



**Report of
the Commission
on the Status
of **Women**
Faculty at EPFL**

Commission Chair

- Rizlan Bernier-Latmani, Associate Professor, ENAC

Commission members

- Katerina Argyraki, Associate Professor, IC
- Lyndon Emsley, Full Professor, SB
- Helene Fueger, Gender Equality Delegate
- Nikolas Geroliminis, Associate Professor, ENAC
- Carlotta Guiducci, Associate Professor, STI
- Kathryn Hess, Full Professor, SV
- Viktor Kuncak, Associate Professor, IC
- Suliana Manley, Associate Professor, SB
- Andrew Oates, Full Professor, SV
- Francesco Stellacci, Full Professor, STI

(in alphabetical order by last name)

July 2020

**“Diversity
is not a
charitable
cause.
It is about
staying
competitive”**

Alec Gallimore, Dean of Engineering, University of Michigan

Executive summary

This report presents the results of a study conducted in 2019-2020 by the Commission on the Status of Women Faculty at EPFL (hereafter ‘the Commission’). The goal of the study was to construct as comprehensive as possible a picture of the status of women professors at EPFL and to make recommendations for improvement of that status, to be implemented by the administration. To do so, the Commission collected quantitative data on resource allocation (salary, start-up package, yearly budget, space), as well as fundraising. It also considered hiring and promotion practices, gender distribution of leadership positions, and grievance numbers and their gender distribution. In addition, a team of external experts led by Prof. Eric Davoine (University of Fribourg) interviewed 51 professors of both genders (including Deans) to capture the qualitative dimension of faculty experiences such as work/life balance, gender climate and the integration of new faculty members. Finally, based on recommendations from the interviewees, several focus group sessions were conducted to elicit feedback from the professors at-large prior to the formulation of the Commission’s recommendations.

The results, by and large, point to a reasonably well-matched distribution of resources between men and women professors at EPFL. In particular, the salary analysis did not show a systematic gender effect, although detailed analysis raised questions about specific cases. Thus, the Commission recommends a pair-matching salary analysis to identify possible issues and correct them. Space allocation data suffer from a lack of reliability and, as a result, the Commission is not able to conclude with confidence that the allocation of space is gender-neutral. More systematic data collection across the entire institution is recommended to allow streamlined future replication of this study.

The evaluation of work/life balance included access to daycare for children, teaching relief and the stop-the-clock policy for maternity and parenthood, as well as the issue of dual careers. The findings suggest that daycare availability remains a challenge for parents. Consequently, the Commission recommends making daycare access a priority with the goal to ensure that all parents at EPFL (students, post-docs, staff, professors) seeking onsite daycare are able to obtain it without being placed on a waiting list. An additional family-friendly measure is to strongly discourage holding meetings before 8:30a and after 5p. While a stop-the-clock policy and teaching relief are implemented for maternity, the interviewees pointed out that there is little in place for other parents (fathers, non-birthing parents, adoptive parents), perpetuating traditional gender roles by which women are responsible for looking after children. Thus, a recommendation is to implement parental leave (1 month) as well as a 6-month stop-the-clock policy while on tenure-track for the non-birthing parent. The Commission also recommends enhancing the visibility of the existing dual-career program, as many interviewees were unaware of its existence.

The numbers of women professors are low, resulting in a feeling of isolation that stems from being a minority, a point underscored by all the women interviewed. The numbers are increasing, but there remains a deficit at the higher ranks of Associate and Full Professors. Many interviewees praised the recent hiring search committee policies aiming at increasing the number of women professors hired. The efforts should continue and be monitored closely to ensure the target offers to women candidates remain at greater than 40%. Furthermore, the Commission recommends budgeting for the annual hiring of one woman Full Professor as a competition across all Schools.

As is typical of most academic environments, the small number of women professors results in the over-solicitation of the few who are there. To mitigate this issue and its attendant negative impact on women professors, the Commission recommends prioritizing

the participation of women professors in committees that make decisions about promotion, funding allocation and research directions while discharging them from work on other committees. The small number of women also results in under-representation in the leadership at all levels, which urgently requires redress.

The gender climate is also tied to the institutional culture, as it is pervasive throughout. Salient amongst gender climate issues identified in interviews were the grievance procedures, a reported lack of respect for women professors, and unequal gender representation at EPFL-wide or School events. Evidently, addressing the culture of an institution is a complex affair. However, the Commission considers that bias awareness must extend to the student body and recommends the organization of bias training for incoming undergraduate and PhD students to delineate acceptable behaviors at EPFL. Furthermore, the creation of a gender equality committee that includes both men and women professors is recommended for each School, with coordination across EPFL to establish common best practices. The visibility of women on the EPFL campus should increase and go along with the establishment of a gender-aware communication style in all official communications. The grievance procedures were roundly criticized by most interviewees as a source of undue stress and, possibly, gender bias, as the fraction of women targeted is much higher than that of women professors at EPFL. A complete overhaul of the grievance procedures is recommended. As this work is already underway, the Commission expects a more transparent procedure to be put in place and recommends that it include regular evaluation to identify possible structural issues. Additionally, the Commission recommends the creation of a workshop for senior leadership that builds on the implicit bias awareness training and focuses on leadership skills and fostering diversity.

The interviewees raised the issue of the management culture at EPFL, which not only relates to gender but, due to the predominance of men in numbers and in leadership positions, affects women disproportionately. The Commission recommends the establishment of greater transparency regarding resource and space allocation, committee work, teaching load and, most importantly, the decision-making process.

The lack of integration of tenure-track professors and other newly-hired professors at EPFL was a point raised by a number of interviewees. A training course has been put in place for tenure-track professors and is planned to be run regularly. The Commission is very supportive of these efforts that will allow faster and more complete integration, both from the practical standpoint and from the institutional culture point of view. A mentorship program open to all professors should be established, to provide professors who seek it the opportunity to receive mentoring from a more senior professor, well versed in the inner workings of academia in general and EPFL in particular.

The professors at EPFL are generally satisfied with their professional environment and find the facilities and opportunities afforded by their position to be outstanding. The study reported on here has uncovered specific points that require attention and it is the Commission's belief that the information provided is of high enough quality to be the basis for mitigating action that will successfully address the issues.

Table of Contents

1.	Introduction	8
2.	Methodology	9
2.1.	Quantitative methodology	9
2.1.1.	Data collection and source	9
2.1.2.	Data analysis	9
2.1.3.	Data plots	9
2.2.	Interview and data analysis	10
2.2.1.	Interviews	10
2.2.2.	Data analysis	10
2.2.3.	Focus groups	10
3.	Findings	11
3.1.	Salary and resource allocation	11
3.2.	Work/Life balance	15
3.3.	Institutional culture	17
3.4.	Representational parity	23
3.5.	Hiring and promotion	26
3.6.	Integration	29
4.	Recommended measures	31
4.1.	Salary and resource allocation	31
4.2.	Work/Life balance	31
4.3.	Representation of women professors	31
4.4.	Hiring	32
4.5.	Gender climate	32
4.6.	Institutional culture	32
4.7.	Measures already being implemented	32
5.	References	33
6.	Acknowledgements	35
A.1.	Appendix I – Origin of data, variables considered	36
A.2.	Appendix II – Multiple linear regression analysis	37
A.2.1.	Salary	38
A.2.2.	Start-up	39
A.2.3.	Yearly budget	40
A.2.4.	Space	41
A.2.5.	Fundraising	42
A.2.6.	Time to promotion	43
A.2.7.	Teaching load	44
A.3.	Appendix III – Report from interviews and focus groups.	45
A.3.1.	Qualitative Study	49
A.3.2.	Discussion of current measures and recommendations	65
A.3.3.	References	88
A.3.4.	Documentation	90
A.3.4.1.	Interview samples (Women and men)	90
A.3.4.2.	Interview guide (Women)	91
A.3.4.3.	Declaration of confidentiality	95
A.3.4.4.	Steps of data analysis	96
A.3.4.5.	Questionnaire of the focus groups	98

Glossary

- CDM: College of Management
- CDH: College of Humanities
- ENAC: School of Architecture, Civil, and Environmental Engineering
- IC: School of Computer and Communication Sciences
- SB: School of Basic Sciences
- STI: School of Engineering
- SV: School of Life Sciences
- ETH WPF: ETH Women Professors Forum
- PO: Full Professor
- PA: Associate Professor
- PATT: Tenure-track Assistant Professor
- PT: Adjunct Professor
- UNIL: University of Lausanne

1. Introduction

Based on findings of an ETH Women Professors Forum (ETH WPF) survey¹ conducted in 2017/18, Prof. Martin Vetterli, president of EPFL since 2017, and the EPFL Management approved the creation of a Commission on the Status of Women Faculty (hereafter, the Commission) with the mandate to conduct a comprehensive study of the experience of women faculty at EPFL and make recommendations to be implemented by the EPFL administration. The investigation was to be based on a review of similar reports from other universities, and the analysis of quantitative and qualitative data.

The Commission was composed of 10 faculty members – a man and a woman professor from each of the five largest Schools at EPFL– as well as the Director of Human Resources, and the Equal Opportunities Delegate, as representatives of EPFL Management. Its work was initiated in January 2019. While quantitative data were gathered by the Commission from Schools and the central administration, the qualitative part of the investigation was outsourced to an external expert² via a mandate, in order to ensure the independence of the investigation and the anonymity of participating faculty members. The full report on interviews and focus groups is available in [Appendix III](#).

By launching this investigation, EPFL joins the list of institutions that have carried out similar projects, including MIT³, California Institute of Technology⁴, and Harvard University⁵, to name a few. While the EPFL study explicitly draws upon the MIT report, it also takes inspiration from research conducted in Switzerland and Europe⁶.

In contrast to the surveys on women professors at US universities, studies conducted at Swiss and European universities often focus on early career researchers and the low numbers of women who have become faculty members (the so-called ‘leaky pipeline’). By focusing on the work conditions and experiences of women professors – and comparing these to their men colleagues – the Status of Women Faculty at EPFL study, along with the ETH WPF report, bring a new perspective to the analysis of gender equality at Swiss universities. Adopting the viewpoint of women professors not only sheds light on issues relevant for the hiring and retention of female faculty, but is also expected to identify structural obstacles to equal opportunity and the underlying causes for persistent inequalities in the academic careers of women and men.

This study by the Commission was intended to contribute to enhancing the quality of the work environment at EPFL and to raising EPFL’s attractiveness to prospective students and faculty. Diversity is an important part of campus culture and the hallmark of a leading university with a highly competitive workforce.

-
- 1 ETH Women Professors Forum (2019). *Survey of issues important to women professors at EPFL and ETHZ*. (<https://zenodo.org/record/2710622#.Xs7-By17HXG>)
 - 2 Prof. Eric Davoine, Chair of Human Resources and Organization, University of Fribourg (CH) and his team, Dr. Xavier Salamin and Christelle Zagato. The entirety of their report is available in Appendix III.
 - 3 MIT (1999). A Study on the Status of Women Faculty in Science at MIT. *Faculty Newsletter Special Edition* Vol. XI No. 4 May; MIT (2002). *Reports of the Committees on the Status of Women Faculty*; MIT (2011). *A Report on the Status of Women Faculty in the Schools of Science and Engineering at MIT*.
 - 4 Caltech (2001). *Committee on the Status of Women Faculty at Caltech, Final report*.
 - 5 Harvard (2005). *Report of the Task Force on Women Faculty*.
 - 6 See for example: Le Feuvre. N. (ed.) (2015) Contextualizing Women’s Academic Careers: Comparative Perspectives on Gender, Care and Employment Regimes in Seven European Countries. *GARCIA working paper* n. 1, University of Trento (ISBN 978-88-8443-609-2), pp.139-184; Gloor, Jamie L. & Susanne Mehr (n.d.), *Career and Life Phase of an Assistant Professor. “Lebens- und Laufbahnphase Assistenzprofessur”*. Study conducted under the Action Plan Gender Equality UZH 2013-2016; Rost, Katja & David Seidl (2016). *Forschungsausstattung, Sozialkapital und Gender an der UZH*. Study conducted under the Action Plan Gender Equality UZH 2013-2016.

