



The Department of Electrical Engineering and Information Technology at TU Dortmund University is offering the following position (starting at the earliest opportunity):

## Professorship (Open Rank: W3 tenured or W2 with W3 tenure track) Communications Engineering

### Our Profile

TU Dortmund University comprises 17 departments in the natural and engineering sciences as well as the humanities and social sciences and is a dynamic university with a strong profile in research, teaching, promotion of young scientists and transfer.

### Profile of the professorship

You will represent the research field of "Communications Engineering" and visibly advance it at an international top level. In doing so, you participate in or initiate research networks and cooperations within and outside TU Dortmund University and are committed to promoting early career researchers. The department plays a significant role in the BMBF 6G Research Hub 6GEM and the Competence Center 5G.NRW. The professorship is expected to take an active shaping role in the subsequent joint activities derived from these involvements, focusing on the physical aspects of future communication systems. You will also participate appropriately in teaching in the Bachelor's and Master's degree programs of the department.

In the case of the W2 professorship with W3 tenure track, the successful candidate will initially be appointed as a temporary civil servant for five years. At the end of this five-year period at the latest, the tenure track will lead to continued employment as a tenured W3 university professor, provided that the necessary aptitude, competence and academic performance have been demonstrated and that the legal requirements pertaining to § 38 HG NRW are met.

### Your qualifications

You will have obtained a doctorate with very good success and have acquired a post-doctoral lecture qualification (Habilitation) or an equivalent qualification. You have an electrical engineering profile with a focus on the physical aspects of communication. Your research encompasses at least two of the following innovative areas in which you are internationally leading:

- Energy-efficient transmission methods and signal processing, e.g. Zero-Energy Communications,
- Information theory beyond Shannon, e.g. Semantic Communications,
- Data-driven channel/source coding, e.g. using machine learning methods,
- Novel AI-supported concepts for adaptive wireless communication, like AI-Native Air Interfaces,
- Secure and resilient communication, e.g. Physical Layer Security,
- Joint Communications and Sensing,
- Physical foundations of novel services, such as Holographic/ Avatar Communications, Mobile Metaverse,
- Future Beyond 6G Communications: Quantum Communication and/or Nano/Molecular Communications

You have demonstrated your research excellence in these areas through continuous international publications in peer-reviewed journals and at scientific conferences, particularly in recent years. Furthermore, you have been successful in acquiring research and development projects that you conceptualized and managed yourself, such as competitively awarded third-party funded projects or industrial collaborative projects with technology transfer.

For the W3 professorship, research in a third area among those mentioned above is expected, along with continuous high-level international publication achievements in esteemed peer-reviewed journals and at recognized scientific conferences, especially in recent years. Likewise, candidates for the W3 professorship can demonstrate continuous high performance in successfully obtaining and conducting research and development projects they have conceptualized and managed, for example, competitively funded third-party projects or industrial collaborative projects with technology transfer.

All applicants will have the potential for teaching excellence and are willing to teach mandatory courses of the Bachelor's degree program in German (after three years at the latest), currently "Communications Engineering". Social and leadership skills and the willingness to participate in academic self-administration will complete your profile. Moreover, the recruitment requirements in Sections 36 and 37 of the North Rhine-Westphalia Higher Education Act (*Gesetz über die Hochschulen des Landes Nordrhein-Westfalen, HG*) apply. Experience in industrial research or in corresponding collaborations for the technological implementation of research results with industry is desirable. Granted patents and patent applications, national and international research contacts and collaborations, as well as participation in national and international expert committees, are also advantageous.

### Attractive environment

We offer an excellent academic environment and attractive cooperation opportunities with renowned international, national, and regional partners. The metropolitan Ruhr Area with the University Alliance Ruhr (UA Ruhr) guarantees short distances to a diversity of partners from science and industry. With our Dual Career Service, we support your partner in finding professional opportunities in the region, if desired. We will be happy to provide information about housing and living in Dortmund and help you find childcare options. If you are coming to us from abroad, our Welcome Service will support you upon your arrival in Germany.

### Diversity welcome

A central goal of TU Dortmund University is to promote diversity and equal opportunities. We strive to significantly increase the percentage of women in research and teaching and therefore welcome applications from female academics. We give preference to severely disabled applicants if their qualifications meet the requirements. We support the compatibility of family and career and promote gender equality in academia and research.

### Your application

If you are interested in the position, please submit your application by **07.02.2024** via our application portal.

Details on the application process and the preparation of application documents can be found here:

[berufung.tu-dortmund.de/en/application](https://berufung.tu-dortmund.de/en/application)

Questions will be answered by the Dean of the Department of Electrical Engineering and Information Technology,  
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Further information about the Department of Electrical Engineering and Information Technology can be found at  
[etit.tu-dortmund.de](https://etit.tu-dortmund.de)

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