



Published: Tuesday, 21st, January, 2025
Application Deadline: Friday, February 28th, 2025
Fulltime Position, target start date: October 1st, 2025
IT:U, Linz, Austria

IT:U – Interdisciplinary Transformation University in Linz, Austria offers
up to two Tenure-track and Tenured Professorships in

- **Cybersecurity**
- **Quantum Communication and Cryptography**

Full-time appointments at tenure-track and tenured professorial levels at IT:U depending on the successful candidate's qualifications.

ABOUT IT:U

IT:U is Austria's emerging public university dedicated to understanding, driving, and evaluating digital transformation for the benefit of our societies, our economy, and our environment. A new kind of science holds the key to sustainable solutions for the complex, multifaceted challenges we face today: **computational methods and interdisciplinary research transform how we do science**, how we design systems, and how we contribute to solutions of global challenges.

At IT:U we research, teach, and learn things that matter to you and to the world. IT:U prioritizes inter- and transdisciplinary research, emphasizing mission-based study programs and project-based learning. IT:U is dedicated to developing highly innovative learning technology for support and scalability. By overcoming disciplinary boundaries, IT:U confronts the conflicting realities of today and cultivates the skills to navigate an increasingly digital world. If you are inspired to build this entirely new university with us, then you are the one we are looking for.

IT:U professors are excited about the opportunities that computational methods and especially artificial intelligence create within and across disciplines. Their work transcends established methodological boundaries and enriches a whole spectrum of scientific fields. They are open to forward-thinking approaches to learning and the co-creation of knowledge. IT:U seeks to increase the percentage of women in such interdisciplinary scientific communities. **We specifically encourage qualified women to apply.** When in doubt: apply!

IT:U provides an environment in which you can grow:

- Independent research groups: Each professor will create their own research group independent of whether the professor is tenure-track or tenured



- Low student/teacher ratio: There will be no large lectures, instead you will be teaching within projects and small groups
- Teaching support: Learning professionals will support your teaching actively
- Tenure-track is modelled according to US standards
- Completely English-speaking environment
- Highly service-oriented administration

IT:U students will predominantly learn in projects. As a professor you will collaborate closely with project coaches, lecturers, and lab experts to build skills, foster problem-solving abilities, and ignite passion. This face-to-face work in projects will be complemented by online sessions before, between, and after the project to support the learning process. While this style of teaching demands effort, we find it to be exceptionally rewarding. And our learning professionals are committed to support you. IT:U offers doctoral schools since fall 2024. Master's programs will be introduced in fall 2025.

IT:U is a kind of it's own. The Interdisciplinary Transformation University was installed by a particular law specifically designed to provide this institution the independence, agility and funding necessary to act this way, outside of the slow pre-defined processes commonly followed.

WE ARE LOOKING FOR YOU

Successful candidates are experienced researchers, enthusiastic for project-based teaching, willing to take risks, looking beyond traditional disciplines, and dedicated to making a difference in the world.

All applicants should have:

- a doctoral degree in any relevant field as described in the focus fields of this call
- excellent publication track record of authoring and co-authoring peer-reviewed publications in relevant high-quality venues
- strong teaching competencies, ideally relevant to project-based teaching

Applicants for tenured positions should have:

- experience in building outstanding research groups
- a strong track record in acquiring funding
- demonstrated strong leadership
- significant international research network

In addition, any activities to show your commitment to disseminating your research in different communities, such as the creation of study programs, societal initiatives, hackathons, entrepreneurial experiences, international engagements, experiences in working with industry or NGOs, etc., will be greatly appreciated.



Faculty duties will include conducting original research, building a research group, and contributing to their fields through publications. Professors at IT:U actively engage in mentoring and guiding students. They teach in project-based learning settings, contributing to hands-on educational experiences. Simultaneously, they play a vital role in shaping the academic work and cultures of IT:U's research communities.

The working language at IT:U is English, fostering a globally inclusive learning environment; therefore, candidates must be fluent in English.

IT:U believes the intellectual, cultural, and social diversity of our faculty, staff, and students is vitally important to the distinction and excellence of our academic and research programs. We seek candidates who support our institutional commitment to ensuring that IT:U is inclusive, equitable, and diverse.

OUR OFFER

- Competitive salaries starting from €85.000 (tenure track) and €100.000 (tenured professor) per year as base payment. Overpayment is envisaged according to experience.
- Fully funded PhD students and PostDoc positions
- Full integration into Austria's robust public health system, boasting outstanding clinical facilities and comprehensive healthcare coverage for you and your family.
- Dual career support or dual hiring if applicable
- Relocation services incl. paid temporary housing for the first 6 months (relocation to the Greater area of Linz, Austria, is expected)
- Relocation tax allowance of 30% on income from scientific activities is possible for a period of 5 years (requirements must be examined)
- Perks and benefits like free public transportation (e.g. KlimaTicket).