2. Methodology

Here we present an abbreviated version of the methodology. The detailed version is included in [Appendix II](#).

2.1. Quantitative methodology

2.1.1. Data collection and source

Data collection aimed at being as comprehensive as possible to present a complete view of the distribution of resources and responsibilities across genders. It was initially guided by the MIT (2002) report but was also tailored to the specificities of EPFL. The focus of the study was on gender, partly because of the limited mandate and partly because data on other forms of diversity were not readily obtainable. The type of data collected on individuals included salary, amount of start-up package, yearly budget, space allocation, teaching load, time to promotion, and research fundraising. Furthermore, global data on the gender distribution in hiring, in grievance filing and the associated outcome, among others, were also gathered. The data were obtained from sources within EPFL central administration and the Schools (Appendix I for full list). Because of the sensitivity and anonymization of most data, only limited cross-referencing was possible between individual datasets.

2.1.2. Data analysis

In order to determine whether gender was a statistically significant explanatory variable for a given dataset, a multiple linear regression analysis was performed. Beyond gender, the specific variables considered depended on the dataset, but they included rank (defined as whether the individual held the title of Full (PO), Associate (PA), or Tenure-track Assistant (PATT) Professor), the School with which he/she was primarily affiliated (CDM, ENAC, IC, SB, STI, SV), whether the professor was employed full-time at EPFL, seniority at that rank (how long that individual has been at their current rank), biological age, as well as whether the type of work required expensive equipment or tools (defined as costing > 50 kCHF) and whether the work required laboratory space. The need for costly equipment or tools and the need for laboratory space were determined on an individual basis for each EPFL professor by members of the Commission (the full list of variables is listed in Table A1 and more detail on the multiple linear regression method is available in Appendix II). Where data were also available for Adjunct Professors (PT), they were also included in the analysis.

2.1.3. Data plots

Most of the data are plotted as box and whisker plots (also known as boxplots). The box top and bottom represent the third and first quartile (i.e., 75% or 25% of the data are contained between zero and this value, respectively; the box contains 50% of the data). The middle line is the median and the diamond indicates the mean. The whiskers attached to each box indicate the variability outside the upper and lower quartiles. The interquartile range (IQR) is defined as the range between the first and third quartile. The upper whisker extends to the maximum y-value, but maximally to 1.5 times the IQR plus the third quartile. The lower whisker extends to the minimum y-value, but never goes beyond the first quartile minus 1.5 times the IQR. In addition to the box and whisker plot, all data points are shown. Data points are jittered horizontally (random noise is added) to minimize overlap and allow the visualization of as many individual data points as possible. Finally, numerical values have been removed from the y-axes to maintain confidentiality on the specific value of the resources available to professors. Thus, the graphs represent relative plots for illustration purposes.

2.2. Interview and data analysis

2.2.1. Interviews

The study is based on interviews of EPFL professors: 30 women, 15 men (sub-sample built with a pair-matching process) and 6 Deans (1 woman, 5 men). The sampling dimensions selected to allow for a representative group of people (academic rank, scientific discipline, EPFL school, family status and configuration) were validated by the Commission. Interviews were conducted between April and August 2019 by a gender-balanced team of researchers constituted of a man and a woman interviewer (with the exception of two interviews, due to scheduling difficulties). Interviews lasted on average 80 minutes, were transcribed by the research team, and then validated by the interviewees. The interview guide structure was validated by the Commission and the major topics that made up the content were identified from previous studies (MIT, 2011).

2.2.2. Data analysis

The analysis was led by the three researchers who interviewed the participants (see Appendix 3 for details). It included the following steps: listing of all the topics identified, evaluation of the frequency and intensity of the discussion of major topics, and a systematic comparison of the sub-samples of men and women. In addition, potential recommendations to improve the status of women at EPFL that were voiced by the interviewees were collected systematically. These were provided as a list to the Commission, together with the draft report of the qualitative analysis. The Commission discussed the proposed measures and made a first selection of 26 measures to be presented in focus group sessions (see below) with EPFL faculty members at-large.

2.2.3. Focus groups

Focus group participation was opened to all 350 EPFL professors, who were invited to register via email in early December 2019. Based on the availability of interested professors, four focus groups were organized; three of these targeted all men and women faculty members, while a fourth was aimed at men and women professors with management responsibilities. Out of a total of 41 focus group participants (excluding Commission members or focus group organizers)⁷, 38 (14 women, 20 men, and 4 who did not indicate their gender) handed in their individual rankings for the abovementioned 26 recommendations. These rankings were considered for the drafting of the final recommendations, which are included in the present report.

⁷ 46 professors responded positively to the invitation (excluding Commission members). Based on availability, 44 could be distributed amongst four focus groups. Three registered participants were unable to attend.

3. Findings

The Commission considered the results of the quantitative analysis as well as the report from the interviews and the focus groups to construct as comprehensive as possible a picture of the status of women professors at EPFL. Thus, rather than separating the quantitative data from the qualitative assessment derived from interviews, the Commission strove to weave the two narratives together to obtain a robust reflection of the reality of the faculty experience. Based on these findings, recommendations for a measured, effective, but vigorous response were formulated.

3.1. Salary and resource allocation

The salary as well as the financial and in-kind resources provided by EPFL were considered. Financial resource allocation includes the start-up package that is provided upon hiring, and the yearly budget that includes running costs as well as salaries of team members. In-kind resources refer to space that is provided, both laboratory (where applicable) and office space.

In the investigation of the salary distribution amongst professors, several parameters were considered: rank, School, gender (M or W), seniority at the present rank, and biological age. Deans and Vice-presidents were excluded from this analysis. We found that discrepancies appeared across gender but were in opposite directions depending on the model considered. Hence, a more detailed investigation was conducted, leading to two observations. The first is that, as formulated in the EPFL rules and regulations⁸, some Full Professors (PO) receive salaries that exceed the nominal range to retain exceptional talent or to acknowledge extraordinary performance. Amongst those, however, there are no women (Figure 1). Second, there are a few cases for which the salary of women (and some men) are lower than would be expected in comparison to their peers. Thus, while overall it appears that the salary distribution across gender is relatively uniform, the presence of outliers calls for further action (see recommendations).

The amount of the start-up package was considered for each professor (Figure 2) as a function of rank (at the time of the start-up), the School, gender, and whether the type of work requires costly equipment/tools or laboratory space (see methodology). Start-up year was also considered in subsequent models but did not change the outcome. Based on the multiple linear regression analysis, there was no evidence that gender plays a significant role in the start-up amount. The interviews appear to confirm this finding as few reported inequalities perceived in their own hiring.

8 Ordonnance du Conseil des EPF sur le corps professoral des écoles polytechniques fédérales #172.220.113.40, Article 17.

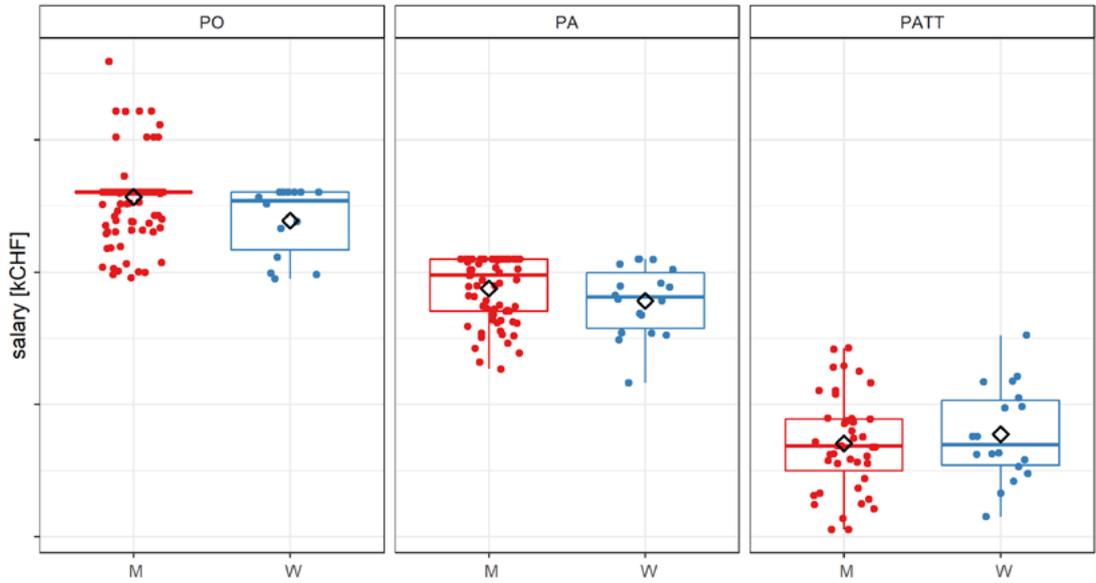


Figure 1: Distribution of salaries amongst professors employed by EPFL as of October 2018, as a function of rank and gender. Each dot represents a data point. Data shown here correspond to those used for the regression analysis. See description of box and whisker plot in the methodology section. Men in red and women in blue.

The distribution of the yearly budget varies according to the School. In some Schools (e.g., IC), there is a single fund allocated which can be used for salaries or for other purposes. In other Schools (e.g., ENAC), there are two separate funds, one for salaries and the other for running costs. We considered the total of the funds provided regardless of how they are distributed (Figure 3). Here, the explanatory variables were rank, School, whether a professor is employed at EPFL full time, gender, equipment needs (see methodology), and space needs (see methodology). The multiple linear regression analysis showed that there was no evidence of a statistically significant gender effect for the yearly budget. Thus, overall, the allocation of funding appears to be gender-neutral at EPFL. In the interviews, it was highlighted that some Schools (i.e., STI) make available the allocation of the yearly budget, annually and to all professors. This type of transparency was praised by interviewed professors and the Commission.

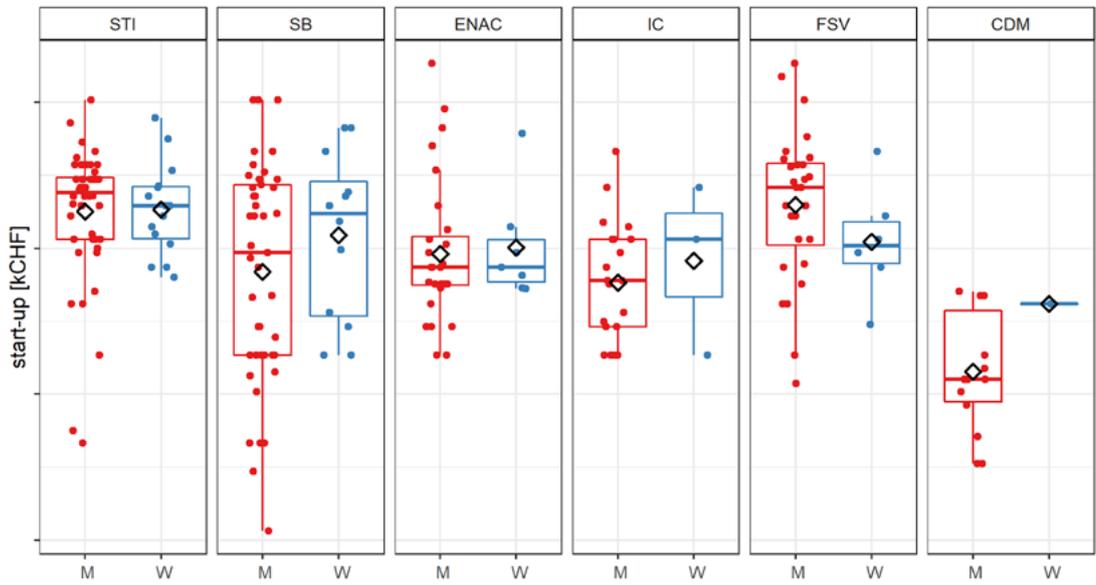


Figure 2: Start-up data for professors employed at EPFL as of May 2019. There is significant variability in the amount of the start-up package but no statistically-significant gender effect. These data include PO, PA and PATT. Data shown here correspond to those used for the regression analysis. See description of box and whisker plot in the methodology section. Men in red and women in blue.

