The **University of Bonn** is an international research university offering a broad range of subjects. With a 200-year history, some 31,500 students, more than 6,000 employees and an outstanding reputation in Germany and abroad, the University of Bonn is one of the leading universities in Germany and has been awarded the status of a University of Excellence.

The **Chair of Computational Life Sciences** of the **International Research Unit Mathematics and Life Sciences** is looking to fill the following position **as soon as possible, in part time, on a fixed-term contract for three years**.

PhD Candidate in Causal Machine Learning & Bio-Mathematics (75%)

The Computational Life Sciences group develops and applies novel mathematical and computational approaches as well as software tools for data analysis and modeling. The spectrum of applications includes oncology, immunology, and epidemiology. We are intensively collaborating with world-leading experts in the respective fields as well as in mathematics, and we are part of the excellence clusters ImmunoSensation2 and Hausdorff Center for Mathematics at the University of Bonn.

To strengthen our team, we are looking for a PhD candidate for a project on the development of interpretable causal models with applications on longitudinal and time-to-event data.

Your tasks:

- Development and application of interpretable causal machine learning-based mathematical models with a focus on longitudinal and time-to-event data
- Development of methods for these models
- Data analysis and interpretation
- Presentation and publication of scientific results at conferences and in journals
- Collaboration with project partners

Your profile:

- University degree (master's degree or equivalent) in statistics, computational biology, computer science, mathematics, econometrics, physics or related fields
- Profound knowledge in machine learning and causal inference
- Experience in some of the following fields: machine learning, causal inference, (mathematical) statistics, probability theory
- Programming skills (preferably Python, C++, Julia and/or R)
- Interest in identifying causal effects, life sciences, and medical topics
- Proficiency in written and spoken English

We offer:

- A varied, challenging job with one of the largest employers in the region
- An international, stimulating, well-equipped working environment with an open and constructive atmosphere and the necessary infrastructure for high-quality research
- The opportunity to complete a doctorate
- Broad spectrum of career development opportunities
- Participation in high-impact scientific projects with access to state-of-the-art resources and technologies
- participation in a university-wide pension system (VBL),
- access to the extensive university sports program,
- easy access to the public transport system due to the central location in Bonn as well as the possibility to use inexpensive parking facilities,
- Remuneration in accordance with TV-L pay grade 13.

The University of Bonn is committed to diversity and equal opportunity. It is certified as a family-friendly university. The University of Bonn seeks to increase female representation in staffing areas where women are underrepresented and provide special career support. Accordingly, the University of Bonn expressly encourages qualified women to apply. Applications will be handled in accordance with the NRW State Gender Equality Act. Applications from qualified candidates with a certified severe disability or from those of equal status are especially welcome.

If you are interested in this position, please send your **complete** application (cover letter, CV, MSc/BSc transcripts, references) by email to iru-mls@uni-bonn.de by **22 June 2025 quoting reference 2025/23.** For technical reasons, applications may **only be submitted as a single PDF file**. Please do not hesitate to contact Prof. Dr. Jan Hasenauer (phone +49 228 73-69446, e-mail jan.hasenauer@uni-bonn.de) if you need any more information. We reserve the right to review application documents that are received after the deadline.