Universidade Federal de Ouro Preto - Federal University of Ouro Preto (UFOP) is a higher education and research institution located in Minas Gerais State, southeastern Brazil. It was founded on August 21st, 1969, as a consolidation of two significant preexisting institutions: Escola de Farmácia - School of Pharmacy (1839), the first School of Pharmacy in Latin America, and Escola de Minas - School of Mines (1876), founded by the French mineralogist Henry Gorceix and the first Brazilian institution aimed to teach Mining, Metallurgy and Geology.

In addition to Escola de Minas and the Escola de Farmácia, UFOP covers all areas of knowledge in 13 academic units, distributed across four campi (located in the cities of Ouro Preto, Mariana and João Monlevade). The main campus is located in Ouro Preto, a multicultural city with a vast calendar with some of the biggest cultural and artistic events in Brazil. It was the first place in Brazil to be considered by UNESCO as a World Cultural Heritage. UFOP comprises 142 research laboratories (in 2018 its patent number 130 was registered), approximately 300 outreach projects (community engagement), 12 libraries (including a rare books library from 18th and 19th centuries), a Center of Arts and Conventions, a Movie Theater, and some museums, as the Museum of Pharmacy and the Museum of Mineralogy.
INDIVIDUAL FELLOWSHIPS 2020

Jobs and funding
Available at https://euraxess.ec.europa.eu/jobs
01 Protein and lipidic biomarkers in control of the inflammatory status in parasitic and metabolic diseases

General description

The project “Protein and lipidic biomarkers in control of the inflammatory status in parasitic and metabolic diseases” includes the essence of the current projects in the Laboratory of Immunobiology of the Inflammation – Labiin. The group investigates protein biomarkers such as cytokines (TNF, IFN-gamma, IL-6, IL-10, IL-22, IL-33, the receptor activator of nuclear factor kB “RANKS” and others), chemokines (CCL2, CCL3, CCL5, CXCL16, CX3CL1 and others) and lipidic mediators (Resolvins, maresins, protectins, prostaglandins, leukotrienes and others) in the evolutive prognosis of illnesses which “inflammation” is the masterpiece for the pathogenesis.

The selected candidate/researcher shall have a well-honed interpersonal capacity and interest in those biomarkers related (i) to the human and/or experimental Trypanosoma cruzi or Toxoplasma gondii infection; (ii) to the nutritional disturbances; (iii) to the effects of the phototherapy; (iv) to the effects of aerobic and strength physical exercises; (iv) to the human pre-eclampsia and (v) to the human cancer.

Regardless the background formation of this candidate/researcher, he/she will have the opportunity to learn and experienced the practice in the follow aspects: (i) protozoan infection and manipulation with experimental animals, (ii) immunological/histological and molecular methodologies, such as immunoassays, immunocytochemistry, histological preparations and stains, quantitative PCR and others (iii) cellular cultures, to test new chemical compounds with anti-inflammatory and anti/protozoan properties and (iv) following the clinical/nutritional attendances and all the steps beyond (collection and processing of the biological samples, clinical database construction and laboratory sample analysis.

Labiin team is formed by biologists, nutritionists, physical educators, pharmaceutic and medical doctors that will be able to assist and support the researcher during the adaptation period (1-2 months). After that period, it is expected that the candidate is able to integrate the group of researchers and chose 1 (one) or 2 (two) projects to the immersion and effective participation and contribution. Based on his/her previous experience, the candidate shall detect knowledge gaps in the projects, shall propose new comprehensive research strategies and execute them in an adequate methodological context and to be able to draft-writing or pitch the project for publication, if the time is sufficient. Finally, in parallel to the investigative activities, the candidate/researcher shall also participate and contribute to the discussions in the Labiin weekly-scientific meetings, contribute to the formation of undergraduate and graduate students and propose seminars and/or short-courses to the graduating students of the Health and Nutrition Graduate Program.

Researcher

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Digital methods applied to radio: a proposal for adaptation and innovation

General description

UFOP is a public university located in Minas Gerais, in the Southeast region of Brazil. With units in the cities of Ouro Preto, Mariana, and João Monlevade, today it has almost 12 thousand undergraduate students, just over two thousand graduate students, and almost 2000 professors. The undergraduate course in Journalism and the Postgraduate Program in Communication are located in Mariana, at the Institute of Applied Social Sciences.