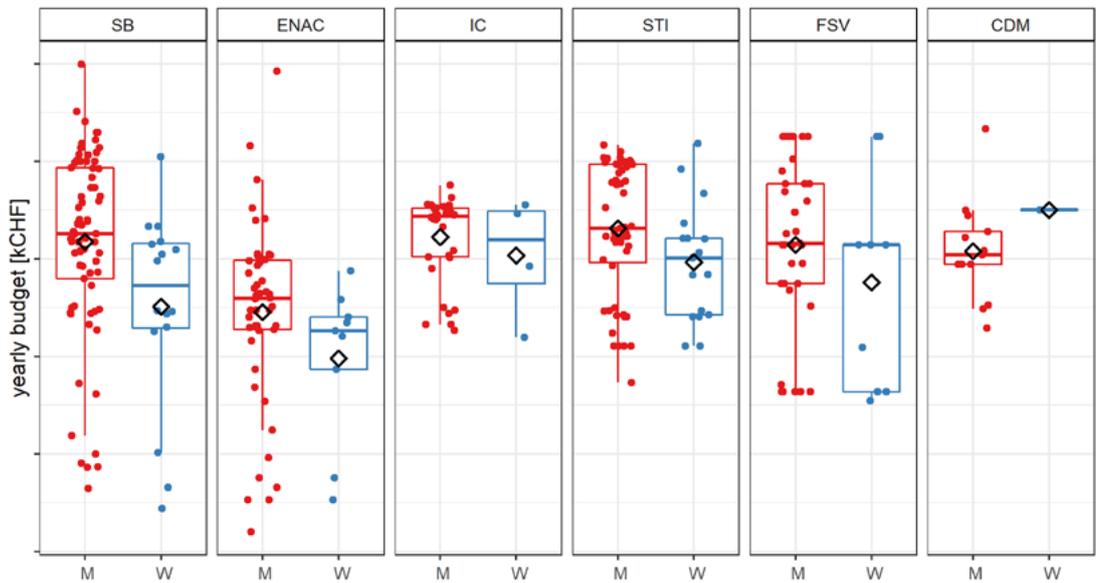


Figure 3: Yearly budget data for professors at EPFL in August 2019. These data include PO, PA and PATT. Data shown here correspond to those used for the regression analysis with outliers excluded. See description of box and whisker plot in the methodology section. Men in red and women in blue.

Space distribution (Figure 4) was also assessed considering rank, School, gender, equipment needs, lab space needs, and whether the type of work requires laboratory space. The data on space combined laboratory and office space as those are not clearly delineated in some Schools (e.g., SV). The analysis showed no statistically significant discrepancies in the allocation of space between genders. However, the underlying space data available and provided to the Commission are unreliable. This lack of accuracy was evidenced by spot-checks conducted by the authors of this report as well as by requests for School space

information from individuals outside the Commission. In this case as well, the lack of transparency in the allocation of space, with the associated issue of the inaccurate accounting of space distribution, were pointed out as areas for improvement. The Commission recommends a more systematic approach to data collection across all Schools to facilitate transparent resource management. Thus, at this stage, while the statistical analysis reports no gender effect, the Commission does not have full confidence in this result.

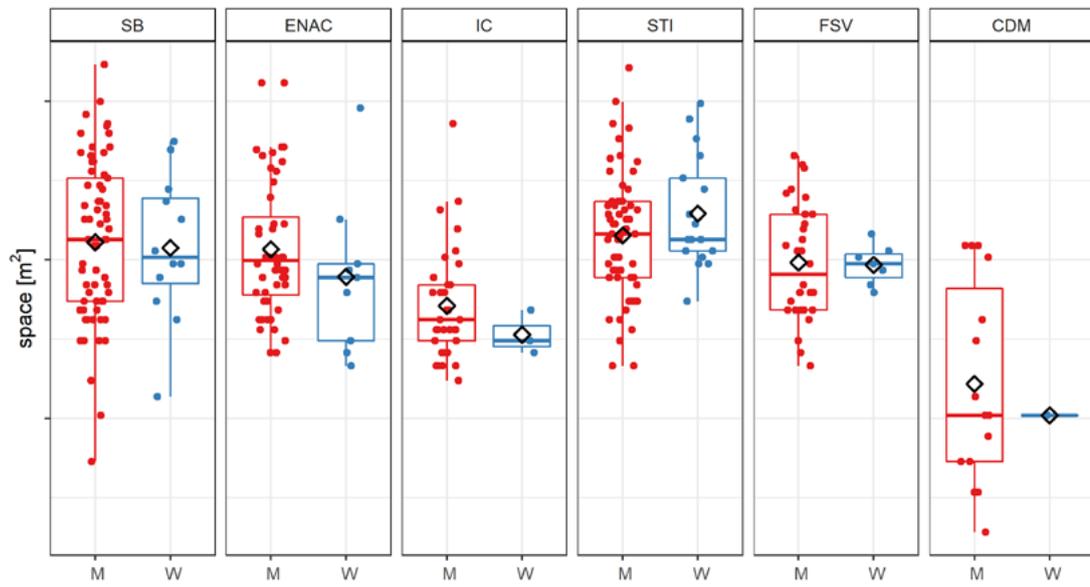


Figure 4: Space allocated to individual professors scaled to the number of members in their group as a function of School and gender. These data include PO, PA and PATT. CDM was not included in this plot because space is not specifically attributed to individual professors. Data shown here correspond to those used for the regression analysis. See description of box and whisker plot in the methodology section. Men in red and women in blue.

In addition to the intramural allocation of resources, the Commission considered extramural fundraising. The data available included the past 10 years (Figure 5). Thus, the Commission considered the average annual fundraising for that timeframe for all professors currently at EPFL. The parameters deemed relevant were: rank, School, whether the professor is employed at EPFL full time, gender, equipment needs, and whether the type of work requires laboratory space. The linear regression analysis showed no evidence of a gender effect in fundraising. Thus, women and men professors raise equivalent amounts of funds per capita on an annual basis.

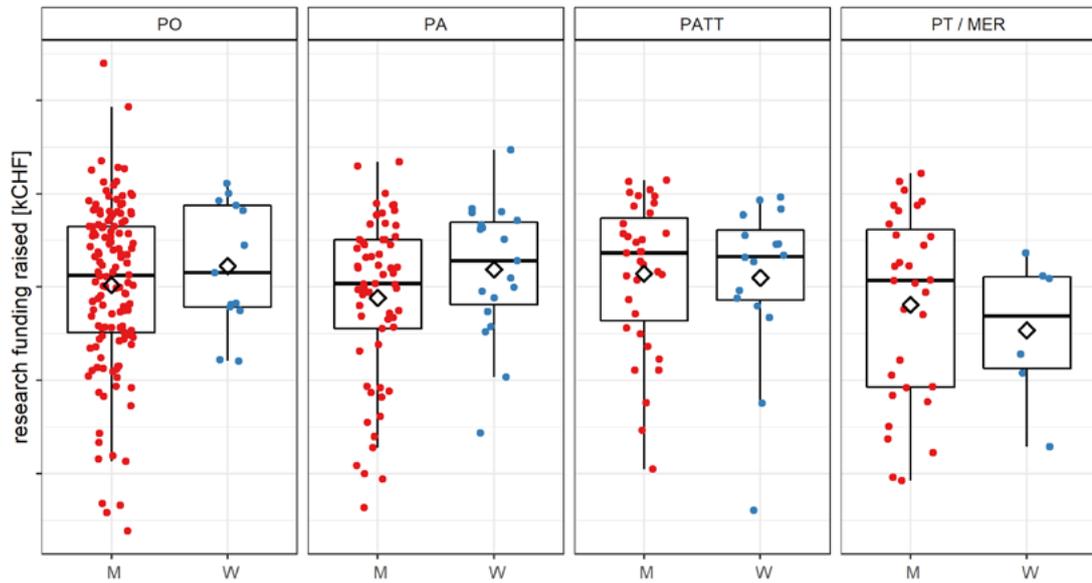


Figure 5: Annual average fundraising as a function of rank averaged over the past 10 years (or the number of years the individual has spent at EPFL if <10 years). Data shown here correspond to those used for the regression analysis with outliers excluded. See description of box and whisker plot in the methodology section. Men in red and women in blue.

Thus, other than the exceptions noted above for salary and the likely inaccuracy of the space data, the findings for resource allocation, by and large, point to a reasonably well-matched distribution of resources between men and women professors at EPFL. This also includes extramural fundraising, underscoring the comparable contribution of women and men to the healthy funding of this organization.

3.2. Work/Life balance

Work/Life balance is a personal topic that is experienced differently by different individuals. For professors (men and women) with pre-school- and school-age children, the issue of availability of daycare and after-school care features prominently. In the ETH WPF survey and the focus group discussions, the continued difficulty in accessing on-campus daycare for preschoolers and in finding suitable solutions for their children during the school day and the school vacations remains a source of concern. In the interviews, most professors with young children mentioned daycare and school time schedules as an issue for work/life balance. Combining family life with a professor’s career –especially at the tenure-track phase, when a professor is most likely to have very young children– is difficult for parents. About 50% of the women professors and 27% of the men professors interviewed were of that opinion. The tenure-track is perceived as being more difficult for young mothers than for other tenure-track professors.

There are three daycare centers on the EPFL/UNIL campus and together, they care for ~300-320 pre-school children, the equivalent of 230 full-time spots. In addition, there are approximately 40 spots for children to attend the first two years of school. The latter facility (Polykids) will be closed in 2021. In comparison, in September 2019, there were 163 children of UNIL/EPFL parents on the waiting list for the on-campus daycare centers (42 prenatal; 77

below 1 year of age; 20 1-year-olds; 12 2-year-olds; 12 3-year-olds⁹). The offer of available and subsidized daycare has improved in recent years but varies depending on the commune¹⁰. This is why the demand remains robust for the EPFL onsite facility. Furthermore, the advantage of being able to drop off one's child near one's workplace is considerable as it affords the opportunity to maximize child-parent interaction time. In 2017, an analysis of the UNIL/EPFL employees and students whose children attended the daycare facilities showed an overall distribution of 53% men and 47% women, with 7% being professors (3% women professors and 4% men professors). Thus, it is clear that men, including men professors, make substantial use of the daycare facilities for their children.

Teaching relief was one of the topics discussed by interviewees and in the focus groups. While in principle teaching relief after maternity is automatic for women tenure-track professors, the practical implementation of teaching relief (e.g., who organizes the relief, whether the professor has to request it) is not uniform across EPFL. Additionally, there appears to be little consensus on how teaching relief should be handled for PA and PO mothers. Finally, fathers or non-birthing parents¹¹ do not receive any teaching relief.

“...a message that is very clear that EPFL sends is that it is women who take care of children.”

