

The Thünen Institute of Sea Fisheries of the Johann Heinrich von Thünen Institute, Federal Research Institute for Rural Areas, Forestry and Fisheries, is offering a temporary position for 3 years beginning at the earliest possible date, for a

Research Scientist (f/m/d).

The position is part-time with 65 % of the regular working time (i.e. currently 25.35 hrs/week) for the development of methods based on artificial intelligence (AI) for age reading of fish. The methodological development work on self-learning algorithms is ideally suited for a doctoral thesis. This vacancy is therefore addressed to applicants who, in addition to their employment relationship, may also pursue their own further academic training in the form of a Ph.D. In this context, the Thünen Institute of Sea Fisheries cooperates with various universities and colleges. The employment relationship shall be limited in time under section 2(1) sentence 1 of the Science Time Contract Act.

Data on the age structure of fish populations are required to estimate the stock sizes. So far, age determination has been based on microscopic images of ring structures in the ear stones (otoliths) of the fish. The application of artificial intelligence for the interpretation of the ring structures is obvious and is to be developed and established within this project for important commercial fish species such as cod, plaice or saithe. In addition, there are possibilities of automated acquisition of biochronological data, e.g. for the investigation of climate effects on fish growth patterns.

The tasks include in particular:

- Acquisition and digitalisation of microscopic images of ear stones (otoliths) and other hard structures of fish
- Construction of training data sets for the development and adaptation of self-learning algorithms for pattern recognition
- Analysis of image information using artificial intelligence and self-learning algorithms
- Development of a largely automated procedure for the recording of age structures in otoliths
- Production of scientific publications on the above-mentioned topics and communication of the results

Required qualifications:

- Completed university studies (University Diploma/Master) in Computer Science / Data Science /Machine Learning or comparable disciplines
- Very good knowledge of the mathematical principles and methods of AI
- Experience in the application of self-learning algorithms for pattern recognition and process automation
- Very good knowledge of English
- A good knowledge of German is an advantage; if no knowledge of German is available, the willingness to learn German is required
- Willingness to work in an interdisciplinary environment and to cooperate closely with technical staff
- Very good communication skills
- Proven ability to publish in the scientific literature

We offer you a highly interesting and cutting-edge research topic in applied research to be conducted within the Thünen Institute's network of interdisciplinary and international cooperation. The results of the work are also of interest to the public, allowing for opportunities of public outreach.

The employment relationship is governed by the provisions of the Collective Agreement for the Public Service (TVöD). The payment of the remuneration is made when the personal and collective bargaining requirements are fulfilled according to pay category 13 TVöD.

Job vacancy at the Johann Heinrich von Thünen-Institute



The Thünen Institute promotes the professional equality of women and men and therefore welcomes expressly encourages applications from women.

The Thünen Institute is committed to inclusion. Applications from people with severe disabilities are therefore expressly desired. These will be given special consideration in the selection procedure.

For technical queries, please contact Dr. Christoph Stransky (Tel. 0471 94460-141; christoph.stransky@thuenen.de).

Written applications with tabular curriculum vitae, description of education and professional experience, career history and copies of certificates, if possible in one PDF file, are requested until 15 April 2020 under the keyword "2020-051-SF" to

sf-bewerbungen@thuenen.de

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Information pursuant to Article 13 GDPR on the collection of personal data can be found at www.thuenen.de/datenschutzhinweis-bewerbungen.