The project “Digital methods applied to radio: a proposal for adaptation and innovation” is coordinated by Professor Dr. Debora Cristina Lopez and developed with the Convergence and Journalism Research Group (ConJor). The study’s concern is with the development of techniques and methods that allow understanding radio on digital platforms as an object of research and its specificities. In addition, we seek to develop tools and strategies to analyze this object, starting from its reconfigured nature due to the new dynamics of production, circulation, and consumption of audio content. The research is anchored in debates on innovation, radio on digital platforms, the epistemology of communication, and methodologies for analyzing digital objects.

We offer, within the scope of this call, a vacancy for visiting researcher, through the Individual Fellowships - IF of Marie Sklodowska-Curie Actions (MSCA), intermediated by the Federal University of Ouro Preto. The activities will be developed at UFOP, on the Mariana campus, and supervised by the project coordinator.

Criteria: Hold a Ph.D.; Domain of Portuguese, English, or Spanish; Be interested in radio studies and their interfaces with big data and/or digital methods; Have availability to live in Ouro Preto or Mariana.

Main duties and tasks: Develop big data quantitative/qualitative analysis tools; Adapt and prototype digital analysis tools and methods; Conduct testing of digital method tools based on the characteristics of the phenomenon observed in the project; Develop conceptual perspectives of innovation applied to radio on digital platforms;

- Work in interinstitutional partnerships of the project;
- Produce scientific articles for circulation of the content developed in the project;
- Develop scientific communication content linked to the project including press releases, blog posts and social media content.

Researcher

Prof. Debora Cristina Lopez
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Corruption in the Ancient Roman World: a study on aristocratical competition and rhetorical representation of alterity

General description

The researcher will join an outstanding research group in Brazil, connected in a national network, the LEIR, that stands in Portuguese for Laboratory for the Research on the Roman Empire.

The group comprises an enthusiastic team of professionals with extensive expertise and state-of-the-art on the Antiquity, integrating researches located in various Universities in Brazil with strong international connections.

The work will be developed in one of our main groups, settled at the Federal University of Ouro Preto, Minas Gerais.

The main interest of the research is the study of corruption in its more varied fields (economic, moral, political, legal, ethical, literary, etc.) with a particular focus on the provincial elites and the rhetorical representation of Roman aristocracy and the traditional values attached to them.

It is expected from the candidate a project concerning a specific aspect in this broad theme of corruption in the Roman world, generating cooperation within our research group.

Researcher

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Evaluation of properties of alkali-activated material made from biomass ash applied to construction materials

General description

Researchers at the Civil Construction Laboratory at UFOP (Federal University of Ouro Preto, Minas Gerais, Brazil - LCC) seek to develop their research to understand materials activated by alkalis, use of residues in the production of cement and sustainable construction materials. The post-doctorate at LCC is a great opportunity for researchers to develop their academic careers in the field of materials science applied to Civil Construction. The fellow is expected to develop an independent research project on alkali-activated cement from ashes from burnt biomass, developing laboratory practices in the micro, nanostructure, and new building materials, recovering industrial residues, characterizing materials cement, durability properties, the performance of construction materials and publication in top scientific journals.

The LCC promotes a weekly meeting between students and supervisors to present and discuss the results. The laboratory infrastructure includes: universal testing machine, cement, and concrete mixers, silica alkaline reactivity test system, flow table, laser diffraction analysis - particle size, thermal analysis (TG - DTA), furnace (1200°C), ultrasonic testing equipment concrete, scanning electron microscopy - SEM-EDS, X-ray fluorescence spectroscopy - XRF, X-ray diffraction - DRX, microtomography - Micro-CT. FTIR, NMR, and isothermal heat conduction equipment are available from partner laboratories.

