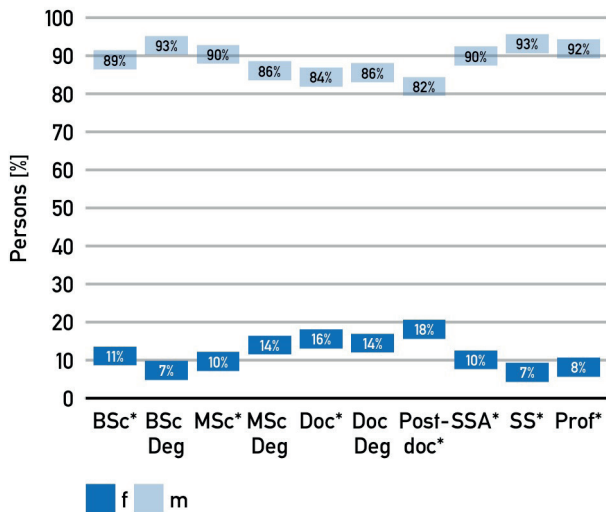


Gender Monitoring 2017/18

Department Report: Mechanical and Process Engineering

Department reports serve as an addition to the general report «Gender Monitoring of ETH Zurich – Report on the Situation of Equal Opportunities for Women and Men in Studies and Science». They provide more detailed information on the situation of equal opportunities per area of expertise at ETH Zurich. All reports of the Gender Monitoring 2017/2018 are available under www.gender-monitoring.ethz.ch →. Information on sources and compilation of data as well as explanations of abbreviations can be found in the general report. In this department report, the situation of equal opportunities in the Department of Mechanical and Process Engineering (D-MAVT) of ETH Zurich is presented.

Leaky pipeline D-MAVT, 2017



The department of MAVT exhibited no typical course of a Leaky Pipeline, in which the proportion of women decreases continuously with each step up the ladder of the academic career. On the contrary, the proportion of women approximately maintained constant on all academic career levels. In 2017, from BSc studies up to doctoral studies, the proportion of women increased slightly and decreased slightly from the level of postdoctoral research on.

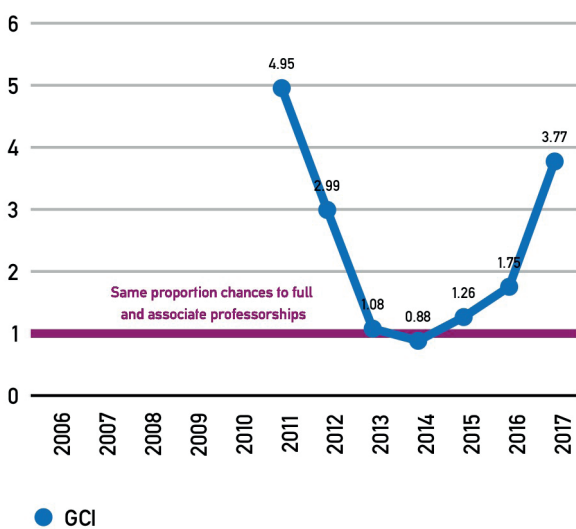
Over all, women were weakly represented on all academic career levels, nevertheless, they did not «drop away».

Remark 1: Organisational changes across departments result in retroactive adjustments of previous year's figures.

Remark 2: A graphical representation of the values is given by the middle of the data points.

*Note pertaining to functional levels: BSc: Bachelor's students; MSc: Master's students; Doc: doctoral students; Postdoc: postdoctoral students and research associates II; SSA: senior assistants and scientific assistants; SS: senior scientists and leading scientists (permanent contracts); Prof: assistant professors (AssP) and full professors (FP)

Glass Ceiling Index at D-MAVT, 2006-2017

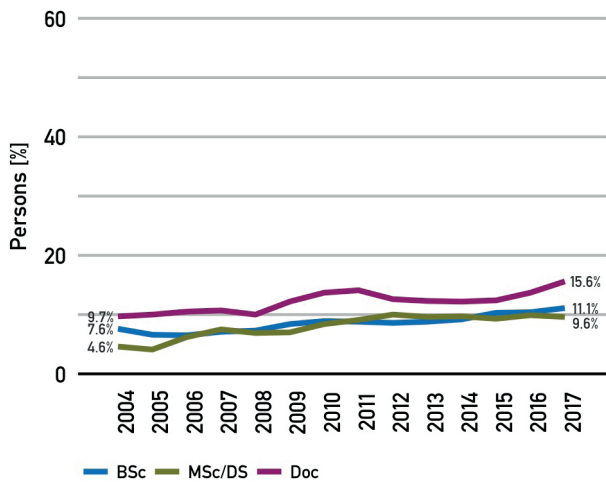


The Glass Ceiling Index (GCI) compares the proportion of women starting at the level of postdoctoral research up to the level of full professorship (full and associate professorships) to the proportion of women on the level of full professorship. A value greater than 1 indicates an underrepresentation of women on the level of full professorship in comparison to the academic positions starting at the level of postdoctoral research. The further the GCI value exceeds 1, the «thicker» the «glass ceiling» is.

