

Milano, 28/06/2024 prot. n. 164412
[Cod. riferimento: C3 1°L]

CALL FOR APPLICATIONS FOR THE AWARD OF 2 POST-DOC RESEARCHER (RTD/RTDA) CONTRACTS FOR THE SCIENTIFIC GROUPS 13/STAT-01, 13/STAT-03, 06/MEDS-24, & 13/STAT-04 AT THE CENTRE DONDENA OF UNIVERSITA' COMMERCIALE "LUIGI BOCCONI" OF MILAN WITH FUNDS MADE AVAILABLE BY MUR – PNRR MISSIONE 4 COMPONENTE 2 – NEXT GENERATION / PROJECT PE8 AGE-IT SPOKE 7.

Article. 1
Call for Competition

To promote the education and improvement of junior scholars, the Università Commerciale “Luigi Bocconi” of Milan, announces a competition by exams and academic titles for the award, by means of two appropriate contracts, according to the ex art. 24 of Law 240/2010 and using the relative University Regulations emanated with the Rectoral Decree n° 106 of 21st December 2022, of 1 Post-doc Researcher Position with the following characteristics:

Duration: **12 months**

Scientific Groups: **13/STAT-01 STATISTICS; 13/STAT-03 DEMOGRAPHY AND SOCIAL STATISTICS; 06/MEDS-24 MEDICAL STATISTICS, HYGIENE, PUBLIC HEALTH, NURSING AND MIDWIFERY and 13/STAT-04 MATHEMATICAL METHODS FOR ECONOMY, FINANCE AND ACTUARIAL SCIENCES**

Scientific Sectors: **STAT-01/A Statistics; STAT-01/B Statistics for Experimental and Technological Research; STAT-03/A Demography; STAT-03/B Social statistics; MEDS-24/A Medical Statistics; MEDS-24/B Hygiene and Public Health; STAT-04/A Mathematical Methods for Economy, Finance and Actuarial Sciences**

In the Bocconi Research Centre “DONDENA”

Professor of referral: **prof.ssa Alessia Melegaro**

Financed by: MUR – PNRR Missione 4 componente 2 – Next Generation

Project: Behaviour and sentiment monitoring and modelling for outbreak control/BEHAVE-MOD/ID SA-02. P0001” - CUP I83C22001810007. Codice locale: CODSOG_000179

Research Project: Preventive health behaviors, such as physical distancing, mask-wearing, and vaccination, are all effective measures to counter the propagation of respiratory infectious diseases. Their adoption by individuals is generally the result of internal and external factors. These factors include risk perception, fear or awareness, past healthcare experiences, and exposure to social and virtual groups. Understanding the underlying mechanisms affecting behavioral response is thus pivotal to maximizing public health efforts during an outbreak and prompting compliance with those measures.

The BEHAVE-MOD project aims to integrate these behavioral aspects into the study of disease dynamics to generate a novel unified modelling framework.

Risk and behavioral data will be collected during the seasonal peak via online surveys within the Italian research project BEHAVE-MOD. These data will be complemented with both traditional socio-demographic data and unconventional data on social media and internet usage. This will allow us to: i) investigate the determinants influencing compliance with health preventive behaviors and vaccine hesitancy to infectious diseases in the post-pandemic scenario; ii) simulate disease dynamics with an

increased level of realism while assessing the impact of behavioral components on epidemic trajectories.

The findings will enable us to design a portfolio of preventive and control interventions targeting the most negatively affected subgroups and enhance their effectiveness.

Responsibility in the Project: Work-package member.

Job description: A combination of quantitative approaches and research methodologies will be required to extend the current state-of-the-art of the epidemiological models integrating behavior.

Data collected through surveys will be used to study the interplay between risk perception, peer influence, and adoption of preventive behaviors or vaccine hesitancy during the seasonal peak. Statistical and machine learning techniques will be used to achieve this goal. Agent-based and compartmental models will then be developed to unravel the complex relationship between preventive behaviors, vaccination choices, and disease burden.

The successful candidate should have a quantitative background with an already solid experience in mathematical modeling of infection transmission, and related statistical methods. She/he should moreover demonstrate previous involvement in research projects relevant to the BEHAVE-MOD framework, should be able to follow projects through from conception to publication in high impact factor journals, be a strong writer, have experience presenting work to scientific audiences from diverse fields and enjoy working collaboratively. The successful candidate will be part of a team of epidemiologists, statisticians, demographers, sociologists and computational social scientists. Supervision of more junior team members might be required.

Article. 2 *Admission Requirements*

In order to participate in the competition, candidates must have a PhD or equivalent carried out in Italy or abroad, with the exclusion of Professors and researchers who already hold a position with tenure, even if they have ceased service.

Candidates with a degree of kinship (up to the fourth degree of kinship) to any professor in the University Board, the University Rector or the Managing Director are not allowed to apply.

These statutory pre-requisites must be in place at the deadline for the presentation of applications determined by the present announcement.

Applicants will obtain a conditional acceptance. At any time, the administration can arrange, with reason, exclusion from the selection procedure due to the lack of necessary pre-requisites.