A man professor at EPFL

The cultural and institutional dimensions of the Swiss gender regime were perceived as an additional difficulty for young mothers. The majority of interviewees (80% of both men and women) described the gender role distribution in Switzerland as being very traditional. From the men professor's perspective, the gender culture at EPFL favors the status quo prevalent in Switzerland, with the mother expected to shoulder the primary responsibility of child-rearing. In particular, some of the men professors interviewed thought that the exclusive application of the stop-the-clock measure to women professors reinforced gender stereotypes. However, it should be noted that a recent study has reported that gender-neutral stop-the-clock policies may lead to unequal tenure rate for women and men¹². Additionally, the limited paid paternity leave (10 days) was interpreted as strengthening traditional gender roles. Family issues also includes caring for elderly relatives. This topic was mentioned by some of the interviewees and is often overlooked¹³.

The other looming topic within work-life balance is the dual-career issue. The willingness of the partner to relocate even if it entails a career sacrifice impacts the mobility of researchers. A study conducted in 2012 showed that in Switzerland, 57% of the women professors surveyed were part of a dual-career couple, as opposed to 31% of the men professors surveyed¹⁴. Thus, negotiating dual career priorities with partners is particularly

9 It should be noted that these parents may be on several waiting lists, or may have been offered a spot that does not yet entirely correspond to their needs.

10 See for example: « Evaluation des besoins en matière de places d'accueil des enfants dans le Canton de Vaud à 5 et 10 ans », Fondation Accueil de jour des enfants (FAJE), octobre 2018. <https://faje-vd.ch/category/actualites/>

11 Adoptive and/or same-sex parents are not systematically considered for teaching relief at present.

12 Antecol, H., Bedard, K. & Stearns, J. (2018). Equal but inequitable: who benefits from gender-neutral tenure clock stopping policies? *American Economic Review*, 108(9), pp. 2420-41.

13 See for example: Meystre Claudia, et.al, (2017). *Support between very old parents and their children: the role of responsiveness in the perceived quality of the relationship*. Proceedings, 15th Conference of the Swiss Psychological Society: Treasuring the diversity of psychology, University of Lausanne, Switzerland; Le Bihan-Youinou, Blanche & Claude Martin (2006). Travailler et prendre soin d'un parent âgé dépendant. *Travail, genre et sociétés* 2006/2 (N° 16), pp. 77-96.

14 Dubach, Philippe et.al. (2013). *Dual-career couples at Swiss universities. Evaluation of the third phase of the Swiss Federal Equal Opportunity at Universities Programme 2008-2011/12*. CRUS.

challenging for women professors. In the interviews, 27% of the women mentioned a career sacrifice by the partner or an end to their partnership to be able to start a career at EPFL. In comparison, 53% of the men interviewed indicated that their partner made career sacrifices to allow them to come/stay at EPFL.

“I think it is a lot easier for men to get a woman to follow when they take a new position. I basically had to choose when I came to EPFL between my job and my partner.”

A woman professor at EPFL

Naturally, these decisions are personal and are tied to the individual’s choices. However, the institution has a role to play in easing the dual-career dilemma, as highlighted in a study commissioned to evaluate the federal program for equal opportunity at Swiss Universities (Dubach, 2013). At EPFL, a dual-career program is in place that can provide some assistance and support to the partner of an EPFL professor (Source: Tristan Maillard, General Secretary). However, based on the interviews, few professors appear to be aware of this resource and the conditions under which it is made available.

3.3. Institutional culture

While EPFL is seen as an attractive employer with access to stellar facilities and resources, most women interviewed expressed some dissatisfaction with the gender climate. The dissatisfaction was linked to the feeling of being a minority and the sense that women must weather a series of ‘small’ slights that accumulate to wear down their well-being.

“When I entered the room, I had ten male professors in front of me, zero women. ... How would it feel for a female candidate?”

A man professor at EPFL

Women are a clear minority within the population of EPFL professors. In Figure 6, the number of professors is shown according to gender, School and rank (data from April 2019). In that figure, considering both rank and School, the largest sub-group of women professors corresponds to women PA in STI (n=8). There are two categories with the next largest number: women PATT in SB and STI (each n=6). All other categories include 4 women or fewer. There are 16 women PO across EPFL in total, with some smaller schools including only 1 (CDM) or 2 (IC and SV) women full professors. Overall, the percent of women professors at EPFL is 16% with School percentages varying: 6% (CDM), 9% (IC), 15% (ENAC and SB), 18% (SV) and 20% (STI). The perception of being a minority was reported by all women professors interviewed. Thus, this perception matches well the gender distribution. Interestingly, in the interviews, women in Schools in which the population of women is lower than 20% reported a stronger feeling of isolation that comes from being a minority than women belonging to the School with 20% women professors.

“If we are not in a minority ..., it becomes the norm and it means that it is not, “ ahhhh! we have also a woman in our organization”.... it becomes normal.”

A woman professor at EPFL

One issue about being a minority in a group situation is that an individual comes to represent an entire group. If a woman is the only member of her gender in a group, she becomes ‘the woman’, and no longer represents an individual with their own opinion¹⁵. Rather, her identity is abstracted to her gender, so that ‘ordinary’ group membership eludes her. When women represent a larger fraction of the group – the exact number is not well defined, but often put at 30% (Robertson, 2018)– they become ‘ordinary’ members of the group, with the same influence as other ‘ordinary’ men members.

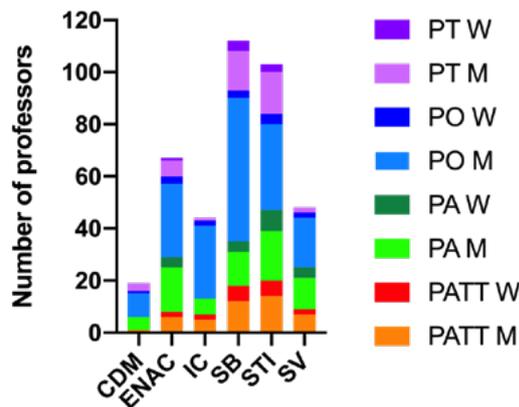


Figure 6: Number of professors by School, rank and gender. Data from April 2019. Since then, there has been an increase in the number of women full professors across EPFL from 15 to 19.

The percent of women professors has been increasing steadily over the past 10 years for some Schools. STI, SB and ENAC have gone from about 10% in 2010 to 18-20% in 2019 (Figure 7). CDH has shot up to around 20% from zero due to the hiring of a single woman professor out of the 5 professors in that School. Other schools (CDM, IC and SV) have shown less of an increase and more of a plateau in the share of women professors.

The gender climate is tied to the number of women¹⁶ and is reported to improve as more women are hired¹⁷ but it is not the only factor. The inherent culture of the organization, what is acceptable and what is not, also plays a crucial role. From the interviews, it emerged that, at EPFL, the culture supports the notion that the norm, for professors (but also students in some Schools) is to be a man. This can be observed by considering the frustrating experiences reported by women and some men, regarding the inappropriateness of some practices.

15 Robertson, Judy (2018). Stereotype Threat, in: Robertson, Judy et.al. (2018). *EqualBITE. Gender Equality in Higher Education*, Sense Publishers, pp. 167-172.

16 Wahl, Anna (2015). *Gender Perspectives on Academic Organizations. Structure, Culture and Power. SV Seminar*. EPFL, 23. October 2015, <http://video.epfl.ch/2850/1/10> (limited access).

17 Dobbin, Frank & Alexandra Kalev (2017). Training Programs and Reporting Systems Won't End Sexual Harassment. Promoting More Women Will. *HBR*, 2017/11.

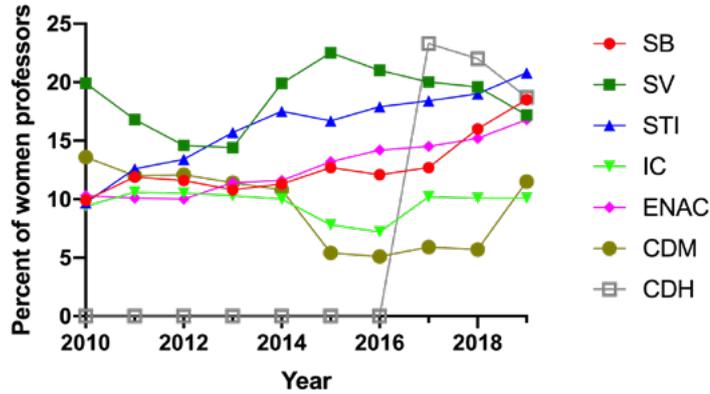


Figure 7: Progression of the percent of women professors per School as a function of time. The data include PO, PA, PATT and PT.

“When we are teaching in ... large classrooms you have a microphone and ... if you are not wearing pants, there is no way to attach this thing... if you are wearing a dress, you basically have to leave it in your hands.”

A man professor at EPFL

Examples include the use of blanket ‘Monsieur le Professeur’ as a greeting in emails sent from the central administration or the doctoral school, the inadequacy of microphone attachments in auditoria if one is wearing a dress, the inclusion of no or few women in school-wide symposia or events. As one interviewee put it, small (or perhaps less small) issues build up to a general feeling of frustration in being a woman in a man’s organization, a man’s society. These are a source of great frustration and are perceived as a symptom of being, ironically, the ‘odd man out’.

“The most challenging issue is that there is not one challenging issue but there is a bag of issues. You can always find an excuse for every issue but pulling them all together can just be wearing and tearing.”

A woman professor at EPFL

An additional dimension of the institutional climate is the process to address grievance cases and the number of grievance cases targeting women professors. While measures were taken as of 2017 with the creation of the ‘Cellule Respect’, grievance procedures remain a source of considerable concern of the majority of the professors interviewed here. The majority of the interviewees (55%) expressed dissatisfaction with the current grievance management procedure –46% of the men professors (excluding Deans), 57% of the women professors, 67% of the Deans– and criticized the lack of support offered by the administration to the professors who were accused, as well as the opacity and the length of the procedure. They also highlighted the extreme duress under which these accusations placed the professors, men and women, targeted by the grievances.

“The effect [of grievances] on these people, whether they’re male or female, is the same. They don’t want to talk about it, they don’t want to open the emails that deal with it, they’re in burn-out, they can’t do research and that whether they’re male or female, I observe exactly the same thing. But now there are more women.”

A woman professor at EPFL

“We have ... a leadership structure where instead of support, it is sort of a “blame culture”. So, everyone tries to make sure that they keep themselves safe instead of really solving problems.”

A man professor at EPFL

The grievance process at EPFL is divided into two categories of inquiries with different objectives. Administrative and disciplinary investigation are instruments of supervision to clarify a situation or a possible breach of duty. For simplicity, the two types of inquiries are shown in combination in Tables 1 through 3.

		Year								
Grievance cases		2009	2012	2013	2014	2015	2016	2017	2018	Total
Total	Investigations (total)	1	2	2	2	3	2	3	8	23
type of case*	Sexual/moral harassment/ threats and assault	1	1	1	1		1	1	4	10
	Scientific misconduct			1		3	1	2	3	10
	Patent litigation/conflict of interest/software hacking		1		1				1	3
person(s) targeted	women targeted					1		1	5	7
	men targeted	1	2	2	1	2	2	1	2	13
	men and women targeted				1			1	1	3

Table 1: Number and type of investigations associated with grievance cases against professors at EPFL for the period 2009-2019. No cases were reported in omitted years. These data combine administrative and disciplinary investigations. *the authors of this report combined categories from the original dataset for ease of presentation.

While there has been a steady number of 0 to 2 grievance cases filed against professors by members of the EPFL community since 2009, the data show an uptick in the number of grievances, with a particularly clear increase of cases filed against women professors in 2018 (Table 1). The underlying reasons for this increase are not readily decipherable. However, considering the outcome of the investigations (Table 2), it is apparent that in the three cases against women professors (that were closed in 2017-2019), it was concluded that the grievances were unsubstantiated (the three additional cases are ongoing). In contrast, out of three cases against men professors, only one was found to be unsubstantiated. While the numbers are fortunately small and statistical significance difficult to establish with such values, the impact on the persons targeted and their immediate colleagues cannot be underestimated. It behooves the institution to structure the grievance process in such a way as to encourage individuals to speak up while ensuring that unsubstantiated cases are minimized.

