

Announcement of available position	Selection code: 354_CRI_IOT
Type of position and number of positions vacant	Fourth level Researcher (R4) in the field of Internet of Things (IoT) technology based sensors' co-development, testing and data analysis applied to environmental monitoring of forest ecosystems - recruiting for the formation of a ranking for temporary employee contract.
Organisational structure and manager for the position	Research and Innovation Centre – Unit of Forest Ecology – Line Manager for the position: Luca Bellelli Marchesini, PhD.
Specific requirements	<ul style="list-style-type: none"> - Master degree (or equivalent ≥ 4 years degree) in Forest Sciences, Agricultural Sciences, Environmental Sciences, Biology, Physics, Engineering, Statistical Sciences or equivalent; - Knowledge of English (minimum level B2), evaluated during the interview.
General requirements	<ul style="list-style-type: none"> - Italian citizenship with the benefit of full civil and political rights within the State of Italy, whether belonging to the Republic, or not; <p>OR</p> <ul style="list-style-type: none"> - Citizens of European Union Member States or other States, provided they meet the following requirements: <ul style="list-style-type: none"> - benefit of full civil and political rights in the country of origin or nationality (or explanation of the reasons for non-benefit); - possession of all the same requirements as for citizens of the Republic, with the sole exception of Italian citizenship, as detailed below. - Having or not having been the subject of criminal convictions or applications of penalties at their own request (plea bargaining), which have been confirmed as enforceable convictions; - Having or not having been the subject of a conviction or any application of penalty at their own request (plea bargaining), which has not yet been confirmed as enforceable, for the offences referred to in Book 2, Title II, Chapter I of the Italian Criminal Code ("Offences committed by public officials against the public administration"); - Having or not having been dismissed or declared disqualified from employment for having obtained employment through the production of false documents or documents that are invalid and with no possibility of remedy, or for having carried out activities incompatible with employment relationships with the Public Administration, or with entities governed by private law but under public control; - Having or not having exercised authoritative or negotiating powers over the Edmund Mach Foundation (Article 53 paragraph 16 ter of Legislative decree 165/2001) during the previous three years; - Having or not having been dismissed for justified subjective reason nor just cause, nor having had their employment relationship terminated in application of Article 32 quinquies of the Italian Criminal Code, because of failure to pass the probationary period for an employment relationship of indefinite duration and requiring the same qualifications as for this current recruitment; - Being in compliance with any obligations for military service; - In the event of recruitment, being available to take service at Edmund Mach Foundation premises.

<p>Physical suitability for the specific work</p>	<p>Edmund Mach Foundation will assess the specific risks connected to the work, and if necessary request a preventive medical examination, pursuant to art. 41 of Legislative Decree 81/2008, in order to ascertain the physical suitability of the employee and absence of contraindications to the work for which they are to be employed. In case of physical unsuitability or suitability with limitations, the Foundation reserves the right not to proceed with recruitment or to withdraw from the contract if it has already been entered into.</p>
<p>Exclusion from the recruitment process</p>	<p>The following may not participate in the recruitment process: temporary staff who have been employed for the Foundation in an equivalent role for 36 months.</p>
<p>Job description</p>	<p>The resources will be assigned to the Forest Ecology Unit under the supervision of Dr. Luca Belelli Marchesini. The successful candidate will primarily work in the context of the EU-funded RemoTrees project (contract no. 101086287, 1 Dec 2023-30 Nov 2027) aimed at producing an innovative IoT based multi-sensor device for the monitoring of the forests in remote/hard to reach environments.</p> <p>Under the supervision of permanent FEM staff, the successful candidate will be expected to contribute to the co-design and testing of sensor prototypes for the measurements of solar radiation spectral features, tree radial growth, tree sap flow, tree stem humidity and physical variables of air and soil in the forest environment. The work will be conducted in collaboration with the partners of the project consortium, including a private company specialised in IoT sensors production. He/she will deal with data elaboration from long term tests conducted at the the RemoTrees project sites and with already existing datasets from the FEM network of forest IoT sensors in order to conduct an evaluation of the sensors performance and to analyze the ecological responses of the monitored forest sites to the main individuated environmental drivers.</p> <p>He/she will also contribute to the establishment of sensor specific routines to process large datasets aimed at creating gap-filled and quality-checked temporal series of the monitored variables and perform an assessment of forest ecosystem services at different spatial scales also by means of remote sensing based upscaling techniques.</p> <p>The successful candidate will participate in the dissemination of the RemoTrees project results through written and oral contributions for scientific meetings and conferences and through the preparation of manuscripts for publication in peer-reviewed journals.</p>
<p>Duties</p>	<p>Under the supervision of the PI, the selected researcher will deal with:</p> <ul style="list-style-type: none"> - Conduct laboratory tests on sensors prototypes aimed at characterising their performance (accuracy, precision, response type); - Test the sensors prototypes at Remotrees field sites managed FEM and report on their technical performance; - Contribute to the technical improvement of the sensors' prototypes by providing feedback on limitations/drawbacks and proposing ameliorations; - Process data from the Remotrees project in situ field experiments and earlier datasets from IoT devices installations at forest sites; - Perform a quality control of the produced datasets; - Analyze the obtained datasets, perform statistical data analyses and interpret the results with particular focus on the ecological functionality of the monitored forests;

