



## Job Description

<b>Job Title</b>	Research Academic(s)
<b>Department/Institute</b>	MCAST Energy Research Group (MCAST Energy) within Institute of Engineering and Transport
<b>Reporting to</b>	Principal Investigator
<b>Main Objective</b>	To support research area(s) related to NEEMO and JUMP2Excel within the MCAST Energy specifically on photovoltaics and electric mobility integration including energy storage and emerging devices.

**Job Summary:** This role develops and supports specific research areas associated with MCAST Energy research studies in photovoltaic and electric mobility integration, systems and technology considered very complex challenges and inclusion of several collaborators. The Research Academic(s) ensure completion of research projects and oversees related day-to-day operations and developments. The role involves the leading of scientific papers for presentation and publication including co-authorship and collaboration, as well as leading and supporting writing, submission and administration of specifically related grants. Ensures that all research activities are completed by strictly following all current local laws, regulations, guidance, policy and procedures.

### DUTIES AND RESPONSIBILITIES

#### Technical

- Gains and provides specific research skills to support the ongoing development of the research team and to contribute to the transfer of knowledge in the specific research area.
- Undertake research under the direction of the Principal Investigator (PI) / Main Project Coordinator.
- Lead independent research programmes in collaboration with the Principal Investigator (PI) / Main Project Coordinator.
- Develop algorithms using C/C++, python and other software and IT applications.
- Provides support in a specific area of expertise, including the use, maintenance and management of research, including equipment.
- Performs a variety of technical duties supporting the research project or programme, as required.
- Draws up detailed technical specifications as required.
- Supports research project(s) activities.
- Oversees installation of equipment, where required.
- Assists in setting up and maintenance of equipment, where required.
- Assists Coordinator/PI and researchers in performing lab work, where required.
- Coordinates lab activity to support the research area/project where required.

#### Administrative

- Develops contacts to acquire knowledge and understanding of the research project(s).
- Facilitates collaboration by liaising with other research groups at MCAST and externally including industry projects.
- Develops and maintains a good working relationship with cross-campus departments at MCAST.
- Coordinate day-to-day work to support the research project.
- Liaise with the Projects Manager (Research) and colleagues on matters relating to the research.
- Develops knowledge and understanding of the research project and research related work.
- Ensures compliance with Health and Safety procedures.
- Acts as a mentor to junior researchers and other lower MQF level students.
- Creates data for use in grant submission for research including obtaining financial support.
- Perform other duties as assigned.



## Job Description

### Vacancy Information

**Job Summary:** This role develops and supports specific research areas associated with MCAST Energy research studies in photovoltaic and electric mobility integration, systems and technology considered very complex challenges and inclusion of several collaborators. The Research Academic(s) ensure completion of research projects and oversees related day-to-day operations and developments. The role involves the co-author and leading of scientific papers for presentation and publication as well as supporting writing, submission and administration of specifically related grants. Ensures that all research activities are completed by strictly following all current local laws, regulations, guidance, policy and procedures. Candidates are expected to seek further development at a higher level of qualifications or within the knowledge gain of the projects.

Candidates are to follow research in the following range of topics:

1. Focused PV integration technical solutions: Flexible technologies such as energy storage
2. Focused PV integration technical solutions: Smart-grid structures and tools including micro-grids
3. Future Electricity Markets with PVs: European regulatory framework and market design
4. Future Electricity Markets with PVs: Smart grids and ancillary services, and PV markets, forecasts and trends
5. Energy-Water Nexus, focus on PVs: Water to balance energy
6. Fusion of emerging PV technology development: Upscaling of emerging technology and On-site testing of devices
7. Driving habits and islands drive cycles
8. Electric vehicles integration considering distributed energy sources
9. Multi-modal full electric mobility
10. Market strategies and tourism in electric mobility
11. Examining Transport Energy Pathways in the Mediterranean

These positions are being funded by the European Commission H2020 TWINNING NEEMO (Networking for Excellence in Electric Mobility Operations) project under grant 857484 and JUMP2Excel (Joint Universal activities for Mediterranean PV integration Excellence) project under grant 810809.

### Vacancy Qualifications & Experience Requirements

#### *For Research Academic(s)*

- Currently employed as Academic in the subject area of Engineering preferably with a specialisation in Electrical and Control Engineering.
- At least 5 years of industrial experience preferably in energy and power systems.
- Have project management experience and/or qualifications.
- Hardware and software development preferably related to electrical engineering and proficiency in C/C++ and python.

#### *Other preferred or asset-considered requirements*

- Related academic/research experience and/or work experience (additional to requirements) would be considered an asset.
- Preference will be given to candidates showing research-based initiatives within their career profile.

**Research Academic(s): Rate as per MCAST Academics Collective Agreement**

**Type of Contract: Definite contract of service on a pro-rata basis.**



## Job Description

### Additional Information and Application Process

Vacancies will be filled if, and when openings become available. Successful candidates will be called to fill existing vacancies in accordance with the order of merit.

Interested candidates are invited to apply at <http://jobs.mcast.edu.mt> and submit in English:

- a covering letter,
- up to 1,000 words research plan highlighting the interrelation of the research theme with Maltese or Regional attributes,
- an updated Curriculum Vitae on the Europass CV Template <https://europass.cedefop.europa.eu/>,
- copies of all academic and professional certificates,
- copies of all full paper publications in journals,
- recognition statement/receipt of an application by Malta Qualifications Recognition Information Centre (MQRIC) for all certificates by applying to <https://ncfhe.gov.mt/en/services/Pages/All%20Services/mqric.aspx> (applicable to all qualifications awarded by foreign or local institutions excluding the University of Malta and the Malta College of Arts, Science and Technology (MCAST))
- two referee contacts, and
- a copy of a full passport (applicable to non-EU candidates).

Additional submission fields are available in the certificates section.

### Incomplete applications will not be considered.

Applications are to be received by the closing date on this advert. Please refer any enquiries to [energy@mcast.edu.mt](mailto:energy@mcast.edu.mt)