



**AMERICAN
UNIVERSITY
OF BEIRUT**

Mediterraneo

Marie Skłodowska-Curie Actions (MSCA) Postdoctoral Fellowships at the American University of Beirut – Mediterraneo in Pafos, Cyprus

The **Marie Skłodowska-Curie Actions (MSCA) Postdoctoral Fellowships** are prestigious European research grants aimed at supporting excellent researchers in further developing their careers and enhancing their international mobility. The grant provides an allowance to cover living, travel, and family costs.

The [American University of Beirut – Mediterraneo](#) (AUB Mediterraneo) in Pafos, Cyprus can support your MSCA application and host you in Europe, and our experienced faculty members can supervise your projects.

Who can apply?

- Competent researchers (of all nationalities) who hold a PhD or have successfully defended their thesis by September 2025 ().
- Applicants must have a maximum of eight years of research experience (from the date of the award of the PhD degree).
- Mobility is a requirement: the applicant should be able to travel to Europe, to an associated country, or to a country outside of Europe.
- It can fund all areas of research; please refer to our research themes below.

For more details on eligibility criteria, please check the website [here](#).

Fellowship Types

There are two types of [postdoctoral fellowships](#):

- **European Fellowships:** they are open to researchers moving within Europe or coming to Europe from another part of the world to pursue their research career. They last between 1 and 2 years.
- **Global Fellowships:** They fund the mobility of researchers outside Europe. The fellowship lasts between 2 to 3 years, of which the first 1 to 2 years will be spent in a non-associated Third Country, followed by a mandatory return phase of 1 year to an organisation based in an EU Member State or Horizon Europe Associated Country. Only nationals or long-term residents of the EU Member States or Horizon Europe Associated Countries can apply.

In both fellowships, secondment(s) can be included to another organization in any country worldwide (except during the return phase of the global fellowship). In addition, placement

can be added at the end of your project with a non-academic partner for a maximum of 6 months (extending the duration of the fellowship).

Research Themes

Currently, we have the following research themes. We do encourage interdisciplinary collaborations between our research themes. We invite you to contact relevant theme leaders to explore the possibility of collaboration.

Faculty of Arts & Sciences

Advances in Large Language Models focusing on Low-resource languages

Theme Leader: [Professor Wassim El Hajj](#) (wassim@aubmed.ac.cy)

Department: Computer Science

External Collaborators:

- [Dr. Shady Elbassuoni](#), American University of Beirut, Lebanon

Theme: Large Language Models (LLMs) are advanced AI systems designed to understand and generate human language. LLMs have received a lot of attention from the research community. Focus has been given though to popular languages such as English. Work on low-resource languages such as Arabic, Greek, and many other European languages is progressing well but is still limited. The aim of this project is to enhance the research related to a specific low-resource language, taking into consideration cultural nuances and addressing gaps in training data and evaluation benchmarks.

Keywords: Large Language Models (LLMs), Low-Resource Languages, Natural Language Processing

Applied Materials Physics

Theme Leader: [Professor Malek Tabbal](#) (tabbal@aubmed.ac.cy)

Department: Physics

Theme: Prof. Malek Tabbal is the Dean of the Faculty of Arts and Sciences at AUB Mediterraneo and Professor of Physics at the American University of Beirut (AUB). Dr. Tabbal's research expertise lies in thin films and nanomaterials physics, growth and characterization. He leads AUB's applied physics research group in laser and plasma assisted synthesis of functional materials. Basically, laser and plasmas are used to generate non-thermal equilibrium conditions in order to synthesize new materials in thin film and nano-structured forms, aiming for applications in modern and advanced technologies. Prof. Tabbal is an expert in Pulsed Laser Deposition (PLD) of materials as well as Laser Induced Periodic Surface Structures (LIPSS) generation, in addition to having experience in microwave plasma devices. Recently, Prof. Tabbal further diversified his research interest to include cultural heritage studies and conservation, setting up collaboration with the Lebanese Commission of Atomic Energy to study pottery excavated from Tyre using ion beam analysis techniques and with the AUB Archeological Museum to investigate antique glass artefacts using materials science techniques.

Keywords: Thin Films; Nano-Materials; Laser Processing; Plasma; Materials Characterization Techniques; PLD; LIPSS; Cultural Heritage.

