Forest Science and Technology Centre of Catalonia (CTFC) is a research centre affiliated with the Generalitat de Catalunya (the Catalan government), and it reports to the Ministry responsible for forest issues.

CTFC is a CERCA centre and a government accredited TECNIO agent (developer of public technology).

It was granted a 'Human Resources Excellence in Research' award by the European Commission, recognizing CTFC as a European research institution that fosters an attractive and motivating work environment.

KTT D+I SPECIALIST IN GEOMATICA

Referencia: 26-02-00008

The Forest Science and Technology Centre of Catalonia (CTFC) is seeking to recruit a highly skilled specialist in forest geomatics, remote sensing, and environmental data analysis to support the development of advanced methodologies for large-scale forest characterization and modelling. The selected candidate will contribute to cutting-edge research and innovation activities focused on processing high-density LiDAR data, integrating multi-source forest inventories, developing predictive modelling frameworks, and generating spatially explicit forest variables to improve monitoring, management, and decision-making across Mediterranean landscapes. She/he will play a key role in both methodological development and operational implementation within an experienced research team.

The Forest Science and Technology Centre of Catalonia (CTFC), located in Solsona (Pre-Pyrenees, 120 km from Barcelona), Spain, employs app. 190 staff, produces >120 scientific articles annually and has a turnover of app. 12 Mil. €/year. CTFC's research activity is organised around four programs: Multifunctional Forest Management, Landscape Dynamics and Planning, Biodiversity management and conservation, and Bioeconomy, health, and governance. Further institutional information is available at: www.ctfc.cat/en.

As part of the **Landscape Dynamics and Planning program**, CTFC undertakes research on the ecology of landscapes in a global change context, innovation in ecosystem modelling and multi-purpose forest planning at different scales targeting multiple ecosystem services, development of cutting-edge decision support systems for forest and agroforest planning, as well as fire ecology and other natural disturbances.

The candidate will work in projects of both the **Landscape Modelling** and the **Precision Forestry** (**PRECFOR) groups** and will be involved in the execution of competitive research related to BOSPIR-3D project regarding close-range sensing in the Pyrenees, and knowledge transfer tasks related to the characterization of the current state of forest resources, the detection of spatial changes in forest structure and composition, and the remote-sensing monitoring of wildfire protection zones in the wildland-urban interface. This research position at CTFC offers an excellent opportunity to develop a scientific career in applied forest and remote sensing sciences research in a stimulating and transdisciplinary working environment.

TERMS OF THE APPOINTMENT

1. The contract may start on April/May 2026. It is a full-time position with a scientific-technical activities contract.

2. Based on CTFC labour categories, annual gross salary will be adjusted to the foreseen role and will be commensurated with the specific profile of the selected candidate (qualifications and experience), ranging between 24.000 - 28.000 €/year.
3. The candidate will be based at CTFC in Solsona (NE Spain), with remote working options according to the institution norms (max. 20 h/week).
4. The contract is for 1 year with possibility to extend it.
5. Working time: 37.5 hours per week
6. 23+6 days of holidays per year and good family-work balance conditions
7. Travelling abroad to collaborate with Southern Europe and Mediterranean researchers and stakeholders.

KEY RESPONSABILITES

Key tasks and responsibilities will include:

1. Process and normalize LiDAR data to extract point-cloud metrics.
2. Adapt and apply existing k-Nearest Neighbour (kNN) methodologies for forest attribute imputation, incorporating a new set of target variables (build and maintain an integrated National Forest Inventory (NFI)–LiDAR database to train and validate models).
3. Develop and implement a new methodology for adjusting forest projection models, specifically the species-specific diameter-class distributions, using LiDAR and Sentinel-1/2 data.
4. Prepare raster cartography for key forest variables.
5. Estimate biomass and develop fuel models for shrublands, exploring the potential of high-density LiDAR, improve upon results obtained with previous LiDAR flights.
6. Develop a methodology through close-range sensing to fit allometric equations using non-destrictive sampling at tree level to estimate stem volume and aboveground biomass at tree level.
7. Comparative analysis of multi-source temporal datasets (LiDAR time series, satellite imagery, and other remote sensing products), including data preprocessing, spatial and temporal co-registration, quality assessment, and change detection using statistical and geospatial analysis techniques.
8. Preparation, structuring, and management of geospatial datasets for integration into multiple planning systems developed within the program, including data standardization, metadata generation, quality control, and data modeling to ensure interoperability across GIS environments and decision-support platforms.