The researcher will carry out experiments in the building materials laboratory and in Nanolab (nanotechnology laboratory), such as sample preparation, sample characterization, evaluation of material properties (microstructure and mechanical properties), presentation of seminars, writing of manuscripts. The researcher will evaluate the application of fly ash (FA) from burnt biomass (eucalyptus) as the primary precursor material in the production of alkali-activated material (AAM). Glass powder (GP) residue from the glass industry will also be included as a mixing material. Four mixtures of AAM will be produced: one using FA; three mixtures where the FA will be replaced by the GP, with different replacement rates. In addition, three different milling times (“one part mixture”) and different amounts of NaOH will be applied. The compressive strength and flexural strength tests will be performed on prismatic samples at 7, 14, 28, and 56 days, and the microstructural analysis of the fragments will be obtained by SEM analysis. The residues and AAM will be characterized by XRF, QXRD (Rietveld and Ponkcs), SEM-EDS, FTIR, and TG-DTA.

Researcher

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05 The dark side of the universe - understanding dark matter and dark energy

General description
This project aims on understanding the theoretical and observational aspects of dark energy and dark matter.
The main topics include dark energy/matter phenomenology, extended theories of gravity, large scale structure theory and observations, supernova and high redshift cosmology and the physics of gravitational waves.
The successful applicant will join the Department of Physics at UFOP (Universidade Federal de Ouro Preto) and should carry an investigation with Prof. Dr. Hermano Velten on the topics described above. It is also desired that the applicant deliver courses at the undergraduate or graduate level.

Researcher
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06 Computational efficient models for inelastic large displacement analysis of structural frames under extreme loading, including fire situation

General description
The researcher will work at the Graduate Program in Civil Engineering (PROPEC) from the Department of Civil Engineering/UFOP. In particular, he (or she) will work on the research line of Computational Mechanics, whose objective is the study and development of methods and techniques that enable advances in computer simulation of engineering systems. In general, the Finite Element Method (FEM) is the numerical technique considered in structural modeling.
In fact, this line of research is at the interface with the other lines of the graduate program, providing technical support on many projects.

Researcher
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Improving yeast's phenotype through CRISPR-Cas9 technology

General description

Prof. Rogelio Lopes Brandão is the coordinator of the Cellular and Molecular Biology Laboratory (LBCM-UFOP, Brazil). His group has experience in Biochemistry, Molecular Biology, and Bioinformatics, focusing on Biochemistry of microorganisms, working in yeast biotechnology with the selection of yeast strains for cachaça production and other applications, such as ethanol, beer, and wine production.

The Yeast Collection of the LBCM has more than 180 strains that were isolated from cachaça fermentation in very harsh conditions, which can lead to more tolerant and robust production organisms, characteristics of great importance for biotechnological purposes.

The aim of the Visiting Researcher will be the establishment of the CRISPR-Cas9 technology in his laboratory to improve yeast’s characteristics such as the flocculation capacity, ethanol and aluminum resistance, maltose metabolism, flavor production, behind others, that can be modified alone or in combination. The improved yeast will be more suitable for industrial use.

Researcher

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Visit offer
08 Theory and History of Historiography

General description
Researchers in Theory and History of Historiography based in Europe are welcome to apply for a Global fellowship to carry out research of up to 2 years in the department of History (PPGHIS) of UFOP – which is one of the university's higher-rated graduate programs (CAPES 5). PPGHIS-UFOP stands out for its activities in the field of Theory and History of Historiography.

The researcher will join the Center for Studies in Historiography and Modernity (NEHM), which coordinates the academic activities related to Theory and History of Historiography within the department. This includes the organization and edition of the field’s most important journal in Brazil, the História da Historiografia: International Journal of Theory and History of Historiography (QUALIS A1), as well as focused research groups such as Historicidades democráticas (Democratic Historicities), Grupo de História, Ética e Política (History, Ethics and Politics Group), Fronteiras da teoria da história (Frontiers of Theory of History).

PPGHIS-UFOP is also the headquarters of the Brazilian Society of Theory and History of Historiography (SBTHH). The main international academic event of the field, the Brazilian Seminar of Theory and History of Historiography (SNHH), was created in 2007, and nine editions (out of the total of ten) was held at UFOP. In 2017, PPGHIS hosted and organized the second Conference of the International Network for Theory of History (INTH).

Thus, the researcher will have the opportunity to carry out research in a consolidated center of excellence recognized nationally and internationally. In its turn, PPGHIS is interested in expanding its international presence, and receiving foreign researchers is a strategic action to achieve this goal.

Researcher
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