In 2017, the department of MAVT measured a GCI value of 3.77, which shows an underrepresentation of women on the level of professorship compared to the academic positions from the level of postdoctoral research upward. The GCI value for all of ETH Zurich reached 1.97 and thus was below the value of the D-MAVT.

Remark: A definition of the GCI can be found in the appendix of the general report. It corresponds to the definition in She Figures 2015 (https://ec.europa.eu/research/swafs/pdf/pub_gender_equality/she_figures_2015-final.pdf, p.137). The GCI can take on a value from 0 to infinite.

Proportion of Women among Students and Doctoral Students D-MAVT, 2004-2017

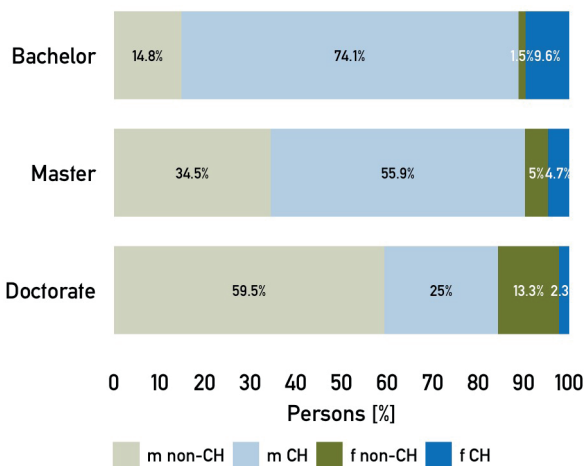


In 2017, 2591 students were enlisted at the department of MAVT and 273 women thereof. The proportion of female students increased by 0.3 percentage points to 10.5% in comparison to the previous year. With respect to 2004, this marks an increase by 3.7 percentage points. Women accounted for 11.1% and 9.6% respectively of BSc and MSc students in 2017.

The department of MAVT counted 481 doctoral students in 2017, thereof 75 women. The proportion of women on the level of doctoral studies reached 15.6% in 2017. Thus, it lay 1.9 percentage points above the previous year's value and 5.9 percentage points above the value in 2004.

From BSc to MSc studies, the proportion of women decreased slightly and increased again by 6.0 percentage points from MSc to doctoral studies.

Students and Doctoral Students against Gender and Foreign Entry Qualification D-MAVT, 2017



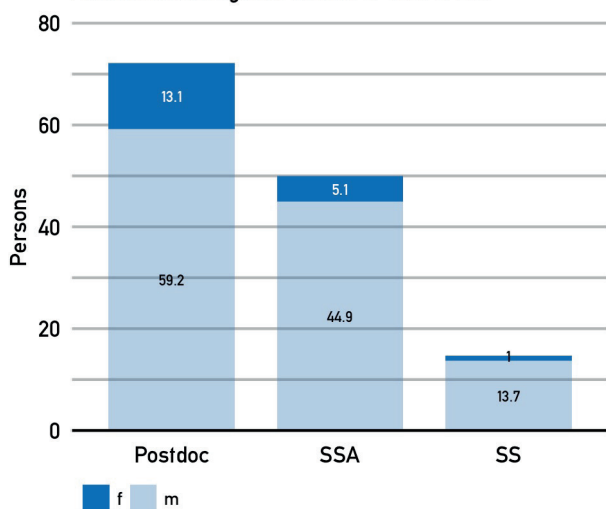
The degree of internationalisation* among students at the D-MAVT increased considerably with each level of qualification from the level of BSc studies upward. In 2017, the proportion of students with foreign entry qualification on the level of BSc studies reached 16.3% (plus 0.4 percentage points with respect to 2016). On the level of MSc studies, the proportion reached 39.5% (minus 1.8 percentage points with respect to 2016). On the level of doctoral studies, international students accounted for 72.8% (plus 0.2 percentage points in comparison with 2016) and thus formed almost three-quarters of the doctoral students.

The proportion of women among Swiss** doctoral students reached 8.4% in 2017 (plus 1.3 percentage points with respect to 2016). By contrast, the proportion of international female students on the level of doctorate was markedly higher at 18.3% (plus 2.1 percentage points compared to 2016).

*The degree of internationalisation is measured by the proportion of international students.

