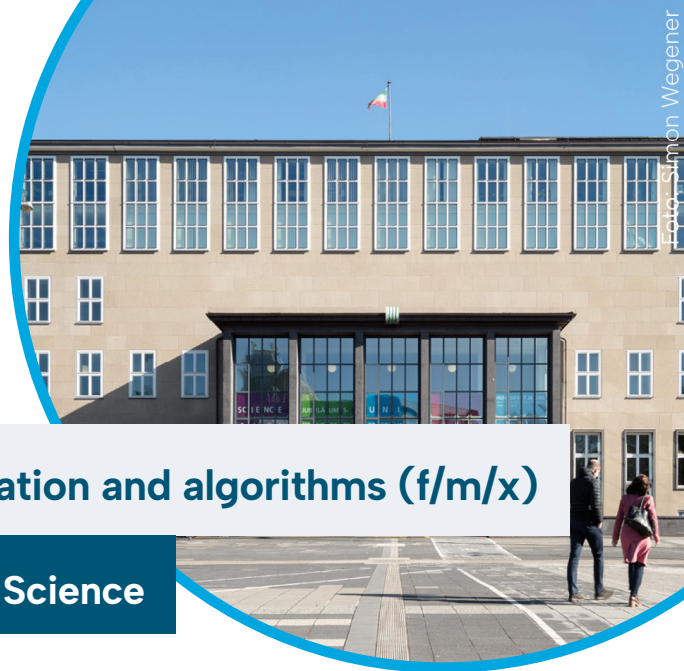




## Research fellow in combinatorial optimization and algorithms (f/m/x)

### Department of Mathematics and Computer Science



We are one of the largest and oldest universities in Europe and one of the most important employers in our region. Our broad range of subjects, the dynamic development of our main research areas and our central location in Cologne make us attractive for students and researchers from around the world. We offer a wide range of career opportunities in science, technology, and administration.

A research fellow position is available in the areas of combinatorial optimization and algorithms. The position is part of the DFG-funded project “New Techniques and Improved Approximation Algorithms for Connectivity Augmentation Problems” and is intended to lead to a doctorate. The project-related scientific guidance will be provided by Dr Felix Hommelshheim. The position is embedded in the scientific environment of the groups of Junior Professor Dr Kevin Schewior and Professor Dr Christian Sohler.

#### YOUR TASKS

- » Research activity within the DFG-funded project “New Techniques and Improved Approximation Algorithms for Connectivity Augmentation Problems” under the supervision of Dr Felix Hommelshheim
- » Research in combinatorial optimization and algorithms, with a particular focus on approximation algorithms for survivable network design and connectivity augmentation problems
- » Development and pursuit of a doctoral research project within the thematic scope of the DFG-funded project under scientific supervision
- » Presentation and publication of research results at international conferences and in scientific journals
- » Participation in scientific exchange as well as support of project-related scientific and organizational activities

#### YOUR PROFILE

- » Degree in computer science, mathematics, or a closely related subject with excellent grades
- » Strong background in the design and theoretical analysis of algorithms, ideally with a focus on graph algorithms, approximation algorithms, combinatorial optimization, or discrete mathematics, as demonstrated, for example, by coursework, theses, research projects, or scientific publications
- » Very good oral and written communication skills in English
- » Desirable: very good German language skills
- » Desirable: proficiency in C/C++ or Python

#### WE OFFER

- » Doctoral studies under the scientific guidance of Dr Hommelshheim
- » A diverse working environment with equal opportunities
- » Support in balancing work and family life
- » Flexible working time models
- » Extensive advanced training opportunities
- » Occupational health management offers
- » Opportunity to work remotely

The University of Cologne promotes equal opportunities and diversity. Women will be considered preferentially in accordance with the Equal Opportunities Act of North Rhine-Westphalia (Landesgleichstellungsgesetz – LGG NRW). We also expressly welcome applications from all suitable candidates regardless of their gender, nationality, ethnic and social origin, religion, disability, age, sexual orientation and identity.

The position is available immediately on a full-time basis (39,83 hours per week). The position is to be filled for a fixed term until 30 September 2029. If the applicant meets the relevant wage requirements and has the appropriate personal qualifications, the salary is based on remuneration group 13 TV-L of the pay scale for the German public sector.

Please apply online with proof of the required qualifications (without a photo) under <https://jobportal.uni-koeln.de>. The reference number is Wiss2606-06. The application deadline is 13 July 2026.

For further inquiries, please contact Dr Felix Hommelshheim at ([hommelshheim@cs.uni-koeln.de](mailto:hommelshheim@cs.uni-koeln.de)) and take a look at our [FAQs](#).