Critical Ecologies and the Politics of Food: Adaptation Strategies, Indigenous Knowledge, and the Agrarian Question in the Eastern Mediterranean

Theme Leader: [Dr. Hanan Toukan](mailto:ht00@aubmed.ac.cy) (ht00@aubmed.ac.cy)

Department: Philosophy, Politics, and Economics

Theme: A key component of the Critical Ecologies Lab in the Mediterranean East (CELME) based at the American University of Beirut and carried out in conjunction with AUB Mediterraneo as key partner, the research project aims to explore, document, and address the multifaceted climate challenges facing the Eastern Mediterranean region, including the politics and economics of climate change, the impact of climate transition, adaptations strategies, eco-social justice, and indigenous ecologies as forms of resistance. The research, and the larger program which will house it, will contribute to scientific and social debates about the formation and future of the Mediterranean East, as a whole, through critical research, community engagement, and South-South learning and exchange. The researcher will contribute to the larger program geared toward research with other partners including local communities, publications in open-access journal, and multi-media content and community outreach and public events including art exhibitions, lecture series, webinars, public courses, and educational programs.

Keywords: Climate Transition, Indigenous ecologies, Environmental Political Economies, Socio-Cultural Responses to Ecological Crises and Disaster, Livelihoods

Intelligent Robotics (Manipulation & Aerial)

Theme Leader: [Dr. Rafael Papallas](mailto:rp00@aubmed.ac.cy) (rp00@aubmed.ac.cy)

Department: Computer Science

External Collaborators:

- [Dr. Luis Figueredo](#), University of Nottingham, UK (Robotic Manipulation)
- [Dr. Bilal Kaddouh](#), American University of Beirut, Lebanon (Aerial Robotics)

Theme: We study and develop intelligent robotic solutions to tackle emerging real-world problems. We are interested in the algorithmic problems, including motion planning, motion control, and perception. The focus is on robot arm manipulators (you can read more about intelligent robotic manipulation [here](#)), but we are open for other applications of intelligent robotics, including intelligent aerial robotics. We welcome applications of intelligent robotics, in general, and we are open to discussing different research directions.

Keywords: Intelligent Robotics; Artificial Intelligence; Machine Learning; Motion Planning; Motion Control; Robotic Object Manipulation; Non-Prehensile Manipulation; Autonomous Systems; UAVs.

Intelligent Systems for Smart Cities: AI-Driven Digital Twins and IoT-Enabled Resource Optimization

Theme Leader: [Dr. Zinon Zinonos](mailto:zz00@aubmed.ac.cy) (zz00@aubmed.ac.cy)

Department: Computer Science

External Collaborators:

- [Spyros Lavdas](#), American College of Greece, Greece
- [Professor Haidar Safa](#), American University of Beirut, Lebanon

Theme: This topic focuses on the development of intelligent systems designed to enhance the management, efficiency, and sustainability of smart cities. In particular, it investigates the integration of Artificial Intelligence (AI), Digital Twin technologies, and Internet of Things (IoT) infrastructures as key enablers of data-driven urban environments. As a representative example, the topic explores how AI-enabled Digital Twins can leverage real-time data from IoT devices and LoRaWAN networks to support smarter decision-making in areas such as water management, mobility, and infrastructure maintenance. These intelligent systems allow city operators to monitor conditions, predict future needs, and optimize resources, contributing to more resilient and sustainable urban ecosystems. The topic also examines challenges related to data integration, interoperability, and the scalability of such systems, providing insights for the design and deployment of next-generation smart city solutions.

Keywords: Internet of Things (IoT), Intelligent Systems, Artificial Intelligence (AI), Digital Twins, Smart Cities.

Supporting the ecosystem's change: The phenomenon of bullying

Theme Leader: [Dr. Chara Demetriou](#) (cd00@aubmed.ac.y)

Department: Psychology

Theme: School bullying always receives our attention because of its serious psychosocial consequences for the individual's development. Many interventions and prevention programs have been used to reduce the phenomenon, but it continues to maintain its high rates. At this point, the importance of systemic intervention that supports the ecosystem (students, teachers, parents) emerges.

Keywords: School Bullying; Ecosystem; Systemic Intervention; Prevention.

Faculty of Business

Advancing Leadership for Flourishing in Peace through Art-based Methods that foster Responsibilization

Theme Leader: [Professor Elena Antonacopoulou](#) (ea00@aubmed.ac.cy)

Department: Business

Collaborators: [Dr. Anthi Chrysanthou](#), AUB Mediterraneo.

Theme: The theme entails three main dimensions:

A. To advance our understanding of responsibility and responsabilization beyond its current focus on stakeholder capitalism. This will involve collaborative research with members of the Centre for Responsible Leadership at Stockholm School of Economics to engage in an interdisciplinary review of the relevant literature to draw across sociology, anthropology, positive psychology, human geography, and the arts in ways in which we can extend notions of responsibility beyond the 'ability to respond' to be found in current literature.