** With Swiss entry qualification/students who acquired their entry qualification in Switzerland.

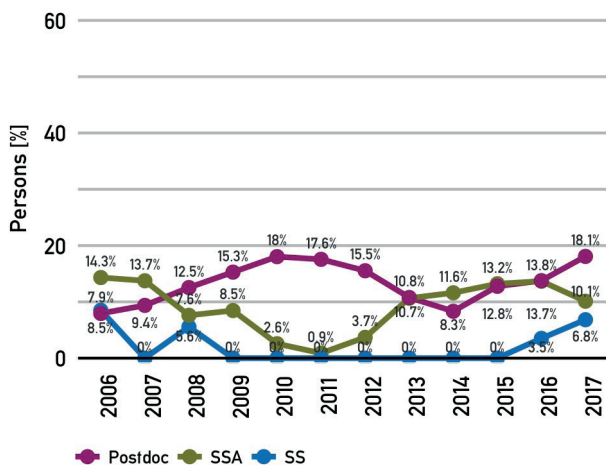
Academic Staff against Gender D-MAVT, 2017



Averaged over 2017, the department of MAVT occupied academic staff in the amount of 137.0 full-time equivalents. Thereof, 19.2 full-time equivalents were filled by women.

The proportion of women, averaged over all career levels, amounted to 14.0% and hence was considerably below the ETH average of 26.2%. With respect to 2016, the proportion increased by 1.3 percentage points.

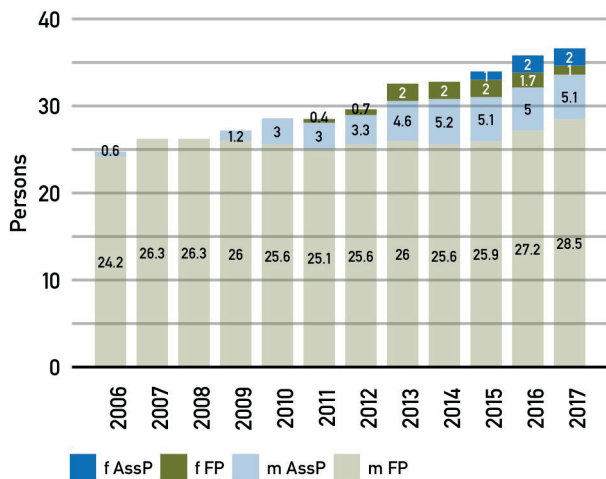
Proportion of Women among Academic Staff D-MAVT, 2006-2017



On the individual academic staff levels, the proportion of women at the department of MAVT reached the following in 2017:

- Postdoc/academic associates II: 18.1% (plus 4.3 percentage points with respect to 2016, plus 10.2 percentage points compared to 2006);
- Senior assistants/academic staff: 10.1% (minus 3.6 percentage points with respect to 2016, minus 4.2 percentage points compared with 2006);
- Senior scientists: 6.8% (plus 3.3 percentage points with respect to 2016, minus 1.7 percentage points with respect to 2006).

Full and Associate Professorships as well as Assistant Professorships, D-MAVT 2006-2017

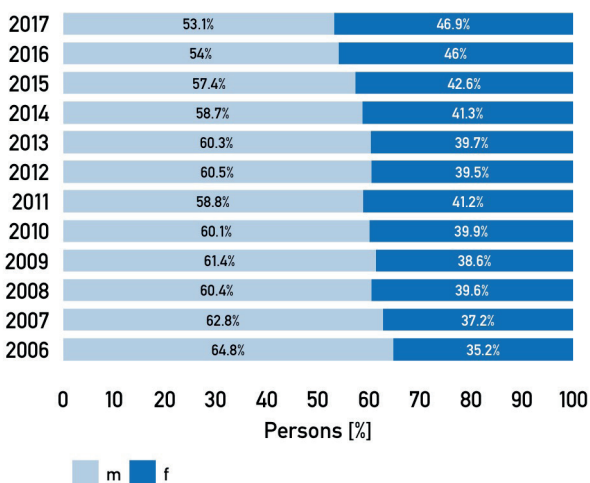


The number of full and associate professorships at the department of MAVT expressed in full-time equivalents increased by 0.6 to 29.5 in 2017. 1.0 full-time equivalents thereof were filled by women (minus 0.7 full-time equivalents with respect to the previous year).

Assistant professors were employed in the amount of 7.1 full-time equivalents at the MAVT department in 2017 (plus 0.1 full-time equivalents with respect to the previous year). 2.0 full-time equivalents were held by women.

The proportion of women among all professors amounted to 8.2% in 2017 and hence decreased by 2.0 percentage points in comparison with the previous year's value of 10.2%.

