

## W2-Professorship for Generative Algorithms for Visual Media

Faculty of Information, Media and Electrical Engineering

Application deadline: 5th November, 2025

Starting date: at the earliest opportunity

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

1. University degree
2. Proven track record of teaching ability, or as an exception, the teaching ability is to be proven during the first year through a 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 academic 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. If the applicant does not have such a strong track record as mentioned above, then it is necessary to have a German “Habilitation” or additional academic qualifications equivalent to a “Habilitation” (the postdoctoral qualification in Germany, which entitles the person to research at an expert level and teach his or her academic subject(s) at university). To prove that the applicant has such an equivalent qualification, a professor’s assessment, which shows the applicant’s competence, is to be enclosed with the application. Such a professor must be from a university, or from a university of applied sciences (Fachhochschule) and in the latter case the professor must have a “Habilitation”. The applicant may also provide evidence of a positively evaluated junior professorship.

Questions on the recruitment process to:

**Christiane Schnuer**  
T: + 49 221-8275- 3508  
E: christiane.schnuer@th-koeln.de  
Gustav-Heinemann-Ufer 54  
50968 Köln

Position-related questions to:

**Prof. Dr. Arnulph Fuhrmann**  
T: +49 221-8275-2614  
E: arnulph.fuhrmann@th-koeln.de

### Professional, didactic and methodical profile

You have completed a university degree and have proven your qualification for scientific work, as demonstrated by a doctoral degree (preferably with a thematic reference to the advertised professorship). You have proven proficiency in the application or development of scientific findings and methods, which was acquired during a minimum of five years of relevant professional employment. At least three of these five years must have been outside of a university environment.

#### Professional Competences

You have in-depth expertise in the field of generative algorithms for visual media. Ideally, you have already successfully developed applications in this area. Examples include algorithms for style transfer, generative design processes (graphic design, architecture or product design), interactive real-time media generation (audiovisual experiences, games, VR/AR or live performances).

In addition to basic knowledge in the field of machine learning and deep learning, you have in-depth knowledge of generative models (e.g. generative adversarial networks, diffusion models or variational autoencoders). You complement this with expertise in the fields of computer vision, image processing or computer graphics. You are willing and able to further develop and apply your expertise in the highly dynamic field of generative algorithms for visual media in a goal-oriented manner.

You are familiar with relevant programming languages such as Python or C++ as well as relevant frameworks (e.g. PyTorch, TensorFlow, JAX, CUDA). You have already developed generative algorithms using these or similar tools, drawing on large data sets in model training (e.g. LAION, FFHQ, OpenVid-1M). You are confident in using high-performance computing (HPC) or cloud systems.

Furthermore, you actively participate in the development of the field and have demonstrated particular achievements in the development and application of scientific

knowledge and methods. You are able to competently present the complex relationships in generative algorithms for visual media and use your expertise to help shape the content of teaching in our technological degree programs.

### **Research competences**

You have a strong interest in research, which is documented by scientifically recognized publications in the research field of generative algorithms for visual media, and ideally already have a research network. You are able to successfully attract national and international third-party funding. Ideally, you have experience in project management, collaborative research, and interdisciplinary research collaboration.

### **International competences**

If you are not proficient in German at a native-speaker level, your German language skills will need to be at the CEFR B1 level at the time of the interview and CEFR B2 by the time you start work. In addition, at the end of the probationary period, your German language skills will be at the GER C1 level. Regardless of your German ability, you are proficient in written and spoken English and are able and willing to teach courses in English. You have a proven track record of international publications. Experience in collaboration in the industrial or scientific sector on an international level is an advantage.

### **Didactic competences**

Ideally, you have competence in the area of project-based teaching and/or in the area of research-based learning, especially a deep understanding of didactic mechanisms in the interaction of learners and teachers. Ideally, you have several years of experience in the design and implementation of courses at universities or comparable courses. You are able to define learning objectives, justify and review them, structure complex issues and divide the teaching material into manageable steps. This includes the selection of suitable methods, the integration of innovative learning methods and the further development of teaching content. You are able to use and further develop new IT-based teaching and learning methods to provide competence-oriented teaching in your courses. Your teaching is application-oriented and can transfer external experience to your own area of expertise. Your willingness to engage in disciplinary and interdisciplinary cooperation is assumed.