B. To embrace Ecosystemic Flourishing as a focus that extends how we understand and engage with the United Nations Sustainable Development Goals (thereafter UNSDGs). This will involve us engaging with the growing global community (including the Harvard Flourishing Program) to advance this agenda and contribute a MENA region perspective that builds on and extends the Inner Development Goals (IDG Foundation, 2024). We will help deepen the understanding of leadership in fostering flourishing in peace.

C. To advance pedagogical innovations to cultivate responsible leaders and leadership realizing the UN Principles of Responsible Management Education. We will empirically test a responsible learning leadership framework developed (Antonacopoulou, 2025) that draws on the use of art-based methods to support realizing our impact.

Keywords: Leadership; Flourishing; Common Good; Responsible Management Learning and Education.

Entrepreneurship

Theme Leader: [Dr. Alain Daou](#) (daou@aubmed.ac.cy)

Department: Business

Collaborators:

- [Dr. Christodoulos Pavlou](#), American University of Beirut – Mediterraneo.

Theme: We look at entrepreneurial ventures and ecosystems in different contexts, including social and sustainable entrepreneurship.

Keywords: Entrepreneurship; Sustainability; Social Entrepreneurship; Innovation Management; Business Models; Entrepreneurial Ecosystems.

Faculty of Engineering

Digital Transformation

Theme Leader: [Dr. Claudia Franze](#) (cf00@aubmed.ac.cy)

Department: Industrial and Management Engineering

External Collaborators:

- Prof. Emilio Paolucci, Politecnico di Torino, Italy
- Prof. Chiara [Ravetti](#), Politecnico di Torino, Italy
- [Prof. Bijan Azad](#), American University of Beirut, Lebanon

Theme: My research focuses on the intersection of digital transformation and strategic management and explores the organizational changes prompted by digital transformation in both manufacturing and service sectors, with a particular emphasis on how new forms of value creation emerge. A central stream of my work analyzes the integration of Artificial Intelligence, investigating its impact on redefining organizational roles, dynamics, and task allocation. Another key area of my research addresses the influence of digital transformation on sustainability.

Keywords: Digital Transformation, Artificial Intelligence, Blockchain, Management Engineering, Organizational Changes, Business Model Innovation, Sustainability Management, Regenerative Business Models, Strategic Management, Technological Innovation

Energy Geotechnics and Thermal Energy Storage

Theme Leader: [Professor Salah Sadek](mailto:sadek@aubmed.ac.cy) (sadek@aubmed.ac.cy)

Department: Civil Engineering and Sustainable Design Program

External Collaborators:

- [Dr. Shadi Najjar](#), American University of Beirut, Lebanon
- [Dr. Joseph Zeaiter](#), American University of Beirut, Lebanon

Theme: We study and develop innovative solutions in energy geotechnics with a particular focus on seasonal thermal energy storage in geomaterials. Our main interest lies in the decarbonization of the building stock by investigating the thermal and mechanical behaviour of soils and rocks used for energy storage applications, including borehole thermal energy storage (BTES) and Tank Thermal Energy Storage (TTES) systems. We also investigate broader applications of energy geotechnics in renewable energy systems and sustainable infrastructure.

Keywords: Energy Geotechnics; Thermal Energy Storage; Renewable Energy; Sand Batteries; Borehole Thermal Energy Storage; Sustainable Solutions for Infrastructure; Seasonal Thermal Storage.

Support for Applicants

The American University of Beirut – Mediterraneo will assist you with your application. You will work directly with a faculty member of our university who will also act as your line manager during the project. The university provides support for proposal writing via our [Writing Center](#).

Express Your Interest Today

If you are interested, we suggest that you complete the form here, and one of the theme leaders will contact you if there is a match.

Deadline to express interest: June 8, 2025, 23:59.

For general enquires about the call: please contact [Dr. Rafael Papallas](mailto:rp00@aubmed.ac.cy) (rp00@aubmed.ac.cy).

For specific questions regarding a theme: please contact the corresponding theme leader.

Submit your details via this link: <https://forms.gle/L2KStyvJduLxnrfd9>

AUB Mediterraneo is a twin campus of the [American University of Beirut \(AUB\)](#) in Beirut, Lebanon, founded in 1866 and globally ranked. AUB operates under a charter granted by the New York State Education Department (NYSED) which registers the university's degree programs.