

# 3-Year PhD Position

Multi-Criteria Fairness in Networks

Complexity Science Hub Vienna

€ 32.200 gross/year\*, part time (30h)

\*according to the standard personnel costs and salaries of the Austrian Science Fund FWF



The [Complexity Science Hub Vienna](#) is a young research institution dedicated to a deeper quantitative and predictive understanding of complex systems for the betterment of society. We provide an exciting, creative, bureaucracy-free environment for open-minded visionaries who want to make a change and are brave enough to step out of mainstream science.

## PHD POSITION in MULTI-CRITERIA FAIRNESS IN NETWORKS

We seek an excellent, creative, and highly motivated scientist with a MSc or equivalent with a background in computer science, network science, statistical physics, applied mathematics, data science, computational social science or related fields. The candidate must have a strong interest in multidisciplinary research, a genuine curiosity about fairness in AI systems, and a critical, open-minded, and collaborative spirit. Specific goals of this position include data analysis of multi-attributed online social networks for understanding the emergence of intersectional inequalities and biases in network-based algorithms. The project is funded by a EU Horizon Europe grant (Multi-Attribute, Multimodal Bias Mitigation in AI Systems, Grant ID: 101070285) and implemented in close collaboration with other research organizations that are aiming for socially responsible AI solutions. The candidate will be working in the research team led by Fariba Karimi.

### YOUR PROFILE

You are proficient in the English language, both written and spoken. We expect you to have the proven ability to carry out research independently, with strong analytical, data analysis and modeling skills. Good knowledge and experience in network analysis, fairness techniques in machine learning, and data science is a plus. Experience in programming languages for data retrieval, network analysis, and statistics (e.g., Python) is necessary.

### WE OFFER

We are offering a 3-year PhD position to work with Fariba Karimi in the Computational Social Science and Network Inequality team at the Complexity Science Hub Vienna, Austria. The successful candidate will have the opportunity to work at a highly interdisciplinary interface and will benefit from opportunities for a dynamic, collaborative, and international research environment

### YOUR RESPONSIBILITIES

The successful candidate will play a leading role within this funded project, designing, managing, executing, and publishing research in collaboration with other researchers within this project and elsewhere. You will work in close collaboration with network scientists, physicists, computer scientists, and social scientists to analyze multi-criteria fairness in network-based algorithms and to develop intervention and mitigation methods.

### APPLICATION

Please send your application material to [applications@csh.ac.at](mailto:applications@csh.ac.at) with the subject line "PhD Fairness in Networks". The application includes a curriculum vitae, a list of publications, a brief research statement (why you think you are an excellent candidate in this topic and what research you would like to do with us), and any additional material that helps us to understand that you are research-oriented, technically skilled, and creative. Please also include names and full contact addresses of at least two individuals who are willing to write a letter of recommendation for you if we request it. We will start evaluating applications immediately. The call remains open until the position is filled.

CSH is committed to the principle of equal employment opportunity for all applicants. All employment decisions are therefore based on job requirements, qualifications, merit, and organizational needs. We strongly encourage individuals from underrepresented groups to apply.

We process your personal data in accordance with the law (<https://www.csh.ac.at/data-protection/>).