

TU Darmstadt Gender Data Report 2023

Brief overview of results



TECHNISCHE
UNIVERSITÄT
DARMSTADT

Increasing the percentage of women in top positions and management in science as well as recruiting more women in Science, Technology, Engineering and Mathematics (STEM subjects) are amongst the key objectives of TU Darmstadt's gender equality efforts. The ongoing increase in the percentage of women at all levels starts with recruiting female students and doctoral candidates and continues through the various career stages to professorships. By collecting and updating gender-specific data in the TU Darmstadt Gender Data Report over the last five years, we have instituted a tool that allows us to strategically evaluate developments in the statistics relating to women. By way of an additional diversity aspect, we also consider at various points the percentage of individuals who do not hold German nationality. The TU Darmstadt Gender Data Report presents developments in the individual university departments over time and offers insights into the developments in the different status groups; the comparison between TU Darmstadt and other universities throws light on the university's standing in the German higher education landscape.

This brief overview summarises the core findings of the 2023 Gender Data Report. The full version is only intended for internal use within TU Darmstadt. If you are not a member of TU Darmstadt but would be interested in the more detailed results of the report, you can contact the staff in Directorate I, Unit Strategic Controlling (stratcontrol@zv.tu-darmstadt.de).

Gender Data Report 2023 - Imprint

Published by

The Executive Board of the Technical University of Darmstadt
Karolinenplatz 5, D-64289 Darmstadt, Germany

Edited by

Ilayda Aslan, Markus Müller, Anke Watenphul (Unit IC - Strategic Controlling) and Uta Zybell (Gender Equality Office)

Graphic design

Hausgrafik GBR

As of

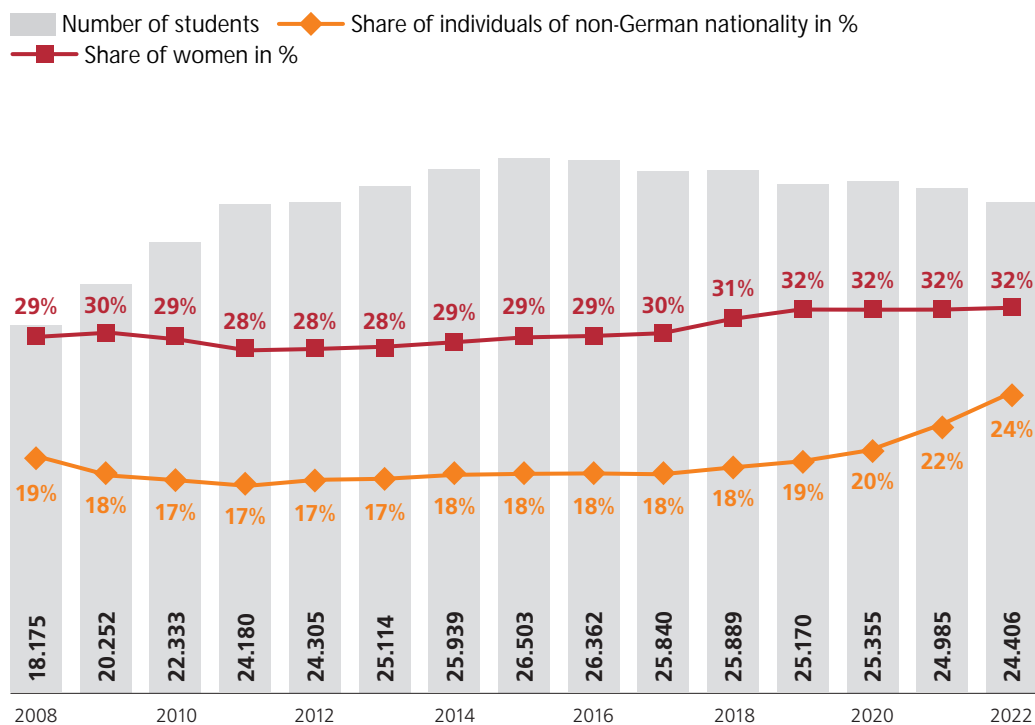
October 2023

Introduction

In the last 15 years, the percentage of women at all qualification levels at TU Darmstadt has increased. Short-term fluctuations and temporary trend reversals have usually resulted from changes in the relative sizes of departments with differing percentages of women. In total, the figure for the proportion of women ranges from 23 percent to 36 percent, amongst administrative-technical staff it is no less than 56 percent.

