



L-Università
ta' Malta

Human Resources
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Call for Applications (Call ID: 43/2022)
Post/s of Full-Time Research Support Officer I or II

Project – “BAT: an innovative navigation system for UAVs based on inertial systems”
Funded by WES Trade Ltd

And Any Other Projects Undertaken by the Institute of Aerospace Technologies

1. Applications are invited for a Research Support Officer to work on a full-time basis on “BAT: an innovative navigation system for UAVs based on inertial systems”, an externally funded project. The selected applicant will design and develop algorithms to improve the performance and integrity of the navigation system. This work will be carried out in collaboration with project partners Airbus Defense and Space, GEM elettronica, Lion Consulting and WES Trade Ltd.
2. Applicants must be in possession of a first degree or a Master’s degree in one of the following areas: Electrical & Electronic Engineering, Aerospace Engineering, Computer Science, Information and Communication Technology (ICT), or related disciplines. Candidates with experience of data fusion, C programming, Matlab programming, Model-Based Systems Engineering (MBSE) and/or safety-critical software development (to DO-178C) will be preferred.

The University of Malta is an Equal Opportunity employer.

3. The selected candidate must be living in Malta for the period of employment.
4. The full-time post is for a period up to 30th June 2023 and carries the following initial annual remuneration:
Research Support Officer I - €20,800 for candidates in possession of a first degree;
Research Support Officer II - €24,960 for candidates in possession of a Master’s degree.
5. Candidates must upload their covering letter, curriculum vitae, and certificates (certificates should be submitted in English) and contact details of at least two referees **through this form** <https://www.um.edu.mt/hrmd/workatum-projects> by not later than **Sunday, 8th May 2022**.

Late applications will not be considered.

6. Further information may be obtained from <http://www.um.edu.mt/hrmd/recruitment> and should you have any queries, please send us an email on projects.hrmd@um.edu.mt.

Office of the University,
Msida, 8th April 2022

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Further Information

1. UAVs are an essential part of air traffic and will become more so in the future. In the absence of an on-board human pilot, UAVs require a degree of redundancy and fault tolerance to ensure that they do not pose an unacceptable threat to other airspace users, including manned aircraft. In the BAT project, this challenge will be addressed through the development of a robust navigation system which will make use of redundant inertial sensors and processors, and algorithms to detect and compensate for potential navigation system faults.

The BAT project is a collaboration between the Institute of Aerospace Technologies, WES Trade Ltd., Airbus Defense and Space, GEM Elettronica and Lion Consulting. WES Trade Ltd. is a Maltese entity that provides engineering and commercial services to national and international entities. GEM Elettronica is a technology leader in areas such as radar, electro-optical systems, and inertial systems. Airbus Space and Defense is a European leader in the design and build of air vehicles including UAVs and helicopters. Lion Consulting is a consulting firm which provides technical, commercial and financial services to various sectors including transport, aerospace, ICT, energy and security.

In this project the Institute of Aerospace Technologies will be primarily responsible for the design and development of algorithms to monitor the integrity and accuracy of the navigation system, and to compensate for potential faults e.g. sensor failure. These algorithms will therefore increase the navigation system’s ability to perform adequately in degraded conditions.

2. The main duties and responsibilities of the appointee will consist of carrying out Research and Project Management Assistant duties including:
 - a. working closely with the project partners throughout the project;
 - b. analysing fault tolerance requirements provided by Airbus;
 - c. developing algorithms (using MATLAB and Simulink) that meet the fault tolerance requirements;
 - d. converting the algorithms to low-level code using Matlab’s automatic code generation tools;
 - e. assisting the project partners with the testing of the algorithms;
 - f. producing project deliverables within the time frames specified in the project description;
 - g. abiding by the conditions imposed by the project;
 - h. assisting in dissemination activities related to the project;
 - i. performing any other project-related tasks as instructed by the project coordinator.

3. The appointee will be expected to work at such places and during such hours as may be determined by the University authorities. Due to the nature of the consortium and the project, the appointee will also be expected to occasionally travel abroad for project-related meetings.
4. The selection procedure will involve:
 - a. scrutiny of qualifications and experience claimed and supported by testimonials and/or certificates (copies to be included with the application);
 - b. shortlisting; and
 - c. an interview and / or extended interview.
5. The post is for a period until 30th June 2023, which will be subject to a probationary period and to the provisions of the Statutes, Regulations and Bye-Laws of the University of Malta which are now or which may hereafter be in force.

Office of the University,
Msida, 8th April 2022