

## Interested in Research at ATHENA Research Center?

### 1. Call for Expression of Interest for MSCA Postdoctoral Fellowships 2023



ATHENA Research Center (Athena RC) is inviting applications by researchers who want to apply for **Marie Skłodowska-Curie Actions (MSCA) European Postdoctoral Fellowships**, and carry out their research in its premises located in Athens, Patras, Xanthi (Greece).

**MSCA European Postdoctoral Fellowships** enhance the creative and innovative potential of researchers holding a PhD who wish to acquire new skills through advanced training, international, interdisciplinary and inter-sectoral mobility. **MSCA European**

**Postdoctoral Fellowships** are open to researchers wishing to reintegrate in Europe, to those who are displaced by conflict, as well as to researchers with high potential who are seeking to restart their careers in research.

Fellowships will be provided to excellent researchers, undertaking international mobility either to or between EU Member States or Horizon Europe Associated Countries, as well as to non-associated Third Countries. Applications will be made jointly by the researcher and a beneficiary in the academic or non-academic sector. European Postdoctoral Fellowships are open to researchers of any nationality.

*The standard duration of these fellowships is between **12 and 24 months**.*

*The submission deadline is on the **15th September 2023***

*Full information on MSCA European Postdoctoral Fellowships can be found in [here](#)*

**Athena RC** is a research technology organisation which conducts outstanding research in Informatics, Communication and Computational Sciences, tackling global challenges, addressing local needs, and producing novel and deep technological results with a broad impact on other sciences, industry, and society at large. It serves the full spectrum of the research lifecycle, starting from basic and applied research, continuing on to system & product building and infrastructure service provision, and ending with technology transfer and entrepreneurship. A European and international actor, Athena RC operates in 6 Greek cities (Athens, Patras, Xanthi, Chania, Tripoli & Mytilene). The scope of activities of Athena RC includes all **Information and Communication Technologies**, covering software and hardware aspects. These include all areas of informatics, *data science, robotics, automation, signal processing, artificial intelligence, networking and digital communication, and modelling*. Its technologies find application in the fields of engineering, computational linguistics, medicine, biology, biodiversity, earth observation, space science, archaeology etc. For 35 years, it maintains an innovation culture, developing high-end technologies, products and services, and cultivating synergies between the entrepreneurial and research worlds. Its spin-off companies and its facilitation of 3 industrial clusters in knowledge-intensive thematic sectors are the result of a fertile technological innovation ecosystem within the Center. The key value of Athena RC lies in the deep expertise, extensive experience, and unique collection of skills and know-how of its >700 researchers, associated faculty, collaborating scientists, and professional staff. By participating in more than 450 national and EU projects in the last 5 years and producing over 1000 publications in the same timeframe, Athena RC has gained a very strong international reputation.

Athena RC is looking to support applications for the **MSCA European Postdoctoral Fellowships** that align and complement its current research interests in the areas of :

- **Artificial Intelligence**
- **Robotics**
- **Industrial Ecosystems**
- **Digital Twins**
- **Digital Culture**
- **Biomedicine**
- **Sustainability Studies**
- **Machine Learning**

Nonetheless, this does not preclude submitting proposals in other areas researched at **Athena RC**. A matching process with relevant researchers of Athena RC interested in supervising the chosen topic of research will be carried out internally.

*To receive support for preparing your final application please send:*

- ✓ **an updated CV with list of publications**
- ✓ **a short research proposal** (2 pages)
- ✓ **a letter of motivation** (1 page) explaining why you want to carry out your research at **Athena RC**.

Email : [bid-consulting@athenarc.gr](mailto:bid-consulting@athenarc.gr) by **20<sup>th</sup> June 2023**

## 2. PhD on data-driven generation of 3D shapes towards interactive design.

ATHENA RC offers a fellowship within MSCA network GRAPES for a PhD student working on Machine Learning for 3D objects.

### **Duration: 8.5 months.**

Applications will be evaluated as they arrive; start date: immediate (no later than September 2023). Remuneration is very competitive following MSCA standards, with extra family and travel allowances.

Synthetic tasks in 3D geometry often rely on effective and accurate editing of the underlying representation. However, editing 3D shape representations, and in particular 3D meshes, is a very tedious task. Designers spend a significant amount of time repurposing existing 3D models, manually repositioning one by one the vertices of the mesh to produce a new shape. A tool that enables easier and faster editing would greatly increase the capacity at which new shapes could be generated, enabling us to move towards interactive design. Our main tool shall be Neural Networks and the corresponding internal representations. Recent works use Neural Networks and learn meaningful intermediate representations of 3D shapes by decomposing them into sets of primitive objects, such as 3D Gaussians, or by enclosing them inside coarse meshes with semantic control points. The goal of this project is to exploit and improve such meaningful internal representations, and use them as conditioning inputs for part-specific editing and generation operations.