Students

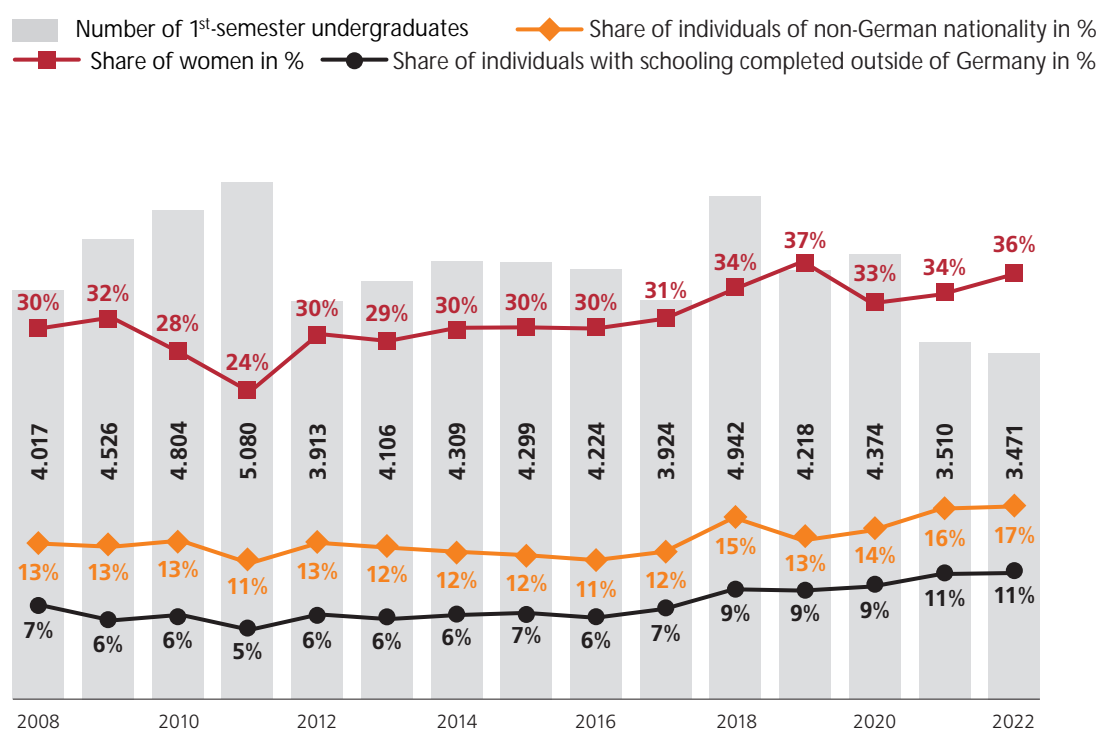
Since 2008, the number of students at TU Darmstadt has risen from 18,175 to currently 24,406. In the last four years, the share of women has remained constant at 32 percent. The share of individuals who do not hold German nationality has risen continuously since 2018 and is currently 24 percent.



In 2022, the proportion of women on the Master's courses was 31 percent. It was slightly higher amongst those who completed their schooling outside of Germany (34%) than amongst those who completed their schooling in Germany (30%), whereby there are very clear subject-related differences: In the Department of Law and Economics, the share of foreign female students is two and a half times higher than that of those who completed their schooling in Germany; in the Departments of Computer Science, Electrical Engineering and Information Technology, it is approximately twice as high.