BASIC REQUIMENTS

1. A MSc degree in environmental sciences, biology, forestry, agronomy, bioinformatics and biostatistics, Geography, Geoinformation or any related suitable discipline for the main topic of this call.
2. Demonstrated computer skills in the use of GIS for spatial data management.

3. Experience in programming (R, C++, Phyton) and using advanced statistical techniques, including some specific remote sensing data processing programs.
4. Proven fluency in spoken and written Spanish and English.

DESIRABLE REQUIREMENTS

1. University degree in Forest Engineering, Environmental Sciences, Geography, Geoinformation, or a related field.
2. Demonstrated experience in LiDAR data processing, point-cloud analysis, and remote sensing workflows, with knowledge on software such as LAStools, CloudCompare, AgisoftMetashape, and UgCS
3. Proficiency in R and/or Python for spatial data processing, modelling, and automation.
4. Solid understanding of forest inventory methods, forest structure metrics, and ecological modelling.
5. Experience applying kNN or similar imputation techniques for forest attribute prediction.
6. Proven ability to generate and manage raster cartography and work with GIS environments.
7. Strong analytical skills and the ability to work independently as well as collaboratively within a research team.
8. Good written and spoken communication skills in English.
9. Previous participation in research projects, especially those related to RS and forestry.
10. Ability to disseminate scientific results.
11. Readiness to work in multi-disciplinary teams.
12. Excellent organizational skills and capacity to deliver tasks in a timely manner to deadlines.

SOFT COMPETENCES

1. Previous experience working with National Forest Inventory (NFI) data or similar large-scale forest datasets.
2. Familiarity with Sentinel-1 and Sentinel-2 products, including preprocessing and feature extraction.
3. Knowledge of fuel models, fire-related variables, and wildfire behaviour modelling.
4. Experience developing or applying forest growth, yield, or projection models.
5. Background in ecological modelling, spatial statistics, or machine learning applied to environmental data.
6. Experience participating in research projects, technology transfer activities, or collaborative scientific initiatives.
7. Ability to document workflows, write technical reports, and communicate results effectively.

8. Capacity to write technical reports.
9. Knowledge of Catalan or Spanish will be considered an asset.

CONTACT

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https://ctfc.cat/

https://ctfc.cat/transparencia.php

CTFC guarantees an open, transparent, and merit-based selection process (OTM-R) for all registered applications, thus avoiding any bias based on gender, origin, age, ideology, or any other potentially discriminatory circumstances.

Inclusion policy: Priority will be given to candidates with a recognized and accredited disability of 33% or higher, provided that the disability is compatible with the proper performance of the position.

SELECTION PROCESS AND CRITERIA

The selection process will be carried out through a two-stage procedure. The first stage will primarily target candidates from the consortium entities, given the nature of the position. The second stage will include the remaining candidates who have correctly submitted their application within the established deadline.

Admission of applications

Candidates must submit a CV, the documents attached to the job offer duly completed and signed, and a motivation letter through www.ctfc.cat/registre.php by March 17, 2026 at 14:00, indicating the reference code of the job offer.

Applications submitted through any platform other than the CTFC job portal will not be accepted. Applications received through the SOC must follow the instructions provided there.

Indicative Timeline

Orientative Calendar	
25 working days	Publication and dissemination of the job offer: CTFC website, SOC Office, and other communication channels.
Following 2 working days	Pre-selection: verification of compliance with the minimum requirements and assessment of desirable conditions. Informative email sent to non-eligible CVs.
Following 2 working days	Selection committee meeting: interviews with shortlisted eligible candidates. Minutes of the Selection Committee stating the name of the selected candidate and the reasons for the selection. Publication of the resolution on the CTFC job portal identifying the selected candidate. Informative email sent to interviewed eligible candidates who were not selected.
Following 1 working day	Submission to Human Resources of the official documentation required to process the employment contract and coordination of the contract start date.
March/April 2026	Start of the contract.