“I think it comes back ... to this unconscious bias, accepting a woman as your boss where sometimes you have to do stuff which you are not a 100% in line, it seems to be more difficult for some people than others.”

A woman professor at EPFL

2017-2019	Outcome			
person(s) targeted	unsubstantiated	measures taken	ongoing	Total
women	3		3	6
men	1	2		3
men and women	1	1		2
total	5	3	3	11

Table 2: Outcome of investigations of EPFL professors between 2017-2019.

“There are really some textbook examples, like you can be in a discussion and you say something and nobody [pays attention], and 5 minutes later a male colleague says the same and everybody says it’s a good idea.”

A woman professor at EPFL

The final dimension of the grievance cases is the gender distribution of the person(s) filing the grievance and the person(s) targeted by the complaint. In the period 2009-2019, there have been seven grievances filed against women. Of those, five were initiated by men (Table 3). Because of privacy concerns, the details of the position (i.e., PhD student, post-doctoral researcher, professor, other staff member) of the individuals filing grievances against women (and men) professors is not available to the Commission. However, according to interviewees, many of the grievances against women are rooted in unconscious bias and the fact that for some men, it appears to be difficult to accept women in leadership positions. Many women and some men highlighted the fact that students—and professor colleagues—may have distinct behavioral and role expectations for men and women. In fact, a large majority of women interviewed (77%) mentioned that women cannot act the same way men do. If they do so, they are perceived as being ‘bossy’. They are expected to be gentler and friendlier, to be more maternal. Some interviewees attribute the increase in grievances filed against women to the discrepancies in expected behaviors between genders.

“But if a (young) female professor tells people to improve and submit reports by a given deadline, she is often considered as aggressive or too demanding”.

A woman professor at EPFL

2009-2019	person(s) filing the grievance				
person(s) targeted	n/a	men and women	women	men	total
women			2	5	7
men	3	2	5	3	13
men and women	1			2	3
total	4	2	7	10	23

Table 3: Gender distribution of the person targeted and the person filing the grievance for grievances filed against EPFL professors by member(s) of the EPFL community. n/a means that it was not individuals but an entity that filed the grievance.

“Someone said: “this Professor she is a real man. But I’m saying this in the positive way.” And that was the best compliment you could give her.”

A woman professor at EPFL

Some of the women interviewed reported difficulties mostly associated with inappropriate comments, a lack of recognized legitimacy, and/or lack of respect. About 50% of women professors mentioned specifically encountering such interactions with senior colleagues. Several studies have identified the difficulty for women to socialize and develop social networks in scientific communities dominated by men¹⁸. These types of negative interactions were also reported in some cases with students, in particular for course evaluations, for which the language used to evaluate the teaching of women professors can be different than that used for men. Furthermore, the impact of cultural differences may also play a role due to the international nature of EPFL. More specifically, some women professors (27%) have reported negative experiences in interactions with some men PhD students from countries where women are not expected to hold positions of authority.

“Actually, yes, it’s shocking that he called me “ma belle”, not great, isn’t it?”.

A woman professor at EPFL

Also, amongst professors, inequalities were reported in the consideration given to women and men during discussions. Ideas presented by women may be first dismissed but later restated by a man colleague and met with approval. A study targeting top executives, including men and women CEOs reported that highly successful and powerful women struggled to make their voices heard at meetings¹⁹. They attributed this discrepancy to differences in communication styles between genders. Other factors such as ethnic group, language skills, sexual orientation,

18 Howe-Walsh, Liza & Sarah Turnbull (2016). Barriers to women leaders in academia: tales from science and technology. *Studies in Higher Education*, 41:3, 415-428; Xu, Y. J., & Martin, C. L. (2011). Gender differences in STEM disciplines: From the aspects of informal professional networking and faculty career development. *Gender Issues*, 28(3), 134; Barnard, S. et al., Bagilhole, B., & Dainty, A. (2010). Researching UK women professionals in SET: A critical review of current approaches. *International Journal of Gender, Science and Technology*. 2(3).

19 Heath, Kathryn (2014). Even When Women Ask for a Raise, They Don't Ask for Enough. *HBR*.

cultural distance were also identified by 6 out of the 45 professors interviewed as potential factors that are interwoven with gender in professional interactions.

Finally, gender representation at official EPFL-wide or in Schools events is perceived as lacking by women professor interviewees. There is an expressed need for more women role models and a persistent criticism of the men-dominated networks that propose guests, speakers, honorees. This type of occurrence reinforces the perception of lack of legitimacy and of alienation that women professors report. Acknowledgement that women professors are a critical and inextricable part of the fabric of EPFL could be achieved through systematic changes in the institutional culture and perhaps could start by the faculty-at-large grasping the challenges women professors face at every turn.

“They are organizing an event and they forget to invite the women... we looked at the list and there was not a single woman”.

A woman professor at EPFL

3.4. Representational parity

The data on the representation of women professors in leadership positions were collected in April 2019. At that time, there were no women professor vice-presidents, no women section directors, 5% women institute directors and 9% women doctoral school directors. As for the Deans, there was a single woman Dean. At the time of writing, in February 2020, there are two women Deans (ENAC and SV), and three women doctoral school directors (one in ENAC and two in STI). Thus, progress has been made in the representation of women in the leadership in the interim.

Leadership positions	Women profs.	Total profs.
Vice-presidents	0	4
Deans	1	7
Doctoral School directors	2	21
Institute directors	1	21
Section directors	0	17
Centers (headed by a prof.)	4	25

Table 4: Representation of women professors in the leadership at EPFL in April 2019.

Beyond leadership at the EPFL level, the Commission also considered the representation of women in decision-making committees. These were operationally defined as standing committees that consider promotions, funding allocation, and strategic directions for the Institute or School.

“But we need absolutely more women and a diversity of women in the governing bodies so not just women who are part of the club, because it does not make things move forward.”

A woman professor at EPFL

In May through October 2019, time during which these data were collected, there were four Schools with no women in the management team (corresponding to ‘direction’ in French) and two Schools for which the promotion committee included no women (Table 5). In some cases, this can be explained by the ex officio structure of the committee, in that they are assembled from existing leadership (institute directors, teaching section directors, doctoral school directors, ...) and simply reflects the gender make-up of the leadership positions (Table 4). Since then, and at the time of writing (February 2020), there have been substantial changes in three schools: In ENAC, the Dean is now a woman, and she has nominated Associate Deans, one of whom is a woman. As a result, there are 2 women out of 9 in the management (22%); in SV, there are now 3 women in the management out of 10 people (33%); in CDM, the promotion committee is now headed by a woman professor, bringing the percent of women in that committee to 20%, and a new woman professor has been hired, increasing the percent of women professors to 12 %.

Thus, there has been progress since May 2019. However, it is clear that the remaining committees that do not include women at all continue to be an area in which action is needed.

School	Institute	Percent women professors in committees			% women professors in School
		Management	Promotion	Strategy	
ENAC	School-wide	0	0		15
SB	School-wide	0	17		15
	ISIC			25	
	IPHYS			11	
	MATH			0	
STI	School-wide	18	20	20	20
SV	School-wide	25	0		18
IC	School-wide	0	14		9
CDM	School-wide	0	14		6
EPFL-wide	EPFL-wide		33		16

Table 5: Representation of women (as percent of total) in decision-making committee as a function of School in May through October 2019. Management refers to ‘direction’ in French. In some Schools (i.e., SB), strategy is considered at the Institute level. For comparison, the percent of women professors in each School is also indicated (data from April 2019). ISIC= Institute of Chemical Sciences and Engineering; IPHYS=Institute of Physics; MATH= Institute of Mathematics.

Naturally, the improved representation of women in decision-making (or any other) committee requires those women to shoulder the additional work associated with the responsibility. In fact, the majority of interviewees raised the point (73% of the women and 53% of the men). They pointed out that, because there is a requirement for women to be represented in faculty search committees, the few women shoulder an undue burden. Some women interviewees reported that their situation was untenable. The burden also extends beyond EPFL, nationally and internationally. Women are stretched thin because of the low numbers of women professors everywhere and the increased awareness of the need to include gender (and other) diversity on committees, panels, boards, and so on.

“I’m in a lot of commissions and last week I think I didn’t do anything for science: nothing for my lab, because I had so many other things and then I said to myself: this is too much!”

A woman professor at EPFL

The interviews raised the issue of the management culture at EPFL: 80% of the men professors and 50% of the women professors and 33% of the Deans described a top-down and often personalized decision-making culture EPFL-wide. This is not strictly an issue that relates to gender but, because of the predominance of men in total numbers of professors and in leadership positions, it becomes an issue that affects women disproportionately. Moreover, in some Schools, informal social networks, including mostly men, seem to play a major role in managerial decisions, effectively perpetuating the perception that women have a lesser voice than men. Thus, the lack of transparency in decision-making was brought up and considered an area for which there is significant room for improvement.

“There are 17% female professors at EPFL. Everyone wants to have women professors in the commissions so they have more work than men.”

A man professor at EPFL

The teaching load of professors (Figure 8) was assessed considering rank, School, and gender. The analysis showed no statistically significant gender effect for the teaching load. During the interviews, concern regarding the teaching came mainly from junior faculty members, men and women. Negative comments were focused on having to teach in French (a foreign language for many), the assignment of undesirable courses to them, and the lack of support at the start of teaching.

“What happens many times is that you go to a faculty meeting and you hear that a certain decision has been made and you don’t know actually how it was made and what came into this decision being made, but you always have the feeling that this was two or three people who somehow agreed to something and then they tell the others what the decision is.”

A man professor at EPFL

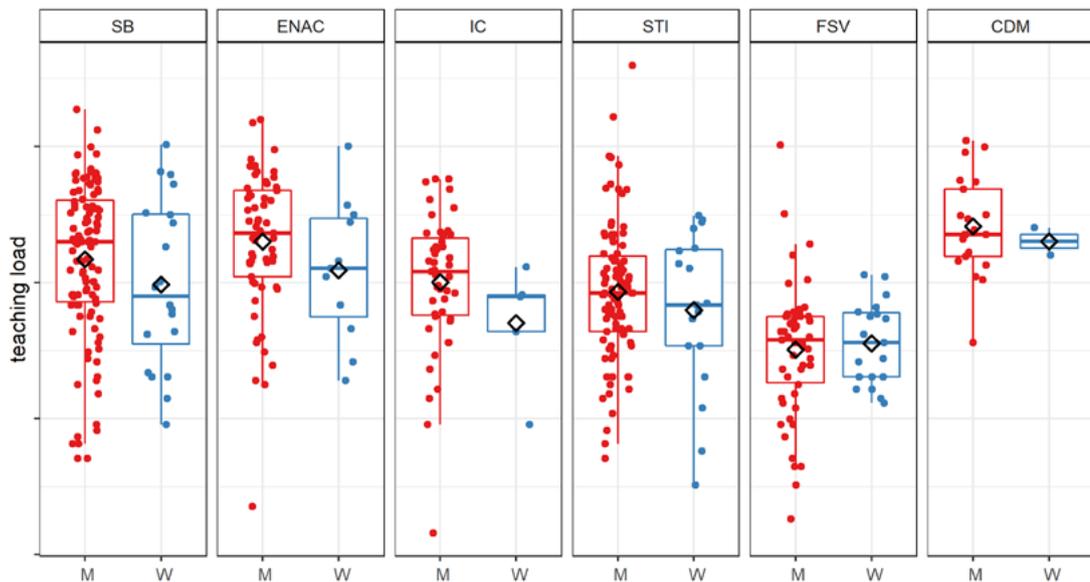
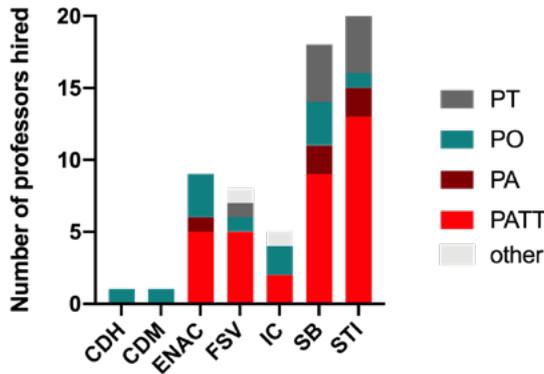


Figure 8: Distribution of teaching load (only lectures and exercise sessions) across Schools and as a function of gender. Data for academic years 2013-2014, 2014-2015, 2015-2016, 2016-2017, 2017-2018 and include PO, PA, PATT and PT. Data shown here correspond to those used for the regression analysis with outliers excluded. See description of box and whisker plot in the methodology section. Men in red and women in blue.