For more information see <http://grapes-network.eu/phd-positions/>

Candidate researchers must be at PhD level (not necessarily enrolled in a PhD program), satisfying MSCA rules of mobility (2 out of the last 3 years in a different country). ATHENA RC offers a vibrant environment for research, with several world-class teams in various relevant fields including Data Processing, Artificial Intelligence, Machine Learning and Scientific Computing.

**To apply please contact directly Prof. I. Emiris – [emiris@athenarc.gr](mailto:emiris@athenarc.gr)**

Supervisors: Prof. I. Emiris (Athena RC and U. Athens), and Dr T. Dalamagas (Athena RC).

## 3. PostDocs on AI

Athena RC offers diverse types of collaboration and of hosting talented researchers, including upcoming opportunities in its recently established groups such as the **Archimedes Unit** on AI, Data Science and Algorithms. The Archimedes Unit informs about **the upcoming 1st Call for Expression of Interest for Postdoctoral Research**. The main objective of the call is to strengthen basic research in the Unit, and the individual objectives through which this will be achieved are:

- The coverage at full-time level of postdoctoral researchers, to implement a clear research object over a period of 24 months.
- The attraction of young researchers with high qualifications, from Greece and abroad, in order to strengthen the research footprint of the Unit and to create strong research groups in the thematic areas of the E.M. "ARCHIMEDES".
- The acquisition of young researchers' experience both in participating in high-level research and in supervising PhD candidates.

**The expected announcement** is part of the project "ARCHIMEDES Unit: Research in Artificial Intelligence, Data Science and Algorithms" which is implemented within the framework of the National Recovery and Resilience Plan "Greece 2.0" with funding from the European Union-NextGenerationEU.

Instructions and dates for participation applications will be announced very soon.

See the Advance Notice announcement [here](#) (Greek version).

To request the English version and to receive updates related to this announcement please email :

**Email :** [liaison-archimedes@athenarc.gr](mailto:liaison-archimedes@athenarc.gr)

The **Archimedes** Unit on Artificial Intelligence, Data Science and Algorithms is expected to be at the forefront of science, in a field of knowledge whose importance is constantly increasing and now has multifaceted applications across the spectrum of economy, society, industry, etc. **Archimedes** will serve both basic and applied research and will be connected with Greek, but also foreign University institutes and research centers. Its main mission will be the funding of visiting researchers (faculty members and researchers in Greece and abroad) as well as PhD candidates in the areas of Artificial Intelligence,

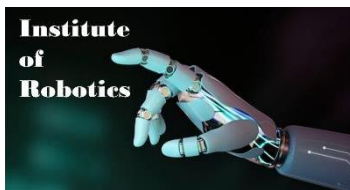


Data Science and Algorithms. **Archimedes** will train a new generation of Greek scientists. It will organize systematic training and educational programs, will build bridges of systematic communication with important institutions abroad and will offer an opportunity to participate in high quality research to talented young scientists, thus dramatically accelerating their scientific development and offering them a promising career path.

#### **4. Robotics across all Research Levels**

**The Athena RC Robotics Institute** which was recently awarded 3,6M€ from the national fund of NextGenEU, informs about an upcoming opportunity for *Postdoctoral, Doctoral and Masters Research for developing autonomous systems*. The official announcement will be published in the following weeks. To express your interest in these positions, and to receive updates on this opportunity or similar ones, please email the proposal support office at :

Email : [bid-consulting@athenarc.gr](mailto:bid-consulting@athenarc.gr)



**Athena RC Robotics Institute** aims to promote the science and technology of robotics in the age of artificial intelligence through coordinated efforts and close collaboration with the Greek robotics community. These efforts will include establishing Makerspaces and promoting scientific and technological excellence in robotics in partnership with universities, research centers, businesses, and industries. The Institute's focus will be on vertical sectors such as health, security, transportation, education, agri-food, and more. The Institute's activities will center around three

directions, responding to the needs of Greek society and international developments: *1. Robotics for Safety and Rescue* *2. Outdoor Robotics* *3. Healthcare Robotics and Social Robotics*. The Institute of Robotics will establish a space for the mechatronic implementation of robotic prototypes (Makerspace). In the next phase, the Institute will take on the coordination of establishing and managing satellite Makerspaces in select parts of the Greek territory. Education will also be a significant role of the Institute, as it will participate in curricula related to robotics and offer short-term courses for researchers and the industry. Lastly, one of the Institute's objectives will be to organize the Greek robotics community (academics, researchers, and industry) and interconnect it with the diaspora's equivalent while creating a center of gravity in Southeast Europe.