



Call for Expression of Interest
Marie Skłodowska-Curie Postdoctoral Fellowship
(HORIZON-MSCA-2026-PF-01)

The University of Malta (UM) is interested in hosting Marie Skłodowska-Curie Action fellows to work in its research teams and welcomes expressions of interest from excellent post-doctoral researchers to co-develop an application with an academic from UM for the Postdoctoral Fellowship call in 2026.

University of Malta (UM) is the sole public and highest teaching institution in Malta, with its structures being in line with the Bologna Process and the European Higher Education area. UM has over a 400-year history and hosts around 12,500 students including 1,700 foreign/exchange students from over 100 different countries, following fulltime or part-time degree and diploma courses. During the last 20 years, the UM was involved as project coordinator and project partner in 790 EU-funded projects, through various funding channels. These include Horizon Europe (51 projects), Horizon 2020 (77 projects), FP7 (51 projects), Erasmus+ (172 projects), Lifelong Learning Programme (123 projects), INTERREG EU, NEXT Med, and ITALIA-MALTA (69 projects). The UM is also involved in national funding programmes, other international initiatives and is even represented in several European and International University networks and groups.

[Department of Metallurgy and Materials Engineering](#)
[Faculty of Engineering](#)

The Department of Metallurgy and Materials Engineering at the University of Malta conducts interdisciplinary research in materials design, processing, characterisation, and performance. Core expertise includes additive manufacturing, surface engineering, mechanical behaviour, tribology, fatigue, and sustainability-driven materials development. The department is actively involved in funded research and international collaborations, with strong links to industry and a focus on innovative, environmentally responsible engineering solutions.

The proposed research focuses on the development of sustainable, high-performance metallic components through the integration of advanced material selection, additive manufacturing, and surface engineering techniques such as surface texturing (shot peening and laser shock peening) or coating deposition. The project will investigate the relationships between processing, microstructure, residual stress states, and functional performance, with emphasis on fatigue resistance, wear behaviour, and tribological efficiency. Data-driven approaches, including machine learning, and life cycle assessment (LCA) will be employed to support optimisation and alignment with the European Green Deal. Applications may include gears and other mechanically demanding components for energy-efficient and sustainable systems. The research is suitable for interdisciplinary training and career development.



Non-academic placement possibilities include: Industrial partners in manufacturing and surface engineering, research centres specialising in tribology and fatigue, or organisations involved in sustainable materials development and life cycle assessment.

Research Field: Information Science and Engineering (ENG)

*Keywords: Advanced materials engineering surface engineering
additive manufacturing shot peening and laser shock peening
and surface textures
tribology AI-driven materials optimisation
fatigue and wear gear systems
sustainable materials residual stress engineering
life cycle assessment (LCA) coating deposition
lightweight alloys heat treatment
automotive, marine and aerospace*

The selected candidates will receive dedicated support from the supervisor, [Prof. Ing. Ann Zammit](#), and the Research Support Services Directorate to write a successful proposal and submission.

Interested candidates must be in possession of a doctoral degree with not more than 8 years post PhD research experience and must not have resided in Malta for more than 12 months during the past 3 years. Furthermore, their research interests should be relevant to the above project.

Kindly send a covering letter and CV to the corresponding, [Prof. Ing. Ann Zammit](#), keeping in copy funding.rssid@um.edu.mt with 'MSCA-PF-2026 candidate name' as the email subject by **19 May 2026**.