3.5. Hiring and promotion

As indicated above, the number of women professors at EPFL is relatively low, particularly at the more senior levels. Thus, the Commission considered the hiring of professors as a function of gender and rank.

a) women professors



b) men professors

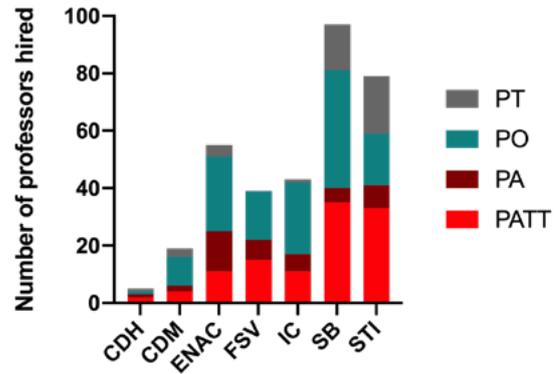


Figure 9: Rank at which professors who were at EPFL in January 2019 were hired, presented as a function of gender and current School affiliation. These data are independent from the current rank of the professors as they may have been promoted during their time at EPFL.

It is evident from the data that the majority of the women professors were hired as PATT (Figure 9). The underlying reasons for this fact are likely a combination of factors. An obvious one is that there are fewer senior women professors at other institutions as well, making it difficult to attract them to EPFL. Considering the distribution of the percent of women across ranks (Figure 10), we observe a sharp decrease in the percent of women starting at the PA level. However, the number of PATT is in line with the percent of women students and post-docs at EPFL. If the hiring of women PATT continues at the same level, those women will eventually be promoted to PA and PO but there will be a lag time of at least a decade due to the duration of the process. Thus, it would be beneficial to increase the number of PA and PO hires in order to more rapidly plug the leaky pipeline and achieve a flat profile across all categories.

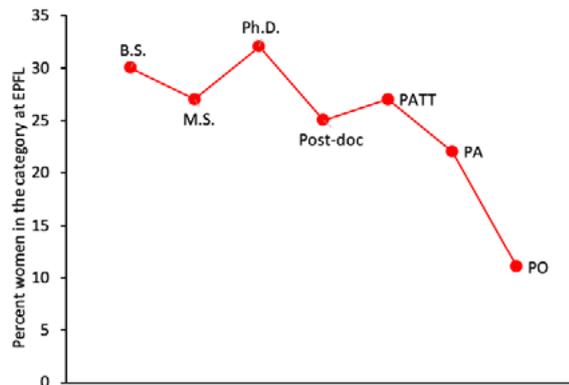


Figure 10: Percent women in the student (BS, MS, PhD), post-doc and professor population at EPFL in December 2019.

It is also important to acknowledge that there are external challenges to hiring women professors such as competition with other universities. Thus, efforts to hire women

professors are not always fruitful. A detailed consideration of gender during the hiring process conducted by the Equal Opportunity Office (based on available data from Faculty Affairs Office) indicates that, for the period between 2015 and 2018, more women declined offers (42% of the women to whom offers were made) than men (14% of the men to whom offers were made) (Table 6). The underlying reasons for this difference are not known²⁰. These figures nevertheless indicate that additional efforts are needed to attract more women professors and to ensure that they accept the offers made to them.

Rank hire	women	men	total	% women
PO	2	5	7	29
PA	1	1	2	50
PATT	5	9	14	36
Declined offer	6	3	9	67
Hire after W declined	-	3	3	-
Total offers	14	21	35	40
Total hires	8	18	26	31
% offers accepted	58	86	74	-

Table 6: Number of faculty searches that produced an offer as a function of gender and rank (for searches launched since 2015 with the nomination effective by end of 2018). The number of offers accepted by men and women candidates and the hiring of men after women declined the offer are also listed.

Data on faculty search committees were queried for the percent of women who participated. The number varied between 11% (IC) and 23% (SV) with most School at either ~15% (CDM, SB, STI) or ~20% (CDH, ENAC). Interviewees pointed to the recruitment process as biased due to the lower percentages of women candidates, the self-exclusion of potential women applicants, gender biases in the evaluations, and the role of the mainly male social network (60% of men and 97% of women). There were specific comments on the practice of selection of women with lower profiles for the short-list simply to fulfill the prescribed number, the so-called ‘alibi’ candidates. In addition, some women interviewees pointed out that cognitive biases may result from different presentation styles and gendered communication styles. However, the unconscious bias training that is required for every committee chair has been helpful in allowing those individuals to flag such occurrences and intervene during the search. In general, interviewees pointed out that there had been a recent improvement in the recruitment and promotion practices.

“I know one or two [women] who suffered a lot from being invited to sixty interviews to become a professor and then each time it was the «alibi file» because [they] wanted a woman in the process.”

A man professor at EPFL

²⁰ We speculate that they may be related to the dual-career issue, which is known to impact women disproportionately (see for example: Londa Schiebinger et al. (2008). *Dual-Career Academic Couples. What Universities Need to Know*. Michelle R. Clayman Institute for Gender Research, Stanford University; Dubach (2013), op. cit.

“Even in situations [where] everybody agrees that the quality of the science is very good, I often also hear things like “she was a bit colorless... he is kind of more impressive”

A woman professor at EPFL

The implementation of the gender-conscious recruitment procedures put in place as well as the minimum 40% target of hiring offers going to women articulated by the president of EPFL, Prof. Vetterli, should continue, according to interviewees. This is borne out in the figures as there has been a steady increase in the percent women hired, particularly in 2019, when 53% of the hires were women (Figure 11).

“What’s improved is that every [search committee] Chair has to go through unconscious bias... you become aware and I think many (and I include myself) have discovered that we have this unconscious bias”.

A man professor at EPFL

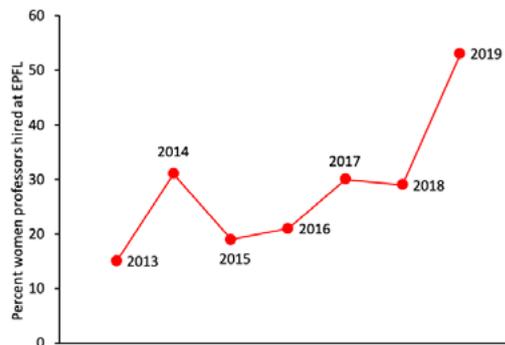


Figure 11: Percent women professors hired in the period 2013-2019. These data include PO, PA and PATT.

The interviews revealed that while most professors interviewed did not perceive that there were inequalities in their own hiring or promotion process, many reported having perceived inequalities in the evaluation of candidates in one or more recruitment or promotion processes (64% of interviewees). Women and men formulated criticisms of the promotion practices and their lack of transparency. This point was raised in particular with respect to the promotion from PA to PO.

“I think they [criteria for promotion] are still quite clearly established. At least at the tenure-track level. Perhaps it is less clear from the promotion from associate professor to full professor.”

A man professor at EPFL

The Commission considered the time for professors to be promoted from PATT to PA and from PA to PO. The two types of promotions were considered together (Figure 12). The time to promotion was assessed considering School, gender and the type of promotion (to PA or to PO). The analysis showed a statistically significant gender effect for SB only, indicating that all else being equal, it takes longer for a women professor in SB to be promoted.

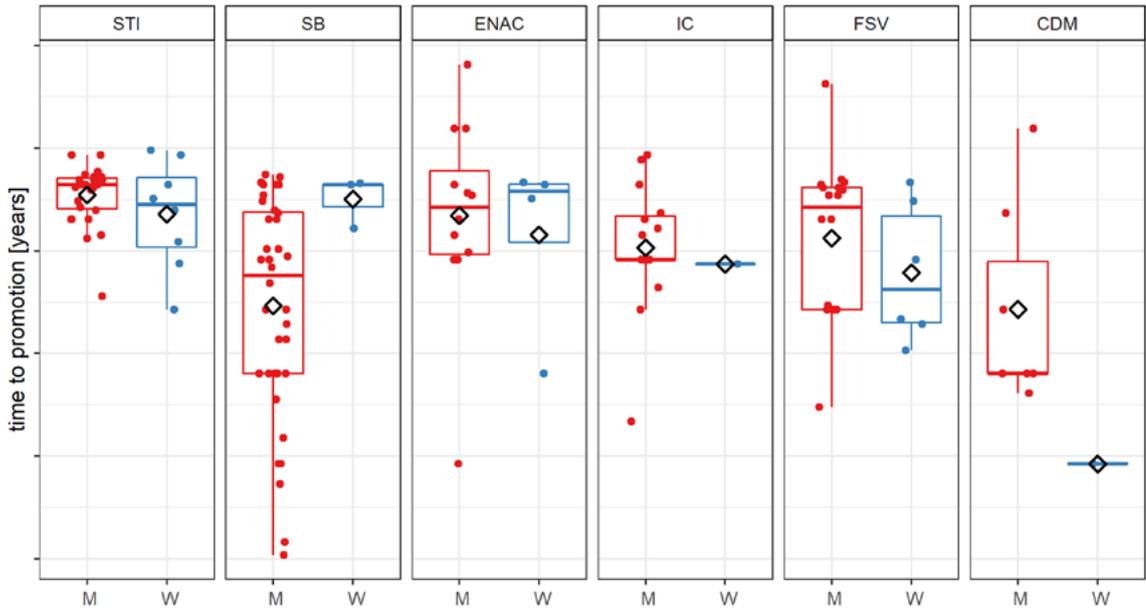


Figure 12: Duration of tenure as tenure-track or associate professor prior to promotion as a function of School and gender. Data shown here correspond to those used for the regression analysis with outliers excluded. See description of box and whisker plot in the methodology section. Men in red and women in blue. The y-axis scale is relative for privacy reasons.

3.6. Integration

Finally, integration into EPFL for newcomers is generally perceived as being relatively easy and the community of professors as a whole seems to be supportive. However, there was a large variability in this perception depending on the specific Institute. Furthermore, the mentorship program that is in place for PAT^T²¹ was perceived as being woefully inadequate and in need of review, particularly as its implementation appears to differ substantially depending on the School (and perhaps the Institute).

“I was assigned a mentor who I perceived to be a real sexist and this became kind of a struggle that defined my tenure-track”.

