

The Institute of Wood Research, part of the Johann Heinrich von Thünen institutes, Federal Research Institute for Rural Areas, Forests and Fisheries, located in Hamburg is looking for a

scientific employee (f/m/d).

The vacancy is a temporary employment for 3 years in part time with 75% of the regular working hours to be filled as soon as possible. The employee will work within the research project "Influences of tree growth and forest management on the technological properties of wood" on the task "Modeling of wood density as a function of climate and other factors".

The vacancy targets at applicants who want to work in the general position as well as to promote their own scientific education, respectively their doctorate. In this context the Institute of Wood Research cooperates with the University of Hamburg. This fixed-term employment contract is carried out according to § 2 Abs. 1 Satz 1 Wissenschaftszeitvertragsgesetz (*Law on Fixed-Term Employment Contracts in the Science and Research Sector*).

The Thünen Institute for Wood Research is an experimental research institute that deals with many aspects of the usage of wood and other materials based on lignocellulose. The scientific expertise of the institute is strongly interdisciplinary and ranges from fundamental research questions to applied problems. The institute advises the Federal Ministry of Nutrition and Agriculture in all questions about the material use of wood.

The growth of trees and thus the possibilities of using wood as a material are currently exposed to a large number of rapidly changing factors. These include climate change, silviculture, planting of selected seeds and diversification of tree species. These factors significantly influence various technologically important wood properties. In order to ensure both the most efficient possible use of wood and improved information for forest planners, these relationships have to be understood quantitatively in more detail.

A key parameter for the material usage of wood is its density or the density distribution over the cross section. Above all, the density influences the mechanical properties of wood and is a decisive factor for the usability of wood in the construction sector. The density of native woods varies over the course of the year and also depends on growth conditions, such as climate, for instance. The aim of the advertised position is to develop a model that can represent the relationships between environmental factors and the wood density distribution for the commercially most important tree species in Germany. For this purpose, existing and new experimental data will be collected and combined with climate archives. The model will be applied to project future tree growth and wood properties.

The project will be carried out in cooperation with Prof. Dr. Philipp Porada, Universität Hamburg (Institute of Plant Science and Microbiology; Ecological Modeling).

Tasks:

- Modeling of wood density based on climate and other factors
- Assessment of different modeling approaches and sensitivity studies
- Evaluation through experimental data, which will partly be collected by the applicant

Requirements:

- Completed university degree (Diploma, M.Sc. or equivalent) in one of the following disciplines: Mathematics, Physics, Data Science, Biology, Wood science, (mechanical, industrial) engineering, environmental science
- Advanced knowledge in numerical modeling, e.g. MatLab, C++, Fortran
- Excellent expertise in spoken and written English, good knowledge of German



- High motivation for scientific work and interest in achieving a Ph.D.
- Strong cooperative and communicative way of working

Further required qualities:

- Creativity and interest in scientific exploring
- Ability to analyze complex systems, a goal-oriented working style, critical judgment
- High motivation, initiative, organizational skills, and also good time management

We offer an interesting scope of work in an active and stimulating research environment, working on socially relevant issues at the interface between science, politics and practice and contacts to national and international research institutions.

We support the compatibility of work and family and hold the [audit certificate career and family](#). In order to support compatibility, the Thünen Institute offers, within the framework of legal and regulatory possibilities, flexible working time models, home office and teleworking.

The employment is governed by the Wage Agreement for Public Services (TVöD-Bund). The payment of remuneration is carried out according to tariff-category 13 TVöD.

The Thünen Institute promotes professional equality of women and men and explicitly welcomes applications of women.

The Thünen Institute sees itself obliged to promote inclusion. Applications of people with severe disability are explicitly welcome. These will be especially considered.

For questions and further information Dr. Martin Nopens is available (E-Mail: martin.nopens@thuenen.de). Please send your written application with a personal data sheet, a presentation of your education and professional career along with copies of certificates (including final school certificate) with the **code 2022-036-HF** by **01. April 2022** to

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Information according to Art.13 DGSVO concerning the collection of personal data can be found at: www.thuenen.de/datenschutzhinweis-bewerbungen.