



Rainfed spatio-temporal crop allocation modelling in Mediterranean landscapes at plot scale from remotely sensed land-use time series

**3 years PhD position
Montpellier-France / Tunis-Tunisia**

Research area and project description:

The PhD project will address the formalization of crop allocation rules in complex rainfed Mediterranean cultivated landscapes in order to explicitly represent crop allocation patterns dynamics at landscape extent and plot scale. Geo-agronomy, remotely sensed land-use time series analyses, landscape patterns analysis, multi-agents modelling will be the main disciplinary focus depending on the qualifications and research interests of the successful candidate. Case study will be the Lebna watershed (200 km²) in Cap Bon, Tunisia.

Qualifications and specific competences:

We expect the applicants to:

- Have a strong background in agronomy at landscape scale with developed skills in spatial/digital modelling and statistics or a strong background in digital/statistical modelling with a deep interest for geo-agronomy, both with an outstanding curriculum
- Be highly dedicated, self-motivated and ambitious
- Have excellent collaborative skills and an interest to work in an interdisciplinary/international context.

Place of Employment and Place of Work:

The position is based at IRD LISAH lab, Montpellier, in an interdisciplinary setting including the Landscape team of the LISAH lab and the international NAILA lab in-between IRD, IRESA and Tunisian Ministry of Research in Tunis. Regular work journeys in Tunis (NAILA lab, INGRESA partner, field trips) for 50% of the time are part of the employment. These labs offer an international working environment with state-of-the-art and field-trip facilities for geo-agronomy, land-use remote sensing, and spatially explicit modelling.

About the LISAH lab at IRD and the LMI Naila:

The LISAH lab (Laboratory for the study of Soil-Agrosystem-Hydrosystem interactions) is a joint research unit with scientists from INRA, IRD, SupAgro and AgroParisTech. LISAH researches deals with hydrology, contaminants transfer and erosion in cultivated landscapes, and on the spatial properties and temporal changes of the landscapes, in order to address the many challenges relative to water and soils in cultivated landscapes. The PhD position will be hosted in the "Landscape" team (namely the "Spatio-temporal patterns of soils and cultivated landscapes" team) of the LISAH lab.

The NAILA lab is an international laboratory devoted to the management of water resources in rural areas in Tunisia. In Tunis the PhD student will be hosted at INGRESA (National research Institute of rural engineering, Water and Forest), which is one of the Naila lab partners within the IRESA (Institution of Agricultural Research and Higher Education).

Financial Support & Eligibility:

The PhD studentship includes 3 years of funding through a tax-free maintenance grant (450 € / month in Tunisia and 1381 € / month in France)

The project is open to any students from Southern nations.

Further evidence for outstanding academic pedigree will be welcomed (e.g. prizes, theses, publications).

Start date is by 1st october 2018.

To apply:

Please send the following documentation by email to anne.biarnes@ird.fr

Applications will be received from 1st January 2018 and can be submitted until the project is filled up to a deadline of 01st June 2018 at 12 :00 (please contact the email address provided for up to date information):

- 1) A current CV;
- 2) A cover letter (2 pages A4 max) which describes your motivation for applying for the project and your previous research experience;
- 3) Letters from two references (these can be sent directly to anne.biarnes@ird.fr by referees if preferred);
- 4) Transcripts of your previous qualifications.

Applications will first be reviewed. Then, the short-listed candidates will be contacted and interviewed. Results will be notified by 15th June 2018

If you have any questions about the project, please get in touch with Anne Biarnès (anne.biarnes@ird.fr).

Contacts:

Applicants seeking further information are invited to contact:

Anne Biarnès, e-mail: anne.biarnes@ird.fr

References

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