



Funded by
the European Union

Project financed from the Horizon Europe Work Program
2021-2027, Grant agreement 101087007-eBio-hub



EMPLOYMENT POSITION

**eBio-hub Postdoctoral Researcher
in Electrical Engineering /
Microtechnology**



Funded by
the European Union



Program: Horizon Europe 2021-2027 - HORIZON-WIDERA-2022-TALENTS-01

Project name: **EBIO-HUB: CHAIR OF RESEARCH CENTRE IN BIOMEDICAL ENGINEERING**

Project acronym: eBio-hub

eBio-hub Postdoctoral Researcher in Electrical Engineering / Microtechnology – Full-time (160h/month)

The deadline for the applicants is January 15th 2025

1. National University of Science and Technology POLITEHNICA Bucharest

National University of Science and Technology POLITEHNICA Bucharest (POLITEHNICA Bucharest) is the largest and the oldest technical university in the country and among the most prestigious universities in Romania.

POLITEHNICA Bucharest pretends the status of advanced research and Education University. Its mission is designed at the intersection of education with its applications: vocational training, scientific research, knowledge production, innovation as the main objectives of the society and the economy based on knowledge, as recorded in the European and Romanian research strategy. POLITEHNICA Bucharest assumes the concept of an innovative university, in terms of human capital formation, which conditions a country's innovation capacity and scientific research, which produces knowledge, innovation and technological upgrading that condition the country's economic growth. The university's teaching and research staff performing - 1379 academic staff working in 53 departments and 38 research centres. Their work is supported by auxiliary staff - 696 people and over 600 people in the administrative field.

The Strategic Field of POLITEHNICA Bucharest (according to the POLITEHNICA Bucharest Strategy) is the biomedical engineering, biotechnology, medical and environmental technologies, micro- and nanotechnology and advanced materials, the university encouraging in this area:

- the development of research centres – eBio-hub is a priority,
- the business of creating and maintaining links with the socio-economic environment for harnessing the competitive edge leader in the field of technical education of POLITEHNICA Bucharest,
- cross the master programs on research lab / scientific research centres of POLITEHNICA Bucharest, and encouraging doctorate in strategic areas,
- encouraging international competitiveness in strategic areas.

POLITEHNICA Bucharest has close ties with Romanian companies and foreign enterprises. Our partners include multinational corporations and Romanian companies. As we are fully

eBio-hub PostDoc in Electrical Engineering / Microtechnology - EMPLOYMENT POSITION | 1



Funded by
the European Union



aware of the importance of knowledge and skills in obtaining our financial sources, we are increasingly developing our market-oriented activities every year.

2. eBio-hub project

The main objective of **eBio-hub** is to establish a *Center of Excellence in Bioengineering* within the National University of Science and Technology POLITEHNICA Bucharest (POLITEHNICA Bucharest). The goal of **eBio-hub** project is to unlock and foster excellent research in biomedical engineering, capitalizing the existing knowledge in POLITEHNICA Bucharest and integrating with local research and clinical expertise from University of Bucharest, Carol Davila University of Medicine and Pharmacy and local hospitals as well as making use of the state-of-the-art research infrastructure in biomedical engineering (INOVABIOMED) by setting up a strong research group and attracting top academics in the field, rising the competitiveness of POLITEHNICA Bucharest research in the European Research Area (ERA).

eBio-hub will operate as an interdisciplinary research center at the interface between chemistry, biology, IT, micro and nanotechnology and medicine. The project aims to develop micro, nano and bio-integrated solutions that will address major global challenges in the biomedical field. In this context, eBio-hub will increase the attractiveness and impact of the POLITEHNICA Bucharest research excellence (illustrated quantitatively and qualitatively through indicators such as publications in peer reviewed journals, national and international collaboration or grants). Furthermore, the project will contribute to the growth of Romanian and EU economy by attracting and nurturing research talents, creating portfolios of intellectual properties, supporting the local industry or commercializing new technologies.

More information can be found <https://ebio-hub.upb.ro/>

3. Position offered: eBio-hub Postdoctoral Researcher in Electrical Engineering / Microtechnology

The **PostDoc researcher** is expected to conduct research in research in microfluidics in the field of nanomedicine.

Special focus will be given to the following areas of activity:

- Design of microfluidic devices for POC applications
- Fluidic and thermal simulation of the microfluidic device
- Fabrication of microfluidic devices
- Characterization / testing of the point of care systems



Funded by
the European Union



The possible research directions include but are not limited to point-of-care testing for liquid biopsy and self-assembled nanocarriers using microfluidics.

4. Expectations

- meet the criteria for R2 (PhD holders or equivalent who are not yet fully independent) researcher profile based on the descriptors of the European Framework for Research Careers (<https://euraxess.ec.europa.eu/europe/career-development/training-researchers/research-profiles-descriptors>);
- Motivated researcher, with a PhD in Electronics or Fluid Mechanics
- Research experience – 2 years
- Prior experience with microfabrication of different integrated sensors
- Prior experience with microscopy techniques is a plus
- Competencies in computer-based quantification/analysis tools (Matlab, COMSOL, or similar).
- Excellent written and spoken English as you will work in an international environment.
- Proof of published papers in Scopus (minimum 2 publications)
- Special social skills: teamwork, ability to motivate co-workers.
- Good communication skills.
- Ability to conduct high quality academic research, reflected in demonstratable outputs.

5. Rights and responsibilities

The Postdoctoral Researcher will have the following rights and responsibilities:

- to research independently in the context of research projects within a specific working area;
- to apply for research projects on a national and international level;
- to publish research work (preparation of scientific papers; active participation at conferences and other scientific events).

6. Remuneration package

eBio-hub is offering an attractive remuneration package, which will be detailed presented once the hiring level and the candidate's work experience is known. Moreover, there are also other financial benefits (involvement in other research activities/projects) that depend on the performances of candidate and national regulations.

7. Application

The job offer for this position will open on December 20th 2024 and close on January 15^h 2025.



Funded by
the European Union



Applications should contain (in the same order):

1. Copy of the relevant document proving that the candidate holds the required qualifications;
 - a. Curriculum vitae including the following:
 - evidence of the required expertise in the field of Electrical Engineering, Microtechnology
 - b. research record,
 - c. experience in research projects,
 - d. list of publications, including h-index (WOS) and citations;
2. One Recommendation letter,
3. Other materials considered relevant by the candidate (Copies of Training certificates, Excellence diplomas, etc).

Applicants have to use the position name “**eBio-hub PostDoc in Microtechnology**” in the title of their application.

Applications should be in English and sent to the following e-mail address: ebio-hub@upb.ro
Additional information is available on: <https://ebio-hub.upb.ro/>, Project director, Horia Iovu (horia.iovu@upb.ro) and Era Chair holder Ciprian Iliescu (ciprian.iliescu@upb.ro)

Before applying, all candidates are invited to read carefully the NUSTPB’s Methodology for occupying didactic and research positions: <https://posturivacante.upb.ro/wp-content/uploads/2024/04/Methodology-for-occupyng-vacant-didactic-and-research-positions-2024.pdf>

The selection will be done in two rounds: 1st all applicants will be evaluated to rank the candidates and, in the 2nd step the selected applicants will be invited to the interview.

The recruitment will be based on open, transparent, merit-based process, agreeing with the Open recruitment policy and the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers.

We welcome applications from all qualified candidates who fulfil the requirements specified in the announcement.