Professorship for Data Driven Modelling

Application deadline: Feb 02, 2025

The professorship is in the **Institute for Data Science, Engineering, and Analytics (IDE+A).**
Starting date: **as soon as possible**

The general legal requirements in compliance with paragraph 36 of the North Rhine-Westphalia Higher Education Act (Hochschulgesetz – HG) are as follows:

1. A University Degree
2. Proven track record of experience in teaching (if not available, teaching within the first year will be evaluated in the context of a contractual probation period)
3. Particular proficiency in scientific work, usually demonstrated by the quality of the doctorate
4. A strong track record in the application or development of research findings and methods gained during a minimum of five years of professional employment in a relevant field – at least three years of these five years must have been outside of a university environment.

Professional, didactic, and methodical competencies:

Applicants will have completed a university degree, preferably in psychology, and hold a doctorate. They will have at least five years of relevant professional experience, with at least three years outside the university sector.

Professional Competence

Applicants will have practical experience in data-driven modelling, proven by various data science projects, ideally in different application contexts. This also includes experience in team processes and collaborations with stakeholders, sound knowledge of programming languages and libraries, and data analysis tools.
For the 'Data Driven Modelling' professorship, we seek a committed personality with strong specialist skills who will consistently represent the topic in the faculty's Bachelor's and Master's degree programmes and research. You should have sound knowledge and practical experience in data analysis, data visualisation, and mathematical modelling to represent these in teaching.

Research competence

We would like you to submit subject-related publications, presentations and/or projects on applied scientific research in data-driven modelling. Due to the practical nature of the computer science degree programmes, research skills geared towards concrete and practically usable innovations in data-driven modelling are an advantage.

Experience in acquiring and realising research projects is desirable. The applicant must be able to coherently demonstrate how past and planned research activities contribute to further enhancing the research profile of the Faculty of Computer Science and Engineering and TH Köln as a whole.

International competence

The applicant will have experience establishing international cooperation and an existing international network; community contacts are an advantage. We expect the applicant to have an excellent command of English, as teaching and project supervision will also be in English. If you are not a native speaker, an excellent knowledge of German is required, as the Bachelor's degree programme is taught exclusively in German.

Didactic competence/communication skills

The TH Köln is committed to high-quality teaching. The faculty plans to reorganise mathematics teaching with a stronger focus on application and modern teaching methods. At

the same time, the Bachelor's degree programmes in the Computer Science teaching unit are increasingly being converted to a project-based structure. An orientation towards research-based learning is also part of the Faculty of Computer Science and Engineering self-image. We, therefore, expect the applicant to be prepared to provide competence-orientated teaching and to create activating learning arrangements in a practice-oriented learning environment.

Theory and practice should be appropriately linked to initiate learning processes and facilitate learning success. The applicant should have a high level of pedagogical aptitude and motivation for teaching practical and scientific knowledge and theories. Teaching experience at universities or further education institutions is desirable. Experience in dealing with learning processes and the ability to facilitate learning success are advantageous. You would like to work with us to modernise the teaching of mathematics and develop it further to meet the needs of our students.

The applicant will be able to structure complex topics in a way that is appropriate to the learning objectives, target group, and situation of undergraduate students and convey them at a proper level of abstraction. This also means that you are able and interested in developing complex content from real projects with first-year students. You have the patience and motivation to support students in the often-challenging maths-based subjects. You are interested in innovative teaching concepts and are prepared to research these and incorporate them into your own teaching. The development and supervision of project work and theses are expressly desired. Engagement with data literacy concepts and digitalisation's role in society is desirable.

Management competence

The applicant will have excellent planning, organisational, and leadership skills, which can be demonstrated, for example, by taking on significant team-oriented leadership roles in companies, larger design or research projects, and/or management functions in academic self-administration. Motivation, communication, and conflict resolution skills when dealing with colleagues and employees are a matter of course. We would like you to bring your forward-looking perspective to developing the teaching and research area of 'Data-driven modelling'. In addition, we are looking for interest and enthusiasm in further developing study programmes and self-administration.

Social skills

The applicant will be able to work in a team, be motivated, deal with conflict and cooperate with the institute staff and external organisations. The applicant will be able to establish and maintain information and contact networks. In the Faculty of Computer Science and Engineering, special emphasis is placed on intensive and personal support for students and staff. Expertise and the ability to initiate and manage international and interdisciplinary cooperation projects are desirable. A sensitive and reflective approach to cultural diversity and the diversity of our students and staff is a prerequisite.