Candidates are also required, as a preferential qualification, to have the following professional skills: In order to participate to the competition, the candidate must have a PhD or equivalent, carried out in Italy or abroad, on one of the following: physics, computer science, informatics, mathematics, demography, mathematical-biology/quantitative epidemiology/statistics/data science/network sciences. High quantitative skills with statistical software (Stata, R) and at least one programming language (Python/C/C++) as well as excellence proficiency in English will be required.

Article. 3 *Applications*

Applicants should apply by submitting the complete package via our on-line application system, which can be found at "www.unibocconi.eu/post-doc" by **23:59 of August 22nd, 2024 (Italian time)**.

Each candidate's application must clearly indicate:

- surname and name
- date and place of birth
- citizenship
- residence
- contact address

The application must include the following documents, which must be attached to the application:

- professional C.V., in pdf format;
- motivation letter, in pdf format.

For any problem related to uploading files, the candidate can contact faculty@unibocconi.it.

Article. 4 *Evaluation Committee*

The Evaluation Committee for this competition, appointed by the Rector based on the proposal of the Director of the competent Research Centre, after consulting the professor of Referral of this call for applications, is made up of three professors, of which at least two professors are from the Bocconi Core Faculty, employed in the * of this call or of a similar scientific disciplinary sector.

The competition will be carried out by an evaluation of titles and examination as well as an interview.

For hiring via the National and International job market, the evaluation of the applications will be carried out by the Evaluation Committee, who will draw up a short list of candidates.

Each shortlisted candidate will be interviewed in person or via conference call according to International Job Market practices to assess their research abilities and interest in covering the Post-doc researcher position proposed by the University.

At the end of the selection process the Evaluation Committee, will write an overall evaluation for each candidate, forming a table of eligible candidates which will be published on the University website.

For eligible candidates, the University, following the proposal of the Research Center, has the possibility to make an offer which must explain: the contract type, teaching load required, responsibility in the Project, proposed salary, which cannot be less than the minimum wage. It must also indicate the deadline by which the candidate must communicate their acceptance of the offer.

If the candidate accepts the offer, the University will draw up a fixed term, private law contract.

Article.5 *Rights and Duties of the Post-Doc Researcher (RTD/RTDA)*

The grant will last for **12 months** and indicatively run from **October 1st, 2024**.

The normal obligations of the research include:

- Research activity as part of the Research Project presented, as well as additional programs elaborated by the Center, supervised by the *Professor of referral*, who will check the activity carried out.

The Post-doc Researcher position is not compatible with the attendance of degree or master's degree courses, research doctorates in Italy or abroad and involves the placement on unpaid leave for the employee in service in the public administration.

It is possible to carry out, with the consent of the Post-Doc Researcher, a teaching activity for a maximum of 48 hours per semester in addition to the Post-Doc Research contract.

Evaluation for the purpose of extension or renewal of the Agreement: Upon the expiration of the first contractual period (three months before the expiry) the Post-Doc Researcher job performance will be assessed as follows:

With respect to the research activities: evaluation of the research activity performed of the Project and the quality of scientific publications produced.

The outcome of this evaluation is formalized and sent to the Researcher and to the Dean of the Faculty.

The Director, on the basis of this evaluation, can propose the extension or renewal of this contract for a functional period of the Project, and in any case within a maximum duration of 5 years.

Article.6 ***Compensation***

The amount of the compensation will be **from 40,000 to 50,000 € gross per annum**, payable as follows:

- SALARY: 13 (thirteen) equal installments made on a monthly basis, on the 27th (twenty-seventh) day of each month.

- SEVERANCE PAYMENT: an annually set aside-amount equal to 1/13,5 (one thirteenth and a half) of the salary to be paid within the end of the month following the expiration of the Agreement.

The University will provide insurance for risks of injury and civil responsibility.

Article.7 ***Causes of deferral or suspension of the contract***

If a candidate is on maternity leave, minimal payments will be made by INPS (national insurance) as according to the Ministerial Decree dated 12th July 2007, published in the "Gazzetta Ufficiale" n. 247 of 23rd October 2007. For illness the article 1, comma 788 of the Law 27th December 2006, n. 296 and subsequent modifications and additions will apply. During the period of mandatory maternity leave, a top-up payment will be made by Bocconi University up to the monthly amount of the grant as according to article 5 of the Decree dated 12th July 2007.

Article. 8 ***Treatment of Personal Data***

According to a General Data Protection Regulation n. 679/2016 all personal data supplied by candidates to People & Culture, both in electronic and paper format, is exclusively for evaluation purposes and to publicize the acts related to the current evaluation procedure and the conferral of a Post-doc Researcher position as detailed in this announcement.

Article. 9 ***Advertising***

This current competition announcement is published on Gazzetta Ufficiale, on the website of



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Università Bocconi - Faculty and Research\faculty recruiting\post-doc positions and on the MUR and EU websites. A copy of the announcement is available from the International Faculty Office.

PEOPLE & CULTURE
(dott. Marcello Valtolina)