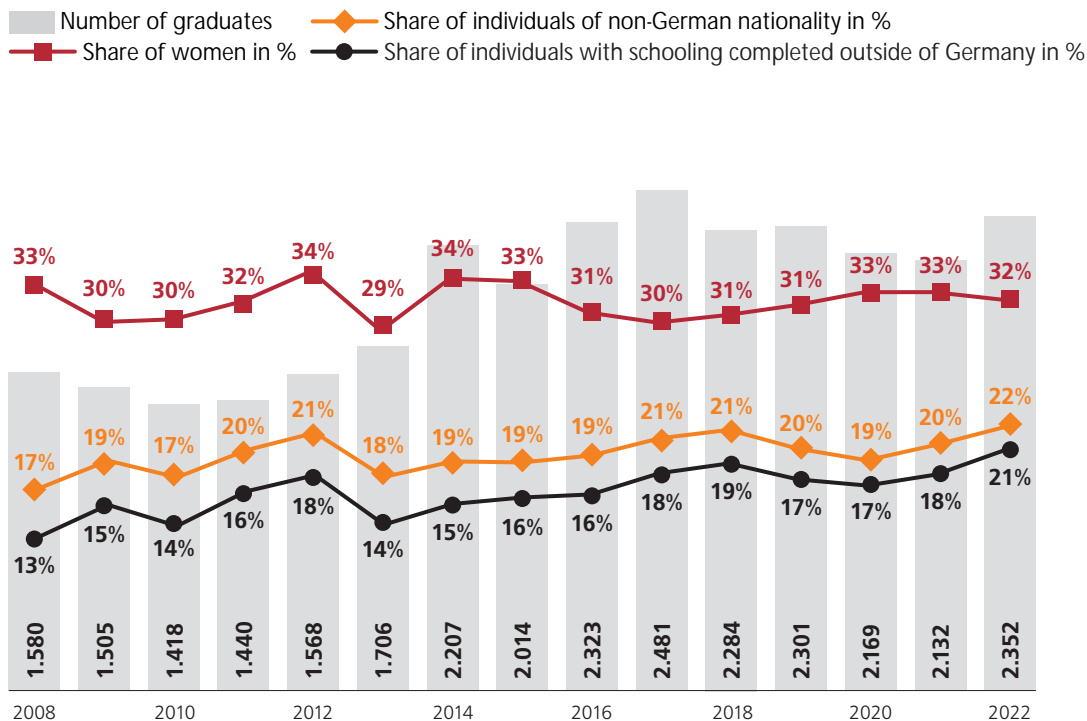
First-semester undergraduates

In the period 2008 to 2022, there was some fluctuation in the number of new undergraduates. The highest figure of 5,080 new undergraduates was reached in 2011. In the last two years, 3,510 and 3,471 students respectively started studying at TU Darmstadt. At 36 percent, the current proportion of women is just below the peak of 37 percent achieved in 2019. At 17 percent, the share of individuals of non-German nationality reached a new peak whilst the share of first-semester undergraduates who completed their schooling outside of Germany equalled the previous year's record of 11 percent.



Graduates

The share of individuals graduating on the Master's and teaching courses has increased significantly in the last 15 years. The proportion of women, on the other hand, has remained fairly constant, ranging from 29 percent to 34 percent. The current figure for female graduates on the Master's and teaching courses is 32 percent. In 2022, the share of individuals who do not hold German nationality (22%) as well as the proportion of those who completed their schooling outside of Germany (21%) reached new peaks.



