

The Institute of Farm Economics of the Johann Heinrich von Thünen-Institute, Federal Research Institute for Rural Areas, Forestry and Fisheries, in Braunschweig is offering a full-time position (currently 39 hours per week) for a

Scientist (f/m/d) in Remote Sensing / Spatial data analysis

The position is limited to a fixed term of five (5) years and is to be filled as soon as possible. The term of employment is regulated by § 2 (1) S. 2 Wissenschaftszeitvertragsgesetz.

The Thünen Institute, together with Julius Kühn Institute (JKI) and the Federal Office for Agriculture and Food, currently undertakes a joint research project that develops concepts and solutions for the “Monitoring of biological diversity in agricultural landscapes”. Within this field, one task of Thünen Institute is the generation of a long-term database about the state and development of biological diversity in agricultural landscape in Germany. Remote sensing plays a key role for the spatially explicit trend-monitoring at national scale. Remote sensing data deliver information about the composition and heterogeneity of agricultural fields in the spatial (landscape) and temporal domain (crop rotation and other indicators of crop practices). A current need, here, is on the detection of extensive management systems (e.g. extensive grazing / pastures, mixed orchards) and other parts of the agricultural land that are not regularly assessed within the Land Parcel Information System (LPIS) of the EU as part of the common agricultural policy (CAP). On the other hand, also the management of intensive cropland can be supported by field-based indicators of productivity from remote sensing. In both cases, the Copernicus-program of ESA provides a long-term data strategy to serve these demands.

The overall aim of the position is the development of remote sensing based indicators of management intensity in cropland and grassland from high spatial and temporal resolution time series. These indicators are planned to support the monitoring of biological diversity at national scale in Germany. Besides the processing of multi-sensoral satellite data time series, your main tasks include the participation in the formulation of concepts for the nationwide implementation of the developed indicators.

Job profile:

- Development of conceptual framework of remote sensing indicators for monitoring management intensity in agriculture
- Geostatistical framework for processing of ground-truth data (e.g. productivity measures)
- Development of metrics and algorithms for the parametrization of phenological features from time series of Sentinel- as well as other national and ESA-EO-missions for selected regions in Germany
- Validation of spatial and temporal transferability of the developed methods
- Evaluation of consistency of developed products with data from agricultural statistics
- Communication in advisory boards and technical authorities
- Composition of reports, presentation and scientific publications

Professional skills:

- Completed academic studies (M.Sc. / Diploma) in agricultural, environmental or geo-sciences, Geoinformatics, Applied Informatics or related disciplines with focus on spatial data evaluation
- Completed PhD in one of the mentioned subjects
- Very good skills in processing of remote sensing data (SAR and optical) and in statistical data analysis (e.g. in R)
- Relevant experience in programming / automation of processes, preferably in Python or R environment

- Experience in the application of cloud-based processing environments for Big Data is beneficial
- Interest in agricultural and environmental sciences

Personal skills:

- Distinctive ability to work in a team
- Analytical power / power of judgement
- Ability to present complex issues in self-explanatory manner in oral and written form
- Very good knowledge of English and German language in spoken and written
- Readiness to travel

We offer the involvement in a dynamic research institute and a position in applied sciences with a high degree of autonomy and creative development and interdisciplinary and international collaboration. As we rate the personal and professional development of our staff highly important, we offer a family-friendly working environment, flexible working hours and a comprehensive range of training courses.

The working contract and employment conditions are based on the German Tarifvertrag für den öffentlichen Dienst (TVöD) (Wage agreement for public service). Remuneration is according to wage group 13 TVöD. The possibility of part-time employment will be checked when there is an interest to work on a reduced weekly hour level (full-time is 39 hours/week).

The Thünen Institute supports gender-equality. Qualified female applicants are encouraged to apply.

Severely handicapped people with the same qualification are given special consideration; only a minimum of physical aptitude is expected from them.

If you have any questions about this job vacancy, please contact Dr. Stefan Erasmi (E-Mail: stefan.erasmi@thuenen.de; phone: +49(0)531 596-5153).

Interested candidates should send their applications (including introductory letter, CV, copies of relevant certificates) in electronic form as one file in PDF-format - reference **2019-29-BW** - before 12 January 2020 to

bw@thuenen.de

Dir. u. Prof. Dr. Hiltrud Nieberg
Thünen-Institut für Betriebswirtschaft

Information about Artikel 13 DSGVO: www.thuenen.de/datenschutzhinweis-bewerbungen.