A woman professor at EPFL

The tenure-track process was highlighted by many interviewees (80% of men, 83% of women, and 83% of the Deans) as a problematic time during which the professors lack support from the administration and from senior colleagues who have not gone through the process themselves. The young professors face new and simultaneous challenges that leave them vulnerable to burnout. In particular for those with young families, it is incredibly challenging. As indicated above, because proportionally more women are hired as tenure-track professors, a larger fraction of them go through the difficulties associated with the process. In addition, if they decide that they would like to start a family, the effect is compounded. Nonetheless, it appears as though the tenure success rate is similar for men

²¹ Art. 19 of the Rules and Regulations Concerning EPFL Tenure-Track Assistant (LEX 4.2.1) states “The purpose of mentoring is to facilitate the start of the PATTs’ activities by giving them the benefit of the experience of a senior colleague. It is encouraged by the Dean and / or the Director of the Institute who participate in setting up mentoring if the PATT confirms his / her interest.”

and women professors (88% for women and 85% for men since the establishment of the tenure-track process at EPFL).

“ ..maybe giving to tenure-tracks, ... before the clock starts for example. Just give them some guidelines, training of how to manage the lab”.

A woman professor at EPFL

4. **Recommended measures**

In light of the discussions at the focus groups and per the Commission's own determination, the following 16 new measures are recommended for implementation.

4.1. **Salary and resource allocation**

- Measure 1: Establish transparency regarding resource and space allocation, committee work, teaching load and the decision-making process.
- Measure 2: Establish a more systematic data collection approach across all Schools to facilitate the management of space, resources, teaching load and committee load and repeat the qualitative and quantitative assessments every 5 years.
- Measure 3: Carry out a pair-matching analysis for the salaries of all women professors and of those men whose salaries were identified as outliers.

4.2. **Work/Life balance**

- Measure 4: Provide sufficient daycare facilities within and near EPFL (including Wednesday afternoons and holidays) for all EPFL faculty members, PhD students, postdocs, and staff. A measurable goal is the absence of a waiting list.
- Measure 5: Strongly discourage holding meeting before 8:30a and after 5p. The teaching schedule should allow parents of children younger than 16 not to teach classes at 8:15a or after 5p.
- Measure 6: Offer non-birthing parents²² (father or same-sex partner) the benefit of a one-month parental leave. In addition, offer a 6-month stop-the-clock to the non-birthing parent per birth while on tenure-track.
- Measure 7: Establish an EPFL-wide uniform plan for systematic teaching relief for PATTs and PAs and POs, following maternity and parenthood. Planning and implementation shall be the responsibility of the Section.
- Measure 8: Enhance the visibility of the dual-career program and clarify the eligibility criteria to benefit from the fund.

4.3. **Representation of women professors**

- Measure 9: Prioritize the participation of women professors in committees that make decisions about promotion, funding allocation, and research strategy and discharge them from other committees.

²² Adoption was also considered but not explicitly stated here, as the legal basis is more complex and depends on the parental situation.

4.4. Hiring

- Measure 10: Ensure the implementation of the current EPFL hiring policy and target through control and monitoring.
- Measure 11: Provide for the yearly hire of a woman full professor in any field as an open competition across all Schools.

4.5. Gender climate

- Measure 12: Provide bias awareness training and self-evaluation to undergraduate and PhD students. Define clearly what are acceptable behaviors at EPFL.
- Measure 13: Establish a gender equality committee for each School that includes men and women professors and ensure coordination of these committees across campus.

4.6. Institutional culture

- Measure 14: Create a workshop for senior leadership (heads of institutes, section directors, doctoral school directors, Deans) that focuses on leadership skills and fostering diversity.
- Measure 15: Establish a standard of gender-aware communication for Schools and Mediacom and increase the visibility of women on campus.
- Measure 16: Review, extend, and improve the mentorship program for professors who seek it.

4.7. Measures already being implemented

The Commission strongly supports the following measures that are in the process of being implemented. In particular, it is in favor of a substantial overhaul of the grievance procedures.

- Measure 17: Establish state-of-the-art procedures for grievance cases including regular evaluation of their effectiveness. A working group has been created and is actively investigating this topic with the goal of providing a new structure for the handling of grievance procedures.
- Measure 18: Establish training courses for PATT to help them acquire skills to manage and lead their group. This is already in progress after a successful pilot run.

5. References

- Antecol, H., Bedard, K., & Stearns, J. (2018). Equal but inequitable: who benefits from gender-neutral tenure clock stopping policies? *American Economic Review*, 108(9), pp. 2420-41.
- Barnard, S., Powell, A., Bagilhole, B. & Dainty, A. (2010). Researching UK women professionals in SET: A critical review of current approaches. *International Journal of Gender, Science and Technology*, 2(3).
- Caltech (2001). *Committee on the Status of Women Faculty at Caltech, Final report*. <http://wff.yale.edu/sites/default/files/files/CSFWFINALREPORT1.pdf>
- Dobbin, Frank & Alexandra Kalev (2017). Training Programs and Reporting Systems Won't End Sexual Harassment. Promoting More Women Will. *HBR*, 2017/11. <https://hbr.org/2017/11/training-programs-and-reporting-systems-wont-end-sexual-harassment-promoting-more-women-will> [accessed 25.05.2020]
- Dubach, Philippe, et al. (2013). *Dual-career couples at Swiss universities: Evaluation of the Swiss Federal Equal Opportunity at Universities Programme, 3rd period 2008-2011*. Bern. Rector's Conference of Swiss Universities. (Brochure), pp. 68. <https://www.buerobass.ch/kernbereiche/projekte/evaluation-bundesprogramm-chancengleichheit-von-frau-und-mann-an-den-universitaeten-3-phase-2008-2011/project-view> [accessed 02.06.2020]
- ETH Women Professors Forum (2019). *Survey of Issues Important to women Professors at EPFL and ETHZ*. <https://eth-wpf.ch/survey-of-issues-important-to-women-professors-at-epfl-and-ethz-2019/> [accessed 25.05.2020]
- Gloor, Jamie L., & Susanne Mehr (n.d.). *Career and Life Phase of an Assistant Professor. Lebens- und Laufbahnphase Assistenzprofessur*. Study conducted under the Action Plan Gender Equality UZH 2013-2016 (Internal report).
- Harvard (2005). *Report of the Task Force on Women Faculty*. <https://faculty.harvard.edu/task-force-women> [accessed 25.05.2020]
- Heath, Kathryn (2014). Even When Women Ask for a Raise, They Don't Ask for Enough. *HBR*, July 14. <https://hbr.org/2014/07/even-when-women-ask-for-a-raise-they-don-t-ask-for-enough> [accessed 25.05.2020]
- Howe-Walsh, Liza & Sarah Turnbull (2016). Barriers to women leaders in academia: tales from science and technology. *Studies in Higher Education*, 41:3, 415-428, DOI: 10.1080/03075079.2014.929102
- Le Bihan-Youinou, Blanche & Claude Martin (2006). Travailler et prendre soin d'un parent âgé dépendant. *Travail, genre et sociétés* 2006/2 (N° 16), pp. 77-96.

- Le Feuvre, Nicky (ed.) (2015). Contextualizing Women's Academic Careers: Comparative Perspectives on Gender, Care and Employment Regimes in Seven European Countries. *GARCIA working paper* n. 1. University of Trento (ISBN 978-88-8443-609-2), pp.139-184. http://garciaproject.eu/?page_id=52 [accessed 02.06.2020]
- Meystre Claudia, et.al, (2017). Support between very old parents and their children: the role of responsiveness in the perceived quality of the relationship. *Conference Proceedings 15th Swiss Psychological Society: Treasuring the diversity of psychology*. University of Lausanne, Switzerland.
- MIT (1999). A Study on the Status of Women Faculty in Science at MIT: How a Committee on Women Faculty came to be established by the Dean of the School of Science, what the Committee and the Dean learned and accomplished, and recommendations for the future, *Faculty Newsletter*, Special Edition. Vol. XI No. 4 March. <http://web.mit.edu/fnl/women/women.html> [accessed 02.06.2020]
- MIT (2002). *Reports of the Committees on the Status of Women Faculty 2002*. https://facultygovernance.mit.edu/sites/default/files/reports/2002-03_Status_of_Women_Faculty-All_Reports.pdf [accessed 02.06.2020]
- MIT (2011). *A Report on the Status of Women Faculty in the Schools of Science and Engineering at MIT*. <http://news.mit.edu/sites/mit.edu.newsoffice/files/documents/women-report-2011.pdf> [accessed 02.06.2020]
- Robertson, Judy (2018). Stereotype Threat, in: Robertson, J.et.al. (2018). *EqualBITE. Gender Equality in Higher Education*. Sense Publishers, pp. 167-172.
- Rost, Katja & David Seidl (2016). *Forschungsausstattung, Sozialkapital und Gender an der UZH*. Study conducted under the Action Plan Gender Equality UZH 2013-2016 (Internal report).
- Schiebinger, Londa, Andrea Davies Henderson & Shannon K. Gilmartin (2008). *Dual-Career Academic Couples. What Universities Need to Know*. Michelle R. Clayman Institute for Gender Research Stanford University. <https://stanford.app.box.com/s/y5bicy7o3cxwtmg22iu> [accessed 25.05.2020]
- Wahl, Anna (2015), *Gender Perspectives on Academic Organizations. Structure, Culture and Power*. SV Seminar. EPFL, 23. October 2015, <http://video.epfl.ch/2850/1/10> (limited access)[accessed 25.05.2020]
- Xu, Y. J., & Martin, C. L. (2011). Gender differences in STEM disciplines: From the aspects of informal professional networking and faculty career development. *Gender Issues*, 28(3), 134.

6. Acknowledgements

The Commission would like to warmly acknowledge the help of the following individuals in various aspects of data collection, data analysis, as well as fruitful discussions and support. This work could not have taken place without their assistance and willingness to engage in this study.

Interviews, focus groups and data analysis:

Prof. Eric Davoine, Dr. Xavier Salamin and Christelle Zagato devised the interview questions, selected the interviewees and conducted the interviews. They also carried out the transcription of the interviews and the analysis of the associated data. Finally, they ran the focus group sessions and analyzed their results. Their full report is available as Appendix 3.

Quantitative data analysis:

- Sarah Gerster carried out the multiple linear regression analysis. Professor Anthony Davison also assisted with interpretation of the regression analysis.

Data collection:

- Eric Bachmann, Registrar's Office
- Mathieu Helbling, and Pascale Guillot, Human Resources
- Caroline Vandevyver and Brad Fetter, Research Office
- Pierre Magnin and Yves Allegri, Finances Office
- Hassan Sadeghi and Vittoria Belmondo, Faculty Affairs Office
- Participants to interviews and focus groups (unnamed)

Support:

- Lucia Baldi: minutes and help with report
- Chantal Mellier: organization, website and minutes

Fruitful discussions:

- Susanna Swann: was part of the Commission in the first few months and provided useful insights to the discussion.

A. **Appendices**

A.1. **Appendix I – Origin of data, variables considered.**

The data were obtained from various services and the Schools at EPFL. A summary table is provided below. Vice-presidency for Education (VPE), Vice-presidency for Finance (VPFI), Faculty Affairs Office (APR), Research Office (ReO), Equal Opportunities Office (EO). * see Appendix 2 for explanation of dependent and explanatory variables. &For these two variables, a binary value (High, Low) was assigned to each professor by members of the commission from the corresponding School, based on knowledge of the research activities. For CDM, Low was selected for all professors for both variables. See text for definition of ‘Need for space’ and ‘Need for equipment’.

	Dependent variable*	origin	Explanatory variables*					
Analyzed by multiple linear regression	Salary	VPFI	rank	gender	School	Seniority at rank	Biological age	
	Start-up	VPFI	rank at start-up	gender	School	Need for space&	Need for equipment&	Start-up date
	Yearly budget	School	rank	gender	School	full-time position?	Need for space&	Need for equipment ^{&}
	Space	School	rank	gender	School	full-time position?	Need for space&	Need for equipment ^{&}
	Extramural funding	ReO	rank	gender	School	full-time position?	Need for space&	Need for equipment ^{&}
	Time to promotion	VPFI	School	gender	type of promotion			
	Teaching load	VPE	rank	gender	School			
leadership	EPFL website							
Gender make-up of hiring committee	APR							
Decision-making committees	Schools							
Position when hired	VPFI							
Hiring offers	APR, EO							
Grievance cases	General Secretary							

Table A1: Type of data collected and their source.