Welcome services: As part of our commitment to supporting the well-being of our employees, we will assist you in securing appropriate facilities such as day nurseries, kindergartens, playgroups, and schools for the seamless integration of your family into our community.

At IT:U, we believe in fostering a diverse and inclusive workplace. We are committed to gender equality, creating an environment where everyone, regardless of gender, has equal opportunities for growth and success. Additionally, we embrace individuals with diverse abilities and provide a supportive and accessible workplace for people of all backgrounds, including those with disabilities.

PLEASE APPLY

Applications must include

- cover letter and motivation for application (1-2 pages)
- curriculum vitae including a list of publications



- three referees – names and addresses of three or more individuals who are willing to provide a letter of recommendation for you. Please note: We will only contact these referees if you make the shortlist and are invited to the hearings.
- research statement describing your future research program and especially illustrating your interdisciplinary approaches (2-3 pages)
- teaching & mentoring statement with a specific focus on how you envision to teach within projects (2-3 pages)

To apply, please fill in the IT:U application form and upload your files at <https://it-u.at/careers/>

DEADLINE: Friday, February 28th, 2025

Review of applications will commence immediately after

INTERVIEWS for the positions will be held in person starting with May 2025.

Candidates are asked to be available during this timeframe. The exact date will be communicated as soon as the shortlist has been finalized (first half of April 2025).

Target start date: October 1st, 2025.

If you have questions or require support, feel free to contact apply@it-u.at.

Univ.Prof. Dipl.Inf. Dr. Stefanie Lindstaedt

Founding President



Cybersecurity, Quantum Communication and Quantum Cryptography:

We invite applications for up to two Tenure-Track or Full Professor positions in cutting-edge areas of **Cybersecurity, Quantum Communication and Quantum Cryptography**. The successful candidates will lead interdisciplinary research, foster industry-academic partnerships, and contribute to teaching in areas critical to technological advancement and security.

To achieve this degree of interdisciplinary and transformational research, we welcome applicants from a wide range of academic backgrounds that are connected to or relevant to Cybersecurity, Quantum Communication and Quantum Cryptography.

Importantly, we aim to strengthen the diversity of perspectives within the field which will recognize the plurality of our society. As such, we particularly encourage researchers with typically under-represented backgrounds to apply at IT:U, e.g., in terms of gender, (dis)ability, social environment, cultural or ethnic heritage, etc.

In particular, candidates should be able to situate themselves (or go beyond) in one or more of the following areas:

- **Cryptography and Cryptographic Protocols:** Designing and analyzing cryptographic algorithms to ensure data confidentiality and integrity.
- **Privacy and Data Protection:** Research on privacy-preserving technologies, GDPR-compliant systems, and secure data sharing frameworks. Developing tools and techniques to protect user privacy in digital interactions.
- **Useable Security and Human-Centered Design:** Exploring methods to enhance the usability of security systems, ensuring that security measures are intuitive and effective for end-users.
- **Cybersecurity Policy and Risk Management:** Research on policy frameworks, risk assessments, and strategies for managing cybersecurity governance.
- **Network and Cyber-Physical Systems Security:** Developing robust protocols and architectures to protect networked systems from cyber threats. Securing integrated systems where computational and physical processes interact, such as industrial control systems and IoT devices.
- **Cloud and IoT Security:** Securing cloud infrastructure and Internet of Things (IoT) ecosystems, including vulnerability assessment and mitigation strategies.



- **Digital Forensics and Incident Response:** Investigating cyber incidents and developing methodologies for effective response and recovery.
- **Artificial Intelligence in Cybersecurity:** Leveraging machine learning and AI techniques to detect and mitigate cyber threats.
- **Cryptography and Post-Quantum Security:** Designing cryptographic algorithms resilient against quantum computing threats, ensuring the security of information systems in the advent of quantum computers.
- **Secure Quantum Communication Systems:** Implementing quantum key distribution and other quantum-based security solutions for robust communication networks.
- **Quantum Networks, Quantum Key Distribution (QKD) and Quantum Network Architectures:** Developing the infrastructure for quantum networks, developing and implementing protocols for secure communication using quantum mechanics, including entanglement-based QKD and the establishment of quantum networks.
- **Quantum Information Theory and Applications:** Advancing the field of quantum information science by developing theoretical frameworks and practical methodologies that enhance quantum computing, communication, and cryptography. This includes creating efficient quantum algorithms, optimizing quantum error correction techniques, and exploring novel applications of quantum information in emerging technologies.