000 and 45.000 euro (gross per year).

Applications should include:

- Full CV, including a list of publications;
- Cover letter stating the motivation and suitability of the candidate.

The application documents shall be sent in pdf format to info@sealaeronautica.com, with 'RP-UTM_Surname-of-the-applicant' in a subject of the email.

SEALA seeks to increase the number of women in those areas where they are underrepresented and therefore explicitly encourages women to apply. SEALA is committed to increasing the number of individuals with disabilities in its workforce and therefore encourages applications from such qualified individuals. SEALA is committed to implement to the maximum possible extent a "Commission Recommendation of 11 March 2005 on the European Charter for Researchers and on a Code of Conduct for the Recruitment of Researchers".