	<ul style="list-style-type: none"> - Perform an upscaling of results from tree level to local and regional spatial level by means of remote sensing products; - Prepare reports and scientific papers on the results of analyzed datasets.
Keywords	Sensors, Internet of Things, Forest functional ecology, Data Science, Remote sensing.
Selection process	By qualifications as expressed in Annex A (maximum 30 points) and interview (maximum 70 points). The results of the selection are based on the sum of the points awarded for the two phases of the selection process.
Subjects covered in the interview	<p>During the interview, which will be conducted in English, the following knowledge will be verified (maximum 70 points):</p> <ul style="list-style-type: none"> - IoT sensors for forest monitoring (maximum 10 points); - Sensors performance evaluation (maximum 15 points); - Forest functional ecology (maximum 10 points); - Statistical data analysis (maximum 15 points); - Remote sensing of forest attributes and RS based spatialization (maximum 15 points); - General organisation and activity of FEM, rights and duties of employees (maximum 5 points). <p>In the interview, the candidate must achieve a minimum score of 40/70 points.</p>
Assessment of qualifications	<p>On the basis of the information provided exclusively in the application (Annex A), FEM will select the best 15 candidates evaluated based on the following criteria (maximum 30 points):</p> <ul style="list-style-type: none"> - Relevance of the Master thesis to the following topics: Forest Sciences, Agricultural Sciences, Environmental Sciences, Biology, Physics, Engineering, Statistical Sciences or equivalent (maximum 5 points attributed according to the following criteria: 0 points=no match, 1.5=minimal match, 3=medium match, 5=perfect match); - Relevance of the PhD thesis to the following topics: Forest Sciences, Agricultural Sciences, Environmental Sciences, Biology, Physics, Engineering, Statistical Sciences or equivalent (maximum 5 points attributed according to the relevance of the PhD thesis to the selection: 0 points=no match, 1.5=minimal match, 3=medium match, 5=perfect match); - Scientific publications in journals with impact factor in the field of forest sciences and environmental sensors or equivalent (1,5 points per item up to maximum 10 points. The score of the individual publications will be doubled if the candidate appears as first, last or corresponding author); - Work experience (including doctorate) in the field of forest ecology and/or environmental sensors (0,3 points for every month of experience up to maximum 10 points).
Knowledge level of languages, relative to the Common European Framework (CEFR), and method of verification	<p>The interview will be in English. Knowledge of English will be verified (to be checked by an interview on a technical or scientific nature) at a minimum level corresponding to B2.</p> <p><i>To understand the levels of knowledge required, consult the dedicated page on the EUROPASS website:</i></p> <p>https://www.coe.int/en/web/common-european-framework-reference-languages</p> <p>Failure to possess a level of English corresponding to B2 will result in exclusion from the selection process.</p>

