

14/10/2019

# Advanced statistics and machine learning for integrative and dynamic predictive modelling of health and disease from multi-source biomedical data

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Where to apply

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Application Deadline: 17/11/2019 00:00 - Europe/Athens

Contact Details

Where to send your application.

**COMPANY**

Universitat de Barcelona

**E-MAIL**

karim.lekadir@ub.edu

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Hiring/Funding Organisation/Institute

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**ORGANISATION/COMPANY**

Universitat de Barcelona

**COUNTRY**

Spain

**DEPARTMENT**

Departament de Matemàtiques i Informàtica, Barcelona

Universitat de Barcelona

**CITY**

**STATE/PROVINCE**

Barcelona

**ORGANISATION TYPE**

Higher Education Institute

**POSTAL CODE**

08007

**E-MAIL**

karim.lekadir@ub.edu

**STREET**

Gran Via de les Corts Catalanes, 585

**PHONE**

+34 934020852

**MOBILE PHONE**

+34 622229535

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**ORGANISATION/COMPANY**

Universitat de Barcelona

**LOCATION**

Spain › Barcelona

**RESEARCH FIELD**

Computer science

**TYPE OF CONTRACT**

Temporary

**RESEARCHER PROFILE**

Recognised Researcher (R2)

**JOB STATUS**

Full-time

**APPLICATION DEADLINE**

17/11/2019 00:00 - Europe/Athens

**HOURS PER WEEK**

37,5

**OFFER STARTING DATE**

07/01/2020

**EU RESEARCH FRAMEWORK  
PROGRAMME**

H2020

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As part of the LONGITOOLS H2020 project, we offer an exciting postdoctoral position at the Universitat de Barcelona and its DataScience@UB centre, to develop algorithms and tools for predictive modelling of individual-specific health and disease trajectories using multi-factorial approaches, integrating environmental and clinical determinants. We are thus seeking candidates with a PhD and expertise in an area pertinent to the project and experience in advanced statistics, machine learning, data integration, software development, sensor/wearable/mobile data, programming using C++/Python, and/or biomedical informatics. The successful candidate is expected to be able to organise his/her work with minimal supervision and prioritise work to meet deadlines of the project. Due to multiple collaborations within the LONGITOOLS project with consortium partners from Europe, advanced oral and writing English knowledge are required.

The LONGITOOLS H2020 project will leverage a unique collection of birth cohorts, longitudinal data, and clinical registers to characterise coincident longitudinal trajectories of environmental exposure and cardio-metabolic health. It will implement evidence-based life-course causal models to estimate how clinical and policy interventions may sustainably affect the health and economic burden of cardio-metabolic diseases due to environmental exposures. A key

objective will be to generate evidence-based predictions which can ultimately translate into innovative healthcare applications for individualised health monitoring and disease prevention. LONGITOOOLS will also allow researchers and policy makers to generate new knowledge for identifying the likely causal (direct and indirect) mechanisms through which exposures to man-made environmental factors affect the risk of cardio-metabolic disease.

The University of Barcelona (UB), founded in 1450, is one of the oldest universities in Spain. It comprises a student body of 84,370 and 4,548 research staff members. With 73 undergraduate programs, 273 graduate programs and 48 doctorate programs, UB is the largest university in Barcelona and Catalonia. The UB is ranked the first Spanish university according to several rankings (QS World University Rankings 2018, ARWU/Shanghai Ranking 2018). It is particularly interested in fostering international relations and, for many years, has managed an average of 150 European projects per year. Since January 2010, Universitat de Barcelona is part of the prestigious League of European Universities Research (LERU). The research will be carried within the DataScience@UB research section, which is an essential part of the Departament de Matemàtiques i Informàtica. DataScience@UB is composed of 15 highly experienced academics in artificial intelligence, computer vision, medical imaging, machine/deep learning, and health-related applications.

**Acronym**

LONGITOOOLS

**FBG project number**

xxxxxx

**Project title**

Dynamic longitudinal exposome trajectories in cardiovascular and metabolic Non-communicable diseases

**IP**

Karim Lekadir

**Department**

Departament de Matemàtiques i Informàtica

**Gross salary per year**

40,000€

**Required documents**

Application letter, Curriculum vitae, etc.

## Send your application to:

### email

karim.lekadir@ub.edu; cc: katharina.f.heil@ub.edu

Name

Karim Lekadir

email subject

Application – LONGITOOOLS PostDoc

## ADDITIONAL INFORMATION

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### Eligibility criteria

- PhD in computing, mathematics, statistics, applied mathematics, biomedical engineering, or equivalent
- A publication record in relevant and refereed journals

### Selection process

- First selection based on CV and letter
- Interviews by a panel of permanent academics from the University of Barcelona

### Additional comments

Priority will be given to people with disabilities.