### **Leadership and management**

You excel in systematic planning of teaching, research and transfer – also taking into account available capacities and resources. You set priorities and show ways to realize goals. You formulate goals, can distinguish between what is desirable and what is achievable. Moreover, you are able to assume responsibility for personnel decisions. Furthermore, you think across disciplines and departments, for example when participating in expert committees, and handle university resources economically.

### **Social competences and communication**

You have the ability to actively shape social contacts, to work in a team-oriented manner and to cooperate across disciplines. This includes communication and cooperation with internal and external institutions as well constructive participation in working groups. You adapt quickly to new tasks and develop further technical aspects. Your professional demeanor is convincing and persuasive, with well-mediated arguments and clear points of view. You meet deadlines and time limits. You are collegial, have the ability to deal with conflict, behave with integrity, and have the ability to be self-reflective.

### **Other skills**

You have knowledge and experience in dealing with ethical issues in the context of generative algorithms and artificial intelligence, particularly in the field of visual media.

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The execution of other activities not part of the professorship is subject to the regulations governing part-time employment.

With the advertisement of this position and the publication of the requirement profile, the TH Köln specifies which competencies must exist to successfully fulfill the tasks of the professorship at the TH Köln. Depending on the focus of the professorship these competencies are weighted and checked in the selection procedure. The pre-selection is based on the written application documents. The necessary competencies of the shortlisted candidates will be determined in a lecture, a scientific presentation and a structured interview. The personal introduction is completed by an interview with a personnel psychologist. Applicants are also advised that any written external expertise may result in a disclosure obligation in connection with potential competition disputes. In case you are shortlisted and invited to a personal interview, you will be asked to submit a written teaching and research concept in advance. You will receive more detailed information with the invitation to the lecture, the scientific presentation and the structured interview.

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## **Additional information**

### **Place of residence**

You are expected to move/relocate to the city in which your campus is located/situated or its greater area. Remuneration

Professors are remunerated in accordance with the W2 remuneration scheme ([www.lbv.nrw.de](http://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 as well as benefits granted on the grounds of extraordinary contributions or for securing third-party funding for research purposes. The Provisions on Performance-related Benefits at Universities in North Rhine-Westphalia are in accordance with the law (Hochschul-Leistungsbezügeverordnung – HLeistBVO) of December 17, 2004. Additionally, Cologne University of Applied Sciences has introduced individual regulations in its guidelines on W2-remuneration. Detailed information on the W2-remuneration bracket is available here: [th-koeln.de/besoldung](http://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 Head of Division for lecturers and assistants in the human resources department (Mr. Thomas Neumann / Phone: +49 221-8275-5581 / Email: [Thomas.neumann1@th-koeln.de](mailto:Thomas.neumann1@th-koeln.de)). When employed under non-civil-servant conditions, professors will be remunerated in accordance with W2 gross remuneration. In contrast to tenured civil servant contracts, professors employed under such provisions are required to pay social security contributions.

### **Additional employment**

Full-time professorship: additional employment of up to eight hours per week may be authorized in compliance with the legal regulations for North Rhine-Westphalia (thus permitting work in positions of practical relevance). If you work on a freelance basis with your own office, then this is subject to specific conditions as laid down in the legal stipulations on additional employment for university personnel.

Part-time professorship (less than 50 %): If your work as a professor is less than 50 % then the legal stipulations on additional employment are not applicable.

## Application information

Please apply via our application management system. Go back to the [job advertisement](#) and click here:

[Apply here](#)

Here we ask you for the personal data relevant for the processing of the application and to upload the following documents (maximum fill size 10 MB per file):

cover letter

photo (optional)

curriculum vitae including list of publication and overview of the courses held (here or at the other documents)

certificates (max. 5 files)

- University certificates
- job references or activity reports
- certified translations in German or English for foreign certificates

other documents

- such as a list of publications
- such as an overview of the courses held (evaluation)
- **if necessary: professor's assessment (see page 1: The general legal requirements)**

In the application form you can select the option to submit the required professor's assessment within two weeks after the end of the application period

We'd love to read how you found out about this job. Thank you very much!

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