Technical and administrative personnel, D-MAVT 2006-2017



In 2017, the department of MAVT occupied technical and administrative personnel in the amount of 87.2 full-time equivalents. 40.9 full-time equivalents were held by women. Accordingly, the proportion of women reached 46.9% and was 0.9 percentage points above the previous year's value. With respect to 2006, an increase by 11.7 percentage points was recorded. Since 2006, the proportion of women among technical and administrative personnel has increased by trend.

In 2017, the proportion of women among technical and administrative personnel at the MAVT department was above the ETH average of 42.6%.

		BSc			MSc			Doc			Post-doc	SSA	SS	FP & AssP	
		New	Stud	Deg	New	Stud	Deg	New	Stud	Deg					
Leaky Pipeline D-MAVT 2017															
Proportion of Women in %		12.6	11.1	7.3	11.9	9.6	14.0	23.9	15.6	14.5	18.1	10.1	6.8	8.2	
Proportion of Men in %		87.4	88.9	92.7	88.1	90.4	86.0	76.1	84.4	85.5	81.9	89.9	93.2	91.8	
Students D-MAVT		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
BSc															
Proportion of Women in %		7.6	6.6	6.5	7.1	7.3	8.4	8.9	8.8	8.6	8.8	9.2	10.3	10.4	11.1
Women in Headcount		52	50	53	64	74	101	120	127	130	139	145	163	159	176
Men in Headcount		630	713	758	835	937	1099	1222	1325	1379	1434	1424	1428	1365	1409
MSc															
Proportion of Women in %		4.6	4.1	6.2	7.5	6.9	7.0	8.4	9.1	10.0	9.6	9.7	9.3	9.9	9.6
Women in Headcount		13	11	17	25	27	33	46	56	70	77	85	87	97	97
Men in Headcount		267	260	257	308	364	441	504	559	630	727	795	850	883	909
Doc															
Proportion of Women in %		9.7	10.0	10.5	10.7	10.0	12.2	13.7	14.1	12.6	12.3	12.2	12.4	13.7	15.6
Women in Headcount		21	25	29	34	33	45	53	57	49	49	50	56	63	75
Men in Headcount		196	225	247	283	296	325	334	348	341	350	361	394	396	406
Students and Doctoral Students by Gender and Foreign Entry Qualification D-MAVT 2017					BSc			MSc / DS				Doc			
Women CH in %					9.6			4.7				2.3			
Women non CH in %					1.5			5.0				13.3			
Men CH in %					74.1			55.9				25.0			
Men non CH in %					14.8			34.5				59.5			
Academic Staff D-MAVT		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017			
Postdoc															
Proportion of Women in %		9.4	12.5	15.3	18.0	17.6	15.5	10.8	8.3	12.8	13.8	18.1			
Women in FTE		3.3	4.3	5.8	8.9	9.9	9.5	8.0	6.8	10.0	11.1	13.1			
Men in FTE		32.4	29.8	32.0	40.4	46.3	51.8	66.1	74.5	68.4	69.3	59.2			
Senior or Scientific Assistants															
Proportion of Women in %		13.7	7.6	8.5	2.6	0.9	3.7	10.7	11.6	13.2	13.7	10.1			
Women in FTE		4.0	2.4	2.7	0.8	0.3	1.4	3.9	4.0	5.7	6.4	5.1			
Men in FTE		25.4	29.7	28.8	30.1	33.7	35.9	33.1	30.4	37.7	40.5	44.9			
Senior Scientists															
Proportion of Women in %		0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	6.8			
Women in FTE		0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.0			
Men in FTE		10.6	8.5	9.3	9.1	9.1	10.3	10.8	10.3	12.6	13.8	13.7			
Professorships D-MAVT		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017			
Proportion of Women total in %		0.0	0.0	0.0	0.0	1.5	2.3	6.1	6.1	8.8	10.2	8.2			
Full Professors															
Women in FTE		0.0	0.0	0.0	0.0	0.4	0.7	2.0	2.0	2.0	1.7	1.0			
Men in FTE		26.3	26.3	26.0	25.6	25.1	25.6	26.0	25.6	25.9	27.1	28.5			
Assistant Professors															
Women in FTE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	2.0	2.0			
Men in FTE		0.0	0.0	1.2	3.0	3.0	3.3	4.6	5.2	5.1	5.0	5.1			
Technical and Administrative Personnel D-MAVT		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017			
Proportion of Women in %		37.2	39.6	38.6	39.9	41.2	39.5	39.7	41.3	42.6	46.0	46.9			
Women in FTE		28.2	29.8	28.9	30.5	32.1	32.4	33.1	34.1	35.5	38.3	40.9			
Men in FTE		47.6	45.5	46.0	46.0	45.8	49.6	50.3	48.5	47.7	45.0	46.3			