

Researcher (UNIVERSITÄT GRENOBLE)

Bewerbungsfrist: 24.03.2017

Chargé-e de recherché/Researcher (young scientist) in spatio-temporal modelling of environmental quality - Grenoble (38) - BAP/ research area: applied mathematics, modelling

Position open to candidates with a Phd NB: in some cases and under certain conditions, applicants may apply for recognition of equivalence of diplomas that are not in the list of qualifications required for this examination (diplomas issued or recognized by a Member State of the European Union or the States Parties to the agreement of the European Economic Area, or the professional qualification obtained).

Description

Irstea (formerly called Cemagref) is the National Research Institute of Science and Technology for Environment and Agriculture. It focuses on three main social challenges: Sustainable management of land and water, natural hazards and environmental quality. Within the framework of French and European research, the Institute carries out research in support of public policies and in partnership with industry. It employs 1,600 people across nine regional centres in France. At the Irstea centre in Grenoble, you will integrate in a new research unit resulting from the merger of the research units DTM (Development of Mountain Territories, <http://www.irstea.fr/dtgr>) and EM (Mountain Ecosystems, <http://www.irstea.fr/emgr>), whose scientific purpose is to understand the functioning and dynamics of socio-ecosystems with a dual objective of producing scientific knowledge and supporting public decision making. This new research unit, whose transitory acronym is TEGR (Territories and Ecology Grenoble), brings together researchers in vegetation ecology and forestry as well as in the social sciences and agronomy. Your mission will be to design and implement dynamic models of species distributions/communities that can measure the current and future impacts of land use change (urban pressure, land abandonment, simulation of potential management options) at different temporal and spatial scales. The challenge is to have a pivotal competence to study the interactions between terrestrial ecosystem dynamics and practices/trajectories, in order to better understand the effects of changes of uses and climate on these interactions, to predict them and to propose adjustments allowing for a better maintenance of environmental quality. In this sense, you will be committed to contributing to and/or carry out work on the trajectories of socioecosystems, with a perspective of developing the interface between ecology/social sciences, which is at the heart of the TEGR unit's scientific project. On the basis of existing data on species and/or communities (flora/fauna) (e.g. Irstea data on soil and vegetation, INPN type databases and/or protected areas, regional, national or international data, etc.), by linking with data on climate and land cover, the developed models will propose simulations allowing to discuss the management options to maintain or increase the environmental quality of a territory, its interface zones between urban and agricultural or forestry areas, and questions of the permeability of these areas. Several lines of research are possible: Development of methods for the analysis and description of habitats, their dynamics and functionality at multiple spatial and temporal scales; Analysis of the spatial structure and diversity of habitats; Interactions between the elements of the landscape mosaic. Taking into account changes in scale (from the plot to the landscape); Interactions between climate change and changes in management: trade-offs between services and trade-offs between scales. Vulnerability/resistance and adaptation to global change of ecosystem functions at the landscape scale; Research on quality indicators for quantifying and monitoring (in particular biodiversity) over large areas (scale of a biogeographic region, a protected area, managed natural areas), mainly on natural mountain habitats (grasslands, moors, forests).

Abilities

You hold a PhD in ecology and/or applied mathematics, and you have profound knowledge of spatial ecology and modelling. You can develop and lead research projects (at regional, national, European levels) and you have experience in supervising PhD students and potentially also post-docs. You have strong oral and written English skills. You enjoy teamwork and pluridisciplinarity. The position requires extended work at a computer screen, with regular working hours. You need to travel for the development and implementation of research projects, which may involve the collection of empirical data as well as the presentation of the analyses and research results. The site is accessible by tram and bus; it has a lift, and parking for personal vehicles.

Contacts

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How to apply

Application form can be obtained:

- on the website: www.irstea.fr link "Nous rejoindre" and then link "concours externe"
- or by contacting the recruitment centre: concours@irstea.fr - +33 (0)1.40.96.60.37 ou 6091

Full application should be submitted **before 24 March 2017** and sent to: Irstea, Direction des Ressources Humaines et des Relations Sociales – Pôle RMDC, 1 rue Pierre-Gilles de Gennes CS 10030, F-92761 ANTONY Cedex