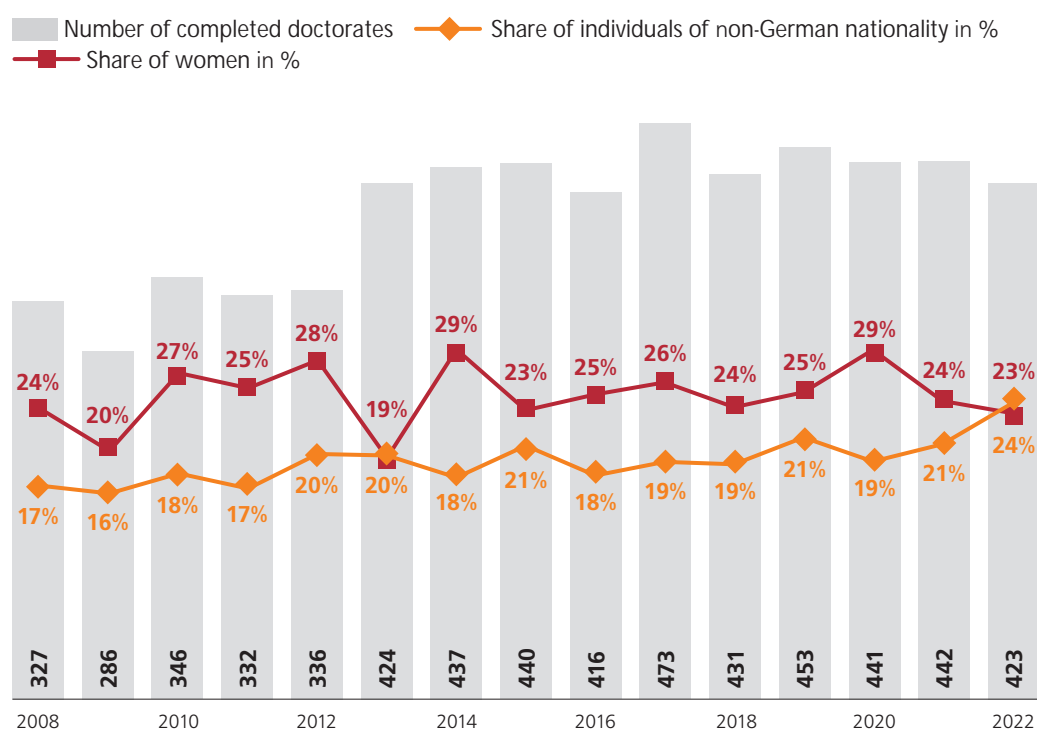
Doctoral candidates

The number of doctoral candidates at TU Darmstadt is currently 2,427 and thus three percentage points higher than in 2020. The share of women has increased concomitantly and is now 29 percent whereby there are very clear subject-related differences between university departments. In Physics, Mechanical Engineering, Electrical Engineering and Information Technology, the share of women is 14 percent to 17 percent whereas in Human Sciences, Biology and Architecture, figures more than 50 percent are achieved. The departments of Materials and Earth Sciences as well as Architecture are particularly international: 40 percent and 35 percent respectively of doctoral candidates in these areas do not hold German nationality. In total, the share of doctoral candidates of non-German nationality at TU Darmstadt is 20 percent.

Doctorates

In 2022, 423 doctorates were completed at TU Darmstadt. At 23 percent, the share of women was just below the figure for the share of individuals of non-German nationality at 24 percent. This means that more international students are completing a doctorate at TU Darmstadt than ever before. The departments of Physics and Chemistry as well as Materials and Earth Sciences, Civil and Environmental Engineering, Mechanical Engineering and Electrical Engineering and Information Technology as well as Computer Science are particularly strong in terms of doctorates, although the degree of internationality and the proportion of women vary

greatly. In the last five years, over 50 percent of doctorates in History and Social Sciences, Human Sciences, Biology and Architecture were completed by women. In the same period, more than 40 percent of doctorates in Materials and Earth Sciences as well as Architecture were completed by individuals of non-German nationality.



Early career researchers – junior research group leaders

The focus is on early career researchers who lead BMBF, Helmholtz Association and Emmy Noether junior research groups or are Athene Young Investigators or ERC Starting Grant holders at TU Darmstadt.

In 2023, there were 28 junior research groups at TU Darmstadt, an increase of 22 percent in comparison with 2020. The share of women has stagnated at 29 percent whilst the proportion of individuals of non-German nationality has also increased to 29 percent. Except for Biology and Architecture, all departments host junior research groups.

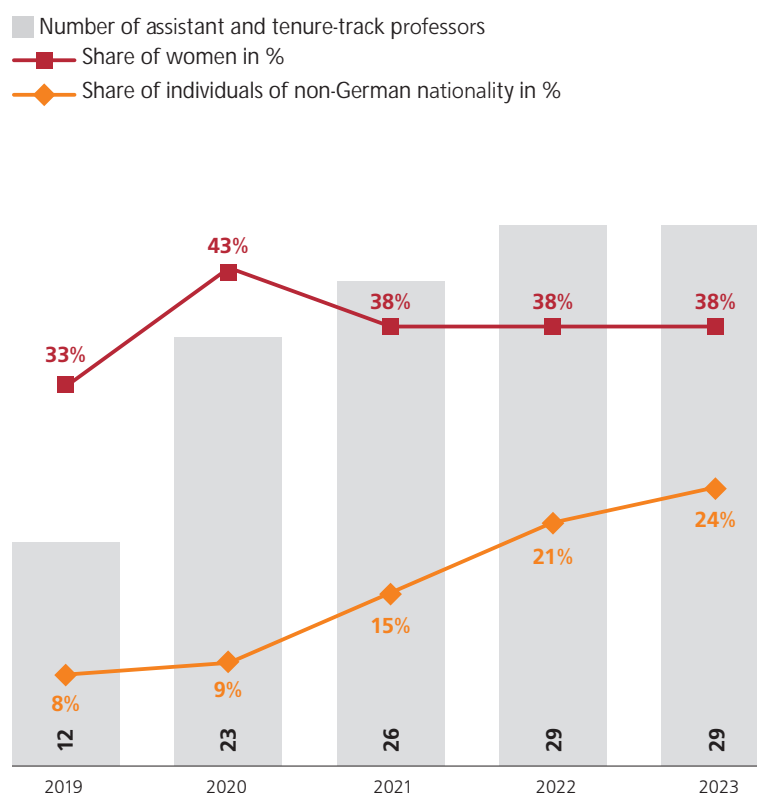
Academic staff

Women's representation on the academic staff of all departments and central facilities at TU Darmstadt is currently 26 percent, having grown by two percentage points in comparison with 2020. In the same period, the percentage of individuals of non-German nationality increased by five percentage points to 25 percent. There is a particularly high percentage of women in Law and Economics,

History and Social Sciences, and Human Sciences as well as Chemistry, Biology and Architecture. In Physics, Electrical Engineering and Information Technology, by contrast, women are underrepresented on the academic staff. At 48 percent and 37 percent respectively, a particularly high number of international academics is employed in the Materials and Earth Sciences. The share of women on the academic staff in the central facilities at TU Darmstadt is currently 18 percent, whereby nine percent do not hold German nationality.