<p>Possession of requirements and recourse to clarification</p>	<p>The candidate must meet all the requirements and qualifications laid out, on the closing date for submitting applications as stated in the public announcement, as well as on the date of recruitment and placement. Candidates are in any case required to promptly inform the Foundation of any change in the data declared in the application for participation in the public notice.</p> <p>Failure to meet the specific and general requirements will result in exclusion from the selection process. The Foundation reserves the right to verify the above requirements and may at any time terminate the selection process for a candidate who does not meet them. Should the verification reveal inconsistencies, doubts or uncertainties, the Foundation also reserves the right to request further clarifications and/or documents to be produced, within the peremptory deadline indicated by the Foundation.</p> <p>The assessment of the possession of requirements and evaluation of qualifications is based exclusively on the information declared in the application form (Annex A).</p>
<p>Modality and deadlines for communication to candidates of the dates and locations of the interview</p>	<p>Candidates admitted to the interview phase will be informed of the date and location via e-mail (<u>not by certified email, a.k.a. PEC</u>), sent to the contact address used to send the curriculum and the application (Annex A), at least 10 days before the interview date.</p> <p>The interviews will be held at the Edmund Mach Foundation in San Michele all'Adige (Province of Trento, Italy) or in videoconference.</p> <p>Each admitted candidate must attend the interview, where they must present a valid photographic identification document, or if held in remote videoconferencing, the document must be presented in advance. Late arrival or failure to appear at the interview will result in exclusion from the selection process.</p>
<p>Gross annual remuneration</p>	<p>Provincial Collective Contract for Personnel of Research Foundations (https://trasparenza.fmach.it/Amministrazione-Trasparente/Personale/Contrattazione-collettiva/CCPL-Personale-Fondazioni-di-Ricerca), Fourth level Researcher, current gross remuneration of Euro 36.075,75, including 13th and 14th month's pay.</p>
<p>Deadline for presentation of applications and recruitment process end date.</p>	<p>Applications must arrive by and no later than 23:59 CET (the date and time of receipt shown in the electronic mail account of the Foundation shall be valid) on February 1, 2024.</p> <p>The recruitment procedure will terminate at the latest by August 1, 2024.</p>
<p>How to present applications</p>	<p>Applications to participate in the selection must be sent in electronic format to the email address (not certified email address, a.k.a. PEC) curricula@fmach.it, indicating the recruitment code (354_CRI_IOT – R4 temporary Internet of Things) in the subject of the message and must consist of:</p> <ul style="list-style-type: none"> - the application form (Annex A), as per the model available on the webpage announcement, which must be saved with the file name and extension: Surname First Name_Application.pdf. The application must be fully completed, without any reference to other attached documentation and/or information; - the candidate's curriculum vitae, saved with the file name and extension as follows: Surname First Name_CV.doc or .pdf; - a copy of a valid identity document. <p>Any person encountering difficulty in submitting the application due to disability is invited to contact +39 0461 615542.</p>

In the application form (Annex A) the candidate must declare any marriage, cohabitation or family relationship up to the fourth degree with employees, ongoing consultants, directors, members of the supervisory bodies of the Foundation. This requirement ensures maximum transparency in the recruitment process and avoids situations of potential conflict, such as, for example, direct or indirect reporting in the same organisational structure between persons who have such relationships.

In the application form (Annex A) the candidate must declare, under their own personal responsibility, **the possession of the specific requirements, general requirements and any qualifications as indicated in the relative boxes of this Recruitment Announcement**, pursuant to Articles 46 and 47 of Presidential decree no. 445 of 28 December 2000, indicating awareness of the forfeiture of any benefits obtained and the criminal sanctions provided for respectively in Articles 75 and 76 of the aforementioned decree, in the case of untrue declarations, creation or use of false documents.

By submitting an application for selection, the candidate assumes responsibility for the truthfulness of all the information provided in the application and in any attached documents, as well as for the conformity to the original of the copies of any documents produced, all this in accordance with Presidential decree 445/2000.

