
Design your doctoral topic as a research assistant



The Department of Product Development and Machine Elements (pmd) in the Faculty of Mechanical Engineering at the Technical University of Darmstadt is constantly on the lookout for

research assistants (f/m/d) with the desire to do a doctorate.

Depending on your interests, you will be employed in one of the three work areas of the department and full-time (approx. 40 hours/week), part-time is possible in principle within the framework of the collective agreement. As a rule, you will be classified as E13 (TV-TU Darmstadt).

At the Department of Product Development and Machine Elements, research in three areas focuses on the design of additively manufactured components and the necessary processes, on sensory machine elements including the corresponding development methods and on the behavior of lubricated tribosystems in the electrical circuit. The re-search is strongly oriented towards basic principles. The transfer of findings into application and economic and production-related aspects are always taken into consideration.

Your tasks:

We expressly promote the development of graduates with a desire to do a doctorate and their own research ideas. As part of your employment, you will develop a research approach in consultation with the head of the department and apply for funding for your research idea within suitable funding programs. You will be supported by your colleagues, both within the institute and in collaboration with other institutes at TU Darmstadt. As soon as funding is approved, you will work on your project and, building on this, your doctorate. It is also possible to work on research questions to an agreed extent before funding is approved. The presentation of research results in publications and at national and international conferences is a matter of course. You will also assist students in the preparation of their theses and provide them with technical and organizational support.

In addition to this activity, you will support the teaching of the department in an appropriate manner and pass on your own expertise to students at TU Darmstadt. Through training courses and projects in cooperation with companies, you will have the opportunity to build up an extensive network of contacts for your personal professional development.

Your profile:

- You have a very good degree in M.Sc. mechanical engineering, electrical engineering, mechatronics or computer science or another discipline that fits the research profile of pmd.
- You have a concrete idea of the topic you would like to pursue as part of a doctorate and are willing to work on this together with us.
- You have in-depth knowledge of the subject area that will be relevant to your research, for example machine elements, additive manufacturing processes or sensor and measurement technology.
- You have the necessary skills for scientific work in your field of research, including programming skills, construction and product design with CAD software, FE simulation skills or similar.
- You have the ability to work independently on scientific questions and to work consistently towards a set research goal.
- You apply with the usual application documents and address the following questions in particular:
 - o What do you want to do?
 - o What skills do you have?
 - o What are you not interested in?

Good teamwork and communication skills in German and English are also expected. You will be given the opportunity to prepare for a doctorate. The provision of the service also serves as an academic qualification.



We offer you:

- Work in a young and motivated team
- Modern office space as well as extensive and modern technical equipment for research
- Opportunity for mobile work to an agreed extent (up to 2 days/week)
- Joint activities (hiking days, university events)
- Offers for further training as part of your work (e.g. Ingenium courses at TU Darmstadt)
- The development of a personal network in research and industry alike
- The freedom to try out your own ideas
- The opportunity to develop and implement a start-up idea
- The opportunity to take on an initial management role shortly after graduation by managing student employees and student theses

Application:

Please send your application with the usual documents in German or English in exactly one pdf file by email to:

Technische Universität Darmstadt
Fachgebiet Produktentwicklung und Maschinenelemente
z.Hd. Herrn Prof. Dr.-Ing. Eckhard Kirchner
Otto-Berndt-Str. 2
64287 Darmstadt
kirchner@pmd.tu-darmstadt.de.

Please understand that we are unable to respond to imprecise and incomplete applications that do not address at least one of pmd's research areas.

After receiving your initial application, we will work with you to determine the possibilities of creating a position to implement your individual desired topic for the doctorate and clarify the necessary conditions together with you. Please bear in mind that this process usually takes between three and six months in order to check and consider all conditions.

Data protection:

By submitting your application, you consent to your data being stored and processed for the purpose of the recruitment process. You can find TU Darmstadt's privacy policy [here](#).