Assistant and tenure-track professors

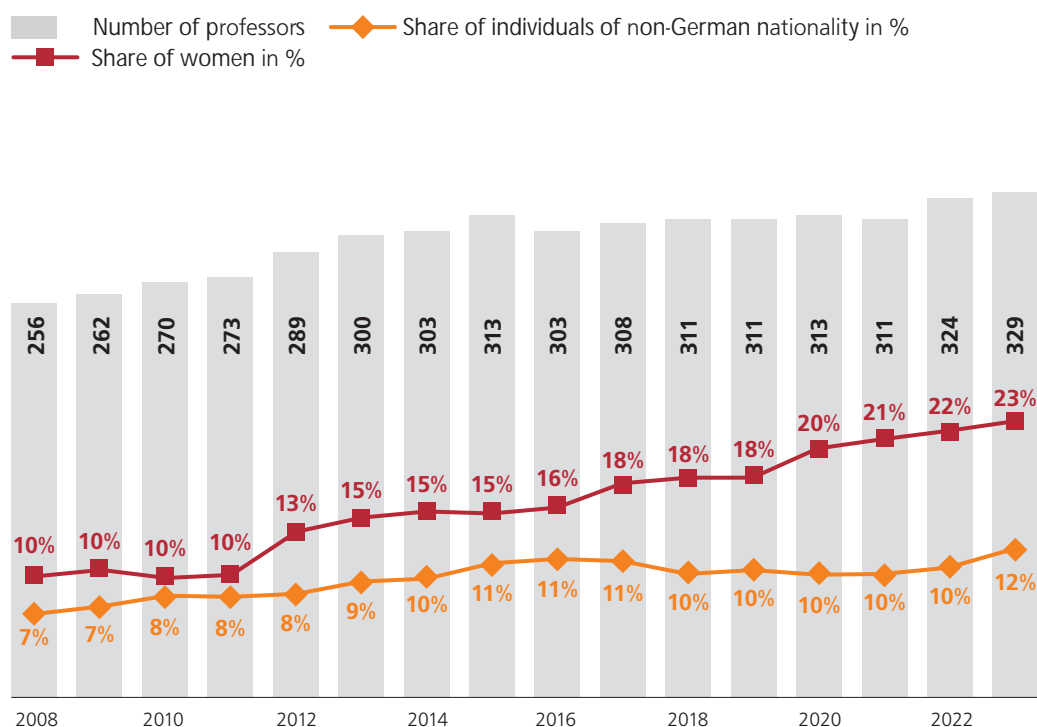
Just as in the previous year, 29 assistant and tenure-track professors are currently employed at TU Darmstadt. For the last three years, the share of women has remained constant at 38 percent whereby the share of assistant and tenure-track professors of non-German nationality has grown steadily to 24 percent at present. In 2023, assistant and tenure-track professors taught in all departments at TU Darmstadt. The field was headed by the Departments of Mathematics, Electrical Engineering and Information Technology with four assistant and tenure-track professors each.