The Edmund Mach Foundation reserves the right to carry out checks and if these reveal that the candidate's declarations contain any untrue content, the declarant will forfeit any benefits deriving from any provision issued on the basis of the untruthful declaration; moreover, such a declaration, as a "mendacious statement", will be punished in accordance with the Italian Criminal Code and the special laws on the subject.

Candidates who make untruthful declarations concerning the possession of the fundamental requirements for participation in the selection process will be removed from the ranking list and the employment relationship, if already established, will be terminated.

The Foundation shall not accept any responsibility for the loss of communications due to the incorrect indication of the address by the candidate or to a missed or late communication of the change of the address indicated in their application, or due to any postal or telecommunications defects or in any case due to third parties, unforeseeable circumstances or force majeure.



Proof of documentation
in the event of hiring
and relative deadlines

Within 10 days prior to hiring, the candidate must provide, under penalty of forfeiture from hiring, the attestations or certifications demonstrating possession of the requisites of admission and qualifications declared in the application form.

Results of the selection

The results of the selection will be communicated by:

- **publication of the suitable candidate ranking** on the webpage dedicated to the present recruiting announcement, with the details of ranking order, surname and name; the publication of the candidate's name in the list of suitable candidates shall not be subject to the right of confidentiality, therefore the candidate may not request that their name be removed from the said list;
- at the end of the procedure, **communication to all candidates**, whether included in the ranking of suitable candidates or not, **by individual email** (not certified email, a.k.a. PEC) to the contact address used to send the curriculum vitae and the application.

 <p>FONDAZIONE EDMUND MACH</p>	<h2>RECRUITING ANNOUNCEMENT</h2>	 <p>Page 6 of 6</p>
<p>Organization and Human Resources Division Human Resources Development Office</p>		

<p>Hiring conditions and categories covered by Law 170/2010 or Law 68/99</p>	<p>The Edmund Mach Foundation operates in compliance with the legislation in force concerning fixed-term contracts. Candidates are invited to state whether they belong to the categories referred to in Law No. 170 of 8 October 2010 (people with specific learning disorders (SLD)) or in Law No. 68/99 (persons with disabilities or categories referred to in Article 18), and to indicate this in the application form.</p>
<p>Company welfare and benefits at current date</p>	<ol style="list-style-type: none"> 1. Family Audit certified company, with flexible working time and human resources management policy, for the wellbeing of the employees and their families; 2. Gender Equality Plan (GEP) that promotes gender equality through a process of structural change; 3. In-house dining hall in San Michele all'Adige, as well as a payment card for meals taken in registered non-company facilities, with the value of Euro 6.00 per meal; 4. Bike-sharing facility and free car park within the San Michele all'Adige campus and at the peripheral locations; 5. Free "Education Roaming (Eduroam)" WiFi on the San Michele all'Adige campus (90% coverage) and in facilities of other entities affiliated with GARR for the Wi-Fi service; 6. Employee discount for the purchase of products from the Edmund Mach Winery sales point; 7. Staff sports club, with discount for members and promotions of sport-recreational activities (on-campus gym); 8. Internal market of agri-food products prepared by the Foundation students.
<p>Privacy Policy</p>	<p>In accordance with Article 13 of the EU General Data Protection Regulation 2016/679 ("GDPR" or "Regulation"), and in general with the principle of transparency set out in the Regulation, the Edmund Mach Foundation provides information on the processing of personal data at the webpage "Privacy Policy".</p> <p>The candidate takes full responsibility for all the information included in their application form and curriculum vitae. The Foundation reserves the right to require that the candidate considered suitable for the post shall offer documentary proof of the qualifications they have listed.</p>

This Recruiting Announcement is issued in compliance with equal opportunities between men and women for access to employment, pursuant to Legislative decree no. 198 of 11 April 2006 "Code of equal opportunities between men and women, pursuant to Article 6 of Law no. 246 of 28 November 2005".

The candidate identifies their gender prior to the tests and/or interview.

For any matters not covered by this Recruitment Announcement, reference should be made to "[Procedure for the recruitment of human resources at the Fondazione Edmund Mach](#)".

Original signed by
 Eng. Mario Del Grosso Destrieri
 Director General
 Edmund Mach Foundation