

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).

Researcher offer in applied mathematics in forestry

Reference: 26-06-00041

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 the Landscape Modelling and the Precision Forestry (PRECFOR) group and will be involved in the execution of competitive research on forest planning, and knowledge transfer tasks related to multi-objective forest Planning, design of resilient landscapes and the provision of ecosystem services. This research position at CTFC offers an excellent opportunity to develop a scientific career in applied mathematics in forest sciences research in a stimulating and transdisciplinary working environment.

Within this program, CTFC is seeking to appoint a researcher to lead and conduct fundamental and applied research related to:

- Numerical analysis and methods
- Multi-criteria spatial prioritization
- Heuristic optimization
- Mixed integer programming techniques
- IA algorithms implementation and interpretation

The candidate will be part of the Precision Forestry (PrecFOR) group and will be involved in the execution of competitive as well as knowledge transfer projects related to designing resilient agroforest landscapes and the estimation of future provisioning of ecosystem services. This research position at CTFC offers an excellent opportunity to develop a scientific career in applied forest research in a stimulating work environment.

The Forest Science and Technology Centre of Catalonia (CTFC), located in Solsona (Pre-Pyrenees, 120 km from Barcelona), Spain, employs app. 200 staff, produces more than 120 scientific articles annually, and has a turnover of around 12 Mil. €/year. The CTFC's research activity is organized into 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.

TERMS OF THE APPOINTMENT

1. The contract may start on September 2026.
2. It is a full-time position with a duration of 2 years (with possibility of contract extension).
3. The candidate will be based at CTFC in Solsona (NE Spain), working as member of the Landscape Dynamics and Planning program.
4. 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 25.000 and 28.800 €/year.
5. Working time: 37.5 hours per week with remote working options according to the institution norms (max. 20 h/week).
6. 23+6 days of holidays per year. Good family-work balance conditions.
7. Travelling abroad to collaborate with European or American researchers.

KEY RESPONSABILITIES

Key tasks and responsibilities will include:

1. Application of Multi Criteria Analysis and Optimization methods.
2. Use of heuristic and/or exact optimization technics to develop and adapt spatial optimization tools for forest management, fire prevention, and conservation planning problems.
3. Develop decision-support systems and integrate forest dynamics and management model simulations together with optimization techniques.
4. Publication in scientific journals and dissemination of results in scientific and technical meetings and knowledge transfer activities.
5. Contribution to other institutional activities.

BASIC REQUIREMENTS

1. A master's degree in computer science, bioinformatics and biostatistics, mathematical modelling, operational research, data science, or related suitable discipline for the main topic of this call.
2. Advanced expertise in numerical methods and spatial, multi-objective optimization methodologies.
3. Expert in programming (R, C, C++, Python, ...) and advanced statistical techniques.
4. Advanced command of exact and approximate optimization techniques, including mixed-integer linear programming, stochastic programming, multi-objective optimization, heuristics, metaheuristics, and hybrid methods.
5. Familiarity with Machine Learning models and algorithms.
6. Proved knowledge on multi-criteria decision analysis and its application to forest planning problems.
7. Proven experience in mathematical modeling applied to tactical-strategic forest planning problems.
8. Proven fluency in spoken and written Spanish and English.

DESIRABLE REQUIREMENTS

1. Demonstrated experience in R+D projects and leading capacities.
2. Ability to disseminate scientific results.
3. Pro-activeness in developing new software (R-packages, forest visualization tool, ...) to contribute at the standardization and generalization of the research team's workflows.
4. Ability to formulate complex mathematical models, analyze their structural properties, implement efficient computational algorithms, and rigorously evaluate their performance through numerical experimentation, simulation, and statistical analysis.
5. Readiness to work in multi-disciplinary teams.
6. Excellent organizational skills and capacity to deliver tasks in a timely manner to deadlines.
7. The authorship of relevant scientific publications.
8. Previous participation in research projects, especially those related to RS and forestry.

SOFT COMPETENCES

1. Good communication skills.
2. Capacity to write technical reports.
3. Result oriented.
4. Flexibility and adaptation.
5. Availability to travel locally and internationally.
6. Initiative and pro activity.

CONTACT

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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.

- **Applications:**

Candidates must submit a CV and a motivation letter via www.ctfc.cat/registre.php by **17 July 2026 at 14:00**, indicating the reference code of the job offer. Applications submitted through portals other than the CTFC's own job board will not be accepted, nor will those received through the SOC that do not follow the instructions specified in the call itself.

The position subject to this call may be declared vacant if the selection committee considers that, despite the existence of candidates who meet the minimum requirements, none is deemed suitable for the position.

The 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.

Estimated timeline	
15 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.
September 2026 (approximately)	Start of the contract.