Professors

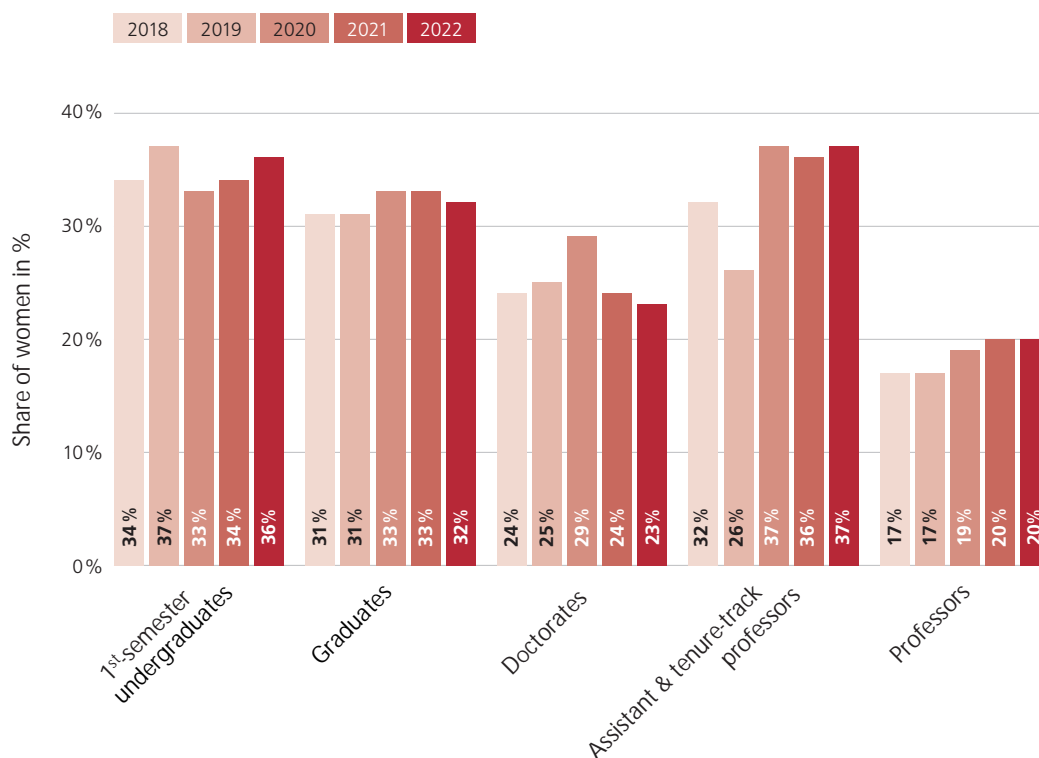
In the last 15 years, the number of professors employed at TU Darmstadt has risen from 256 to 329. Currently, 76 professors (including assistant and tenure-track professors) work at the university. At 23 percent, the proportion of women is higher than ever, and the internationality of the faculty has also reached a new peak of 12 percent.

Between 2020 and 2023 alone, the number of female professors increased to 12. Particularly in Human Sciences, Civil and Environmental Engineering as well as Architecture, the departments managed to increase the share of female professors significantly. In the departments of History and Social Sciences, Human Sciences, and Architecture, women account for more than 50 percent of professors. The Departments of Human Sciences, Physics and Computer Science are especially international.



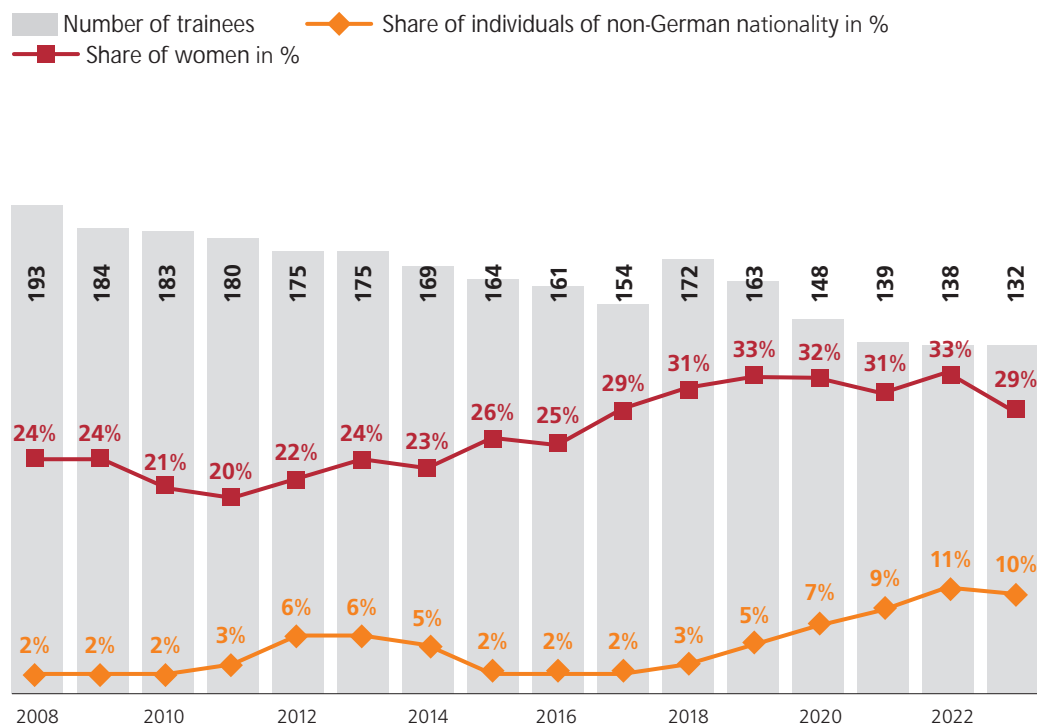
Academic career stages

At TU Darmstadt, just as at other German universities, during the entire course of acquiring academic qualifications, the share of women drops from the first undergraduate semester to tenured professorship. One exception at TU Darmstadt are assistant and tenure-track professors, amongst whom the share of women is significantly higher than the number of doctorates completed. Whilst the proportion of women between the first undergraduate semester (36%) and graduation (32%) only dropped slightly in 2022, a clear drop of nine percentage points occurred between graduation and doctorate. The tenure-track professorships, introduced in 2018, contribute significantly to a marked increase in the share of women at this qualification stage which reached a peak of 37 percent this year. In the long run, the high figures for women at this career stage should have a positive impact on the development of the proportion of women in tenured professorial positions. With a share of 20 percent in 2022, only every fifth professorship at TU Darmstadt was held by a woman.