Female candidates are encouraged to apply.

## REQUIREMENTS

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### Offer Requirements

#### REQUIRED EDUCATION LEVEL

Computer science: PhD or equivalent

#### REQUIRED LANGUAGES

ENGLISH: Excellent

### Skills/Qualifications

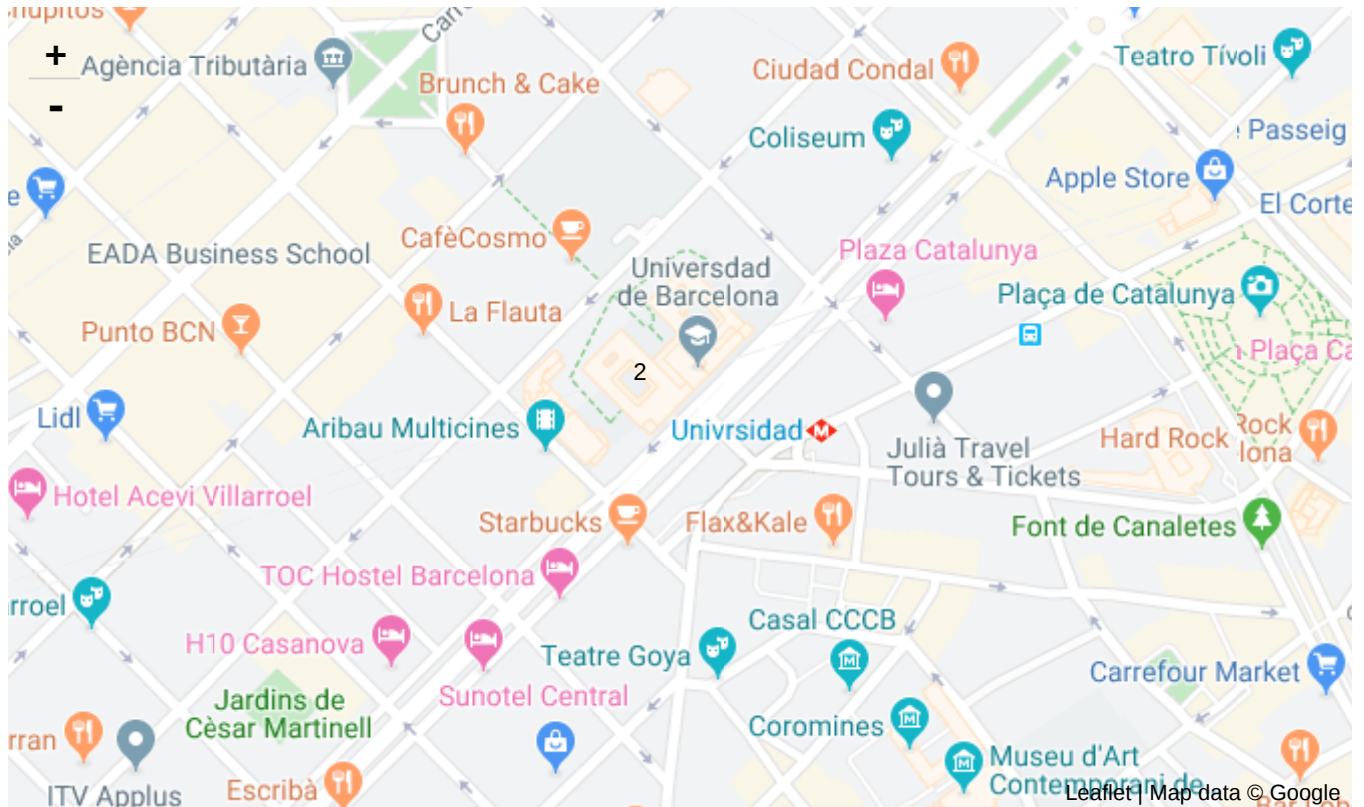
- Machine/deep learning
- Predictive modelling
- Multi-source data integration
- Error / uncertainty estimation

- Structural equation modelling
- Excellent programming skills in Python and/or C++
- Excellent English, both oral and written

## Specific Requirements

- Good team spirit and participation to the scientific life of the lab
- Aptitude to work independently, to lead on project deliverables and to co-supervise students
- Aptitude to collaborate with both technical and clinical collaborators
- Passion for applications of artificial intelligence to biomedicine

# Map Information



Job Work Location



Personal Assistance locations

## WORK LOCATION(S)

1 position(s) available at  
 Universitat de Barcelona  
 Spain  
 Barcelona  
 Barcelona  
 08007  
 Gran Via de les Corts  
 Catalanes, 585

## Open, Transparent, Merit based Recruitment procedures of Researchers (OTM-R)

Know more about it at Universitat de Barcelona [↗](#)

Know more about OTM-R

EURAXESS offer ID: 454401

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