Other skills

The applicant should be interested in collaborating with colleagues and external organisations beyond the boundaries of its specialist area. You recognise the importance of digitalisation as an innovative driver in a wide range of application areas and industries and the resulting need for interdisciplinary cooperation. Cooperation with neighbouring disciplines in research and teaching is expressly desired. It is particularly advantageous if you can assess the potential of inter- and transdisciplinary cooperation to make effective and innovative contributions to global future topics.

With the advertisement for this position and the publication of the requirement profile, TH Köln – University of Applied Sciences specifies which competencies are necessary to fulfill the duties of the professorship successfully. Depending on the focus of the professorship, these competencies are weighted and checked in the selection procedure. Pre-selection is based on the written application documents submitted by applicants. The necessary competencies of the shortlisted candidates will be assessed in an application procedure that includes a lecture, a research presentation and a structured interview. If applicants are

shortlisted and invited to a personal interview, they will be asked to submit a written teaching and research concept in advance. As per their invitation, short-listed candidates will receive more detailed information concerning the lecture, the research presentation, and the structured interview.

Please take note of the application information at the end of this list of requirements for the position.

Additional information

Place of residence

You are expected to move to the city or region where your campus is located.

Remuneration

Professors are remunerated following the W2 remuneration scheme (www.lbv.nrw.de: the remuneration scale for North Rhine-Westphalia as well as information on the family supplement are available on the website of the North Rhine-Westphalia State Office for Salaries and Pensions – LBV NRW – at). In addition to the family supplement, the remuneration provisions make allowance for other benefits (performance-related benefits), in particular, benefits related to the appointment and benefits granted on the grounds of outstanding contributions and/or securing third-party funding for research purposes. The Provisions on Performance-Related Benefits at Universities in North Rhine-Westphalia follow the law (Hochschul-Leistungsbezügeverordnung – HLeistBVO) of December 17, 2004. TH Köln – University of Applied Sciences has also introduced individual regulations in its guidelines on W2-remuneration. Detailed information on the W2 remuneration bracket is available here: th-koeln.de/besoldung

Employment as a civil servant or as a non-civil servant

Professors may only be employed as tenured German civil servants if they hold a full-time position and comply with all legal provisions (e.g. being younger than 50 years old). The possibility of becoming a tenured German civil servant is always determined on an individual basis, and candidates should, therefore contact the above-mentioned contact person in the division for lecturers and assistants in the human resources department. Professors will be remunerated following W2 gross remuneration when employed under non-civil-servant conditions. In contrast to tenured civil servant contracts, professors employed under such provisions must pay social security contributions.

Part-time employment may be granted upon request, e.g., for familial reasons, provided this does not interfere with fulfilling the position's duties.

Additional employment

Full-time professorship: additional employment of up to eight hours per week may be authorised in compliance with the legal regulations for North Rhine-Westphalia (thus permitting work in positions of practical relevance). If you work freelance with your own office, this will be subject to specific conditions outlined in the legal stipulations concerning additional employment for university personnel.

Part-time professorship: The execution of activities other than those related to the professorship is subject to the regulations governing part-time employment.
If your work as a professor is less than 50 %, then the legal stipulations on additional employment do not apply.

Application information

Please submit your application materials using our application management system. Return to the job advertisement and click here:

Apply here

In our application management system, we ask you to submit information relevant to the processing of your application and to upload the following documents (maximum file size 10 MB per file, optimum processing with a maximum of 5 MB):

- cover letter
- photo (optional)
- curriculum vitae, including a list of publications and an overview of courses held Please list your periods of work experience (inside and outside of the university contexts) in tabular form and provide the month and year of each period. In the case of parallel employment, please indicate the percentage of work time spent at the given institution. Please list the work experience you gained after receiving your first university degree.

- certificates (max. 5 files)

  - copies of university diplomas/certificates
  - job reference letters and/or performance reviews to provide evidence for periods of work experience gained from the first university degree onwards
  - certified translations in German or English of foreign certificates

- other documents

  - e.g. a list of publications, an overview of the courses held, evaluations