Trainees

In the last 15 years, there has been an almost linear decrease in the number of trainees at TU Darmstadt; in 2023, the figure was 132. With slight fluctuations, the proportion of female trainees has developed in the opposite direction and is currently 29 percent. Ten percent of trainees do not hold German nationality. The negative trend observed in the number of trainees is also evident in many sectors across Germany and is partly a result of demographic change and the increasing demand for well-trained specialists. With a share of 64 percent, the smallest training sector at TU Darmstadt, “Administration and Libraries”, is particularly popular amongst women whilst the share of women in IT and the commercial-technical sector is significantly lower at 20 percent and 13 percent respectively. At 16 percent, the IT sector is particularly popular with trainees of non-German nationality and has seen an increase in both female trainees and trainees of non-German nationality compared to 2020.



Administrative and technical staff

The proportion of women on the administrative and technical staff at TU Darmstadt is currently 56 percent. Except for Physics, Civil and Environmental Engineering as well as Mechanical Engineering, the share of women in the departments well exceeds 50 percent, in central services it is 50 percent and in university administration, 61 percent. The share of administrative and technical staff at TU Darmstadt who do not hold German nationality is six percent. In the Departments of History and Social Sciences, Chemistry as well as in Materials and Earth Sciences, the share is over ten percent.

A separate analysis of administrative and technical staff – both employment groups in TU Darmstadt's departments are roughly identical in size – shows that more than three times as many women work in administrative positions (87%) as in technical positions (27%). The proportion of women on the administrative staff exceeds 79 percent in all departments and in Chemistry is even 100 percent. By contrast, the proportion of women on the technical staff in the departments largely ranges from zero to 30 percent; only Chemistry and Biology achieve figures of 38 percent and 76 percent respectively.

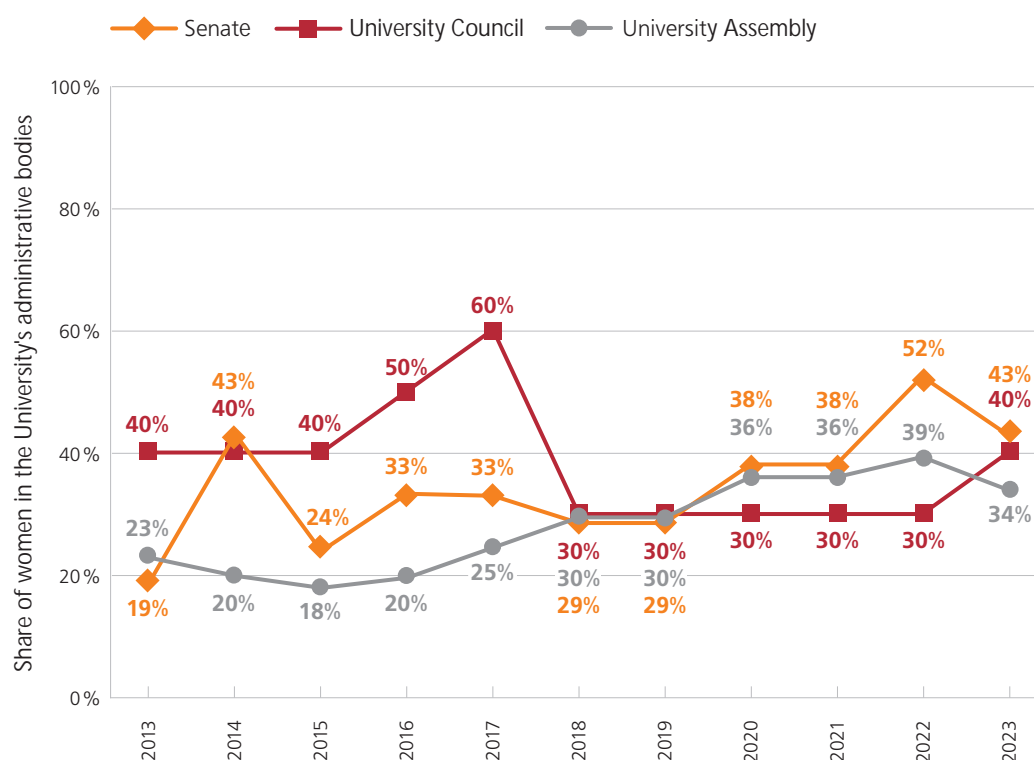
Appointment procedures

The share of women applying for a professorship at TU Darmstadt has remained constant in the last three years at 22 percent, whereby the total number of applications dropped. The figures for the share of women interviewed and those on appointment

