



Pursuant to Article 10, Paragraph 2, Point 3) of the Law on Scientific Research Activity (Official Gazette of Montenegro, No. 80/10 and 57/14)

THE MINISTRY OF SCIENCE  
Publishes a  
CALL  
FOR AWARDING NATIONAL FELLOWSHIP IN  
THE FRAMEWORK OF THE CAPACITY BUILDING PROGRAMME  
RELATED TO THE SEEIIST PROJECT

with total amount of EUR 50,000 allocated under this Call

I Subject of the Call

Capacity building for the regional project of the South East European International Institute for Sustainable Technologies (SEEIIST - <https://seeiist.eu>) is one of the key elements for its successful implementation. It is an essential and integral part of the project and consists of education and training for the scientists, researchers, medical doctors, engineers and technicians, particularly among young generation.

In order to build capacities of the Montenegrin scientists and researchers related to the SEEIIST project, **subject of this Call is to support training and research experience through awarding fellowship in one of the world's largest and most respected centres for scientific research - the European Organization for Nuclear Research (CERN - <https://home.cern/>).**

II Objectives of the Call

Objectives of the Call are the capacity building of Montenegrin scientists and researchers and obtaining the excellent research experience related to SEEIIST project through awarding a fellowship for research stay at CERN.

FE is focused on the:

Big-data cloud distributed computing and modelling for intelligent decision making.

Accordingly, under this call a fellowship for one researcher shall be awarded, as follows:

*Building a common platform for medical data sharing by using cloud and grid computing technologies*

**State of the art:** Current information technology solutions used in the medical research field cannot easily be used on a global scale as they are either designed to exploit public data or designed to work on small -scale private repositories. More scalable distributed solutions are in widespread use in High Energy Physics and they could be transcribed to be available within the cancer research and treatment community. Patient data Montenegro/SEE region are stored in numerous isolated data silos (e.g., different/unconnected hospitals) and is extremely privacy sensitive. There is thus an urgent need to develop a proof-of-concept collaborative platform to be used by the research infrastructures and a medical community of users to enable big data and resource

sharing, but considering the specific needs of medical research in compliance with ethics and privacy. Since the performance of the predicted model is roughly proportional to the volume of data, a dynamic access to a variety of large volumes of high-quality data is critical to the successful development of high-quality prediction models.

#### **Training:**

The selected fellow will receive a dedicated training in: (1) big-data cloud distributed computing and (2) modelling for intelligent decision making.

#### **Deliverables:**

*Deliverable 1:* The fellow will build a state-of-the-art platform for collecting and collating medical data (such as cancer occurrence epidemiological data, imaging and treatment plans, etc.) from local cancer centres, hospitals, and health registries.

*Deliverable 2:* Deploying the platform from Deliverable 1 for analysing the collected distributed patient data and how smart decisions can be made for patient specific treatment.

#### **Outcome and deliverables**

Delivery of a multifactorial data infrastructure platform (e.g. imaging, clinical data) based on privacy-preserving algorithms and distributed learning methodologies (exploiting shared ontologies and advanced machine learning techniques) that will support by design the required data protection regulations. It will result in a standardised and scalable distributed learning technology to enable scientific discovery.

### **III Budget of the fellowship**

**The fellowship is fully funded by the Ministry of Science of Montenegro.**

Fellowship covers the following **eligible costs**:

- A monthly subsistence cost in amount of **EUR 3,800** in the CHF equivalent, which includes travel and health insurance for the duration of the scholarship;
- International travel costs, including one return air ticket and international local costs (from the airport to CERN and vice versa).

**Host institution** is offering the following:

- Supervising/mentoring of the researcher during duration of the fellowship;
- Office space and access to the equipment necessary for fellowship realization; and
- Administrative support during the stay.

### **IV Duration of the fellowships**

The FE approved under this Call shall be funded for a period of **12 months**, starting from **April 20, 2020** with the possibility of extension for additional 12 months, under the condition of the mentor's positive evaluation of the researcher in the Semi-annual and Annual Progress reports.

### **V Eligibility criteria**

The Call is open to the candidates with:

- Residence in Montenegro;
- Minimum VII1 education qualification level, in the field of physics, computing and engineering.

### **VI Content of the application for awarding fellowship**

**Project application shall contain the following:**

- Signed Application Form (in English);
- Proof of Residence in Montenegro;
- Curriculum Vitae (Europass in English) with Bibliography;
- Copy of the most recent relevant qualification with the mark sheets;
- Motivation letter stating the interest to pursue the research in the specific field in CERN; and
- Letter/s of recommendation (not older than a year at the time of the deadline for applications).

## VII Evaluation of the application for awarding fellowship

The administrative check of the received applications for the Call shall be conducted by the Ministry. After the administrative check, all project applications that meet the required conditions shall be submitted for evaluation.

The evaluation process shall be carried out by International panel experts.

## VIII Criteria for selection

The criteria for the selection is the following:

- Qualifications and quality of research experience of the candidate.

The Ministry shall decide on awarding one FE in line with the recommendations of the International evaluation committee.

Decision on the selected candidate shall be published on the website of the Ministry of Science.

## IX Deadline for applications

Applications for the Call should be submitted no later than **March 20, 2020, by 2:00 pm**.

## X Submission of the Application:

The completed and signed Application Form, along with the supporting documents, should be submitted in one original hard copy to the Ministry of Science, at the following address: Rinski trg br. 46, 81 000 Podgorica. In addition, the application should be submitted in electronic form (in PDF) on the following e-mail address: [marija.raznatovic@mna.gov.me](mailto:marija.raznatovic@mna.gov.me)

Contact person for the Call in the Ministry of Science:

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