shortlists were 28 percent and 24 percent respectively. Just as in the previous year, seven women were appointed to professorships, equating to 37 percent. TU Darmstadt consequently achieved its target of awarding at least one third of new appointments to women for the fifth year in succession. Moreover, parity was achieved in ad personam procedures, which are used, amongst other things, as a strategic means of attracting highly qualified people to TU Darmstadt.

Committees and leadership roles

On TU Darmstadt's central committees dealing with academic self-administration – Senate, University Council and University Assembly – the proportion of women varied in 2023. Whilst there were slight drops in the Senate (43%) and the University Assembly (34%) in comparison with the previous year, the share of women on the University Council increased to 40 percent.



In the personages of the President and the Vice-President for academic careers, two women currently sit on the Executive Board, a share of 25 percent. The share of women heading the directorates is 25 percent; in the directorial units it is 67 percent. All six of the university's staff units are headed by women whilst the figure for the central services is 50 percent.

Despite an increase of eight percentage points in comparison with the previous year, at leadership level in the departments, the proportion of women deans is particularly low, only reaching 13 percent, whilst at managing director level it is 71 percent. On the departmental councils the proportion of women varies considerably according to status group: at 41 percent and 45 percent respectively, the share of women amongst the student representatives and academic staff was similar, amongst administrative and technical staff it was 61 percent, amongst professors, 24 percent.

Comparison with TU9 and nationwide benchmarks

A comparison with other German universities of the share of women in the various phases of acquiring academic qualifications in the departments and, to some extent, disciplines at TU Darmstadt makes it possible to rank the results presented above in the German university landscape. In nearly all disciplines the proportion of women drops between the first undergraduate semester and professorship level. This negative trend is known as a leaky pipeline. Depending on subject, however, there is little, or a very great, difference in the proportion of women between the first undergraduate semester and professorship level.

In Civil and Environmental Engineering at TU Darmstadt, the figures for the share of women at all academic career stages are better than the comparative benchmarks. On the other hand, the share of women in Sports Science and Mechanical Engineering at TU Darmstadt is lower than the reference values across the board. In the other subjects, however, no uniform picture emerges. In Biology, there is a very pronounced leaky pipeline both at TU Darmstadt and the benchmark universities, whilst a similar trend can be observed in Chemistry and Geosciences. By contrast, the share of women in Computer Science at TU Darmstadt increases with each subsequent qualification level after a decline between the first undergraduate semester and graduation; the reference data stagnate. At more than 50 percent, there is a particularly high proportion of women in Psychology, Pedagogy and Sociology at TU Darmstadt. With the exception of first-semester students in Electrical Engineering and Information Technology, which can be explained by an increased share of women in Biomedical Engineering, in Mechanical Engineering, Electrical Engineering and Information Technology, the share of women at all levels of qualification is under 20 percent. In Industrial Engineering, Political Sciences, Mathematics and Materials Sciences the share of women at TU Darmstadt and the benchmark universities is similar. In History, a mixed picture emerges both in the reference values and at TU Darmstadt; the share of women at the various academic career stages ranges from 33 percent to 63 percent.

Conclusions

The Gender Data Report 2023 shows that, in the long term, women's representation in most status groups at TU Darmstadt is developing positively. This year, too, in various areas, new records were reached or repeated. Despite this, in many areas of the university women are still under-represented.

Achieving a numerical increase in the proportion of women at all qualification levels and in the various status groups demands change. In order to live out the idea of a consistently gender- and opportunity-equitable university, data must be considered and scrutinised, for example in the context of working culture, exclusion and discrimination mechanisms, bias, stereotypes and power relations.

The Gender Data Report showcases success stories and, within the university, serves as a guideline for indicating further fields of action.

Sources

The data presented here derive from the various official statistical reports prepared by TU Darmstadt, supplemented in part by our own databases. The comparative data of the TU9 Universities (www.tu9.de) and all German universities were acquired from the German Federal Statistical Office DESTATIS.