A.2. Appendix II – Multiple linear regression analysis

Multiple linear regression is useful in modeling the relationship between a dependent variable (y) and multiple explanatory variables (x). In this project, the ‘lm’ command in R was used. The dependent and the explanatory variables are listed in the table above (Table A1). Given the rather large set of explanatory variables in comparison to the available observations, we could not systematically include all interaction terms. Nevertheless, we considered the interaction term of each individual explanatory variable with gender whenever possible²³. These interaction terms were considered because of a study on the salary differentials based on linear multiple regression that specifically emphasized the need to include such terms²⁴.

For each dataset, we list the following values:

- Adjusted r^2 = the fraction of the variation in the dependent variable that can be explained by the explanatory variables, corrected for the size of the model.
- F-statistic p-value= tests the null hypothesis: coefficient for all explanatory variables is zero.
- Residual standard errors= how far the observed dependent variable values are from the fitted values
- Regression coefficient: estimated effect of the explanatory variable on the dependent variable, all other variables being constant. In principle, an increase of 1 in a given explanatory variable, results in an increase in the dependent variable equal to the slope. Interpretation is less trivial for categorical explanatory variables or when the dependent variable is log-transformed.
- t-test p-value: testing the null hypothesis: that the contribution of this explanatory variable or interaction term to the dependent variable is zero.

The assumptions of linear regression were verified for each case by considering four diagnostic residual plots. The first plot considers the residual vs. the fitted values: it should not show much variation as we expect similar residual at all fitted values, and it allows to check the linearity assumption. The second plot (aka the Q-Q plot) shows the ordered observed standardized residuals vs. the ordered theoretical residuals and is expected to show a diagonal line. This plot tests the normal distribution of the residuals. The third plot is the scale-location plot and considers whether residuals are spread equally along the range of fitted values. This plot checks the assumption of equal variance. The fourth plot is the residuals vs leverage plot and evaluates whether there are any data points that disproportionately impact the regression coefficients.

In some datasets, outliers were identified and removed. These were identified by an iterative procedure by which the outliers are flagged while fitting the model. Those are removed and the model refitted. This is repeated until no outliers remain. Thus, outliers are only discarded if they cannot be explained by any combination of variables in the model.

The multiple linear regression can produce a low adjusted r^2 , suggesting that the

²³ Sometimes the number of observations in a subcategory (e.g. women working part time) is (almost) empty. Hence, there is not enough evidence to get a useful estimate of the interaction term.

²⁴ Billard, L. (2017) Study of salary differentials by gender and discipline. *Statistics and Public Policy*, 4:1, 1-14, doi: 10.1080/2330443X.2017.1317223

model only captures a small part of the variability in the data. Low r^2 values are not uncommon in social or behavioral sciences, when one cannot-include all the relevant predictors to explain an outcome variable. However, the p-value of the F-test of all models is smaller than 5%, hence our regression models fit the data better than a model without any independent variables.

The various datasets and their parameters are listed below.

A.2.1. Salary

The data were normalized to the percent employment at EPFL and base-10 log-transformed. Deans, Vice-presidents and the President were excluded from the analysis. Biological age and seniority at the current position were the only variables available. Ideally, academic age (years since PhD) would be a better explanatory variable but was not available. A number of combinations were considered for this dataset (not all shown here) and yielded differing results depending on the specific explanatory variables considered. Here, we show the most complete model. For non-numerical explanatory variables, the default values are: Gender=man; School= ENAC; Rank= PA. No data were discarded as outliers.

Explanatory variables and interactions	coefficient	Residual std. error	p-value
intercept	5.255	0.014	0.000
Gender_w	0.112	0.035	0.002
School_SB	0.003	0.004	0.528
School_IC	0.013	0.005	0.009
School_STI	0.011	0.004	0.009
School_SV	0.013	0.005	0.008
School_CDM	0.018	0.007	0.011
Prof_PATT	-0.095	0.005	1.73e-73
Prof_PO	0.045	0.004	2e-26
Seniority at position	0.00043	0.000	0.142
Biological age	0.002	0.00029	9.75e-14
Gender_w:school_SB	-0.018	0.011	0.088
Gender_w:school_IC	0.009	0.014	0.527
Gender_w:school_STI	-0.010	0.010	0.296
Gender_w:school_SV	-0.010	0.012	0.434
Gender_w:school_CDM	-0.022	0.025	0.371
Gender_w:prof_PATT	-0.015	0.011	0.173
Gender_w:prof_PO	-0.002	0.010	0.823
Gender_w:seniority	0.005	0.001	4.97e-06
Gender_w: age	-0.003	0.001	0.00034
Adjusted R2	0.917		

A.2.2. Start-up

The data were base-10 log-transformed. For non-numerical explanatory variables, the default values are: Gender= man; School= STI; Rank at start-up= PA; Lab space needs= Low; equipment needs= Low. No data were discarded as outliers. For individuals who have laboratories in several Schools, the start-up information was merged. While year of start-up was considered in some models, it did not impact the results and was subsequently removed from the model.

Explanatory variables and interactions	coefficient	Residual std. error	p-value
intercept	2.57173	0.06457	<2 e-16
Gender_w	-0.12964	0.15844	0.414185
School_SB	-0.16586	0.04876	0.000804
School_ENAC	-0.15728	0.05506	0.004720
School_IC	-0.17321	0.06228	0.005914
School_SV	-0.10124	0.05679	0.076073
School_CDM	-0.40567	0.07729	3.7e-07
Rank at start-up_PATT	-0.05238	0.05336	0.327465
Rank at start-up_PO	0.16422	0.05546	0.003421
Lab space needs_high	0.20543	0.04499	8.5e-06
Equipment needs_high	0.09987	0.04244	0.019548
Gender_w:school_SB	0.22782	0.11682	0.052497
Gender_w:school_ENAC	0.20324	0.13311	0.128336
Gender_w:school_IC	0.30120	0.19444	0.122884
Gender_w:school_SV	0.01270	0.12790	0.920987
Gender_w:school_CDM	0.33785	0.27780	0.225296
Gender_w:start-up_PATT	-0.02156	0.12599	0.864293
Gender_w:start-up_PO	-0.06138	0.16768	0.714708
Gender_w:lab_space_needs_high	0.14039	0.12923	0.278591
Gender_w:equipment_needs_high	-0.03808	0.09847	0.699363
Adjusted R2	0.4188		
F-statistic p-value	<2.2e-16		

A.2.3. Yearly budget

The data were normalized to percent employment at EPFL and base-10 log-transformed. In this case, there were three levels for laboratory space needs: H, M, and L. For non-numerical explanatory variables, the default values were: Gender= man; School= SB; Rank= PA; Lab space needs= M; equipment needs= Low; Full time employment at EPFL= yes. Eight data points were discarded as outliers (and were justified by the underlying data). In this dataset, PT were included. For individuals who have laboratories in several Schools, the yearly budget information was merged. Due to the few women working part-time, the interaction gender, full-time employment was removed from consideration.

Explanatory variables and interactions	coefficient	Residual std. error	p-value
intercept	2.762538	0.021180	<2e-16
Gender_w	-0.005303	0.047410	0.911008
School_ENAC	-0.171324	0.016547	<2e-16
School_IC	0.002178	0.018333	0.905521
School_STI	0.010967	0.015271	0.473228
School_SV	-0.069050	0.018208	0.000181
School_CDM	-0.010085	0.026722	0.706159
Rank_PATT	-0.195434	0.016601	<2e-16
Rank_PO	0.118906	0.012365	<2e-16
Rank_PT	-0.343948	0.027535	<2e-16
Lab space needs_low	-0.034016	0.016360	0.038463
Lab space needs_high	0.031310	0.018251	0.087301
Equipment needs_high	0.030143	0.013227	0.023389
Employment_part-time	0.072891	0.018824	0.000133
Gender_w:school_ENAC	-0.059340	0.040220	0.141170
Gender_w:school_IC	-0.033826	0.054623	0.536219
Gender_w:school_STI	-0.038088	0.038709	0.325950
Gender_w:school_SV	-0.004151	0.041417	0.920243
Gender_w:school_CDM	0.009891	0.093110	0.915476
Gender_w:rank_PATT	0.019276	0.032998	0.559557
Gender_w:rank_PO	0.025857	0.033822	0.445180
Gender_w:rank_PT	-0.050971	0.052717	0.334395
Gender_w:lab_space_needs_low	-0.017754	0.044844	0.692458
Gender_w:lab_space_needs_high	-0.012025	0.053849	0.823446
Gender_w:equipment_needs_high	0.025050	0.036123	0.488564
Adjusted R2	0.7843		
F-statistic p-value	<2.2e-16		

A.2.4. Space

In order to account for group size and its yearly variability, the average full-time equivalent (FTE) employees of the lab over the period 2017-2019 was obtained and used to normalize the space to group size (FTE). The normalized data were base-10 log-transformed. For non-numerical explanatory variables, the default values were: Gender= man; School= SB; Rank= PA; Lab space needs= Low; equipment needs= Low, Full time employment at EPFL= yes. No data points were discarded as outliers. For individuals who have laboratories in several Schools, the space information was merged. Due to the few women working part-time, the interaction gender-full-time employment was removed from consideration.

Explanatory variables and interactions	coefficient	Residual std. error	p-value
intercept	1.30705	0.03853	<2e-16
Gender_w	-0.04194	0.10653	0.69409
School_ENAC	0.01988	0.04071	0.62564
School_IC	-0.18119	0.04393	4.88e-05
School_STI	-0.03188	0.03864	0.41007
School_SV	-0.13814	0.04809	0.00438
School_CDM	-0.37608	0.06156	3.31e-09
Rank_PATT	-0.06071	0.04175	0.14700
Rank_PO	0.01486	0.03106	0.63269
Lab space needs_high	0.17664	0.03692	2.76e-06
Equipment needs_high	-0.03306	0.03445	0.33812
Employment_part-time	-0.06322	0.10744	0.55673
Gender_w:school_ENAC	-0.02302	0.15018	0.87830
Gender_w:school_IC	0.14628	0.09824	0.13759
Gender_w:school_STI	0.09543	0.11710	0.41582
Gender_w:school_SV	-0.07213	0.23410	0.75820
Gender_w:school_CDM	0.12977	0.08271	0.11777
Gender_w:rank_PATT	0.01335	0.08466	0.87483
Gender_w:rank_PO	-0.15527	0.11154	0.16500
Gender_w:lab_space_needs_high	0.04512	0.08678	0.60351
Gender_w:equipment_needs_high			
Adjusted R2	0.2909		
F-statistic p-value	<2.2e-16		

A.2.5. Fundraising

Only research (rather than industrial) fundraising was considered due to the high variance of the industrial data available. The total amount of funding raised over the number of years spent at EPFL (a maximum of 10 years were considered) was normalized per year and base-10 log-transformed. For non-numerical explanatory variables, the default values were: Gender= man; School= SB; Rank= PA; Lab space needs= M; equipment needs= Low; Full time employment at EPFL= yes. A single data point was discarded as an outlier (and was justified by the underlying data). In this dataset, PT were included. For individuals who are affiliated with several Schools, one was selected (the major affiliation where discernable). Due to the few women working part-time, the interaction gender, full-time employment was removed from consideration. The faculty and gender interaction terms were also not considered.

Explanatory variables and interactions	coefficient	Residual std. error	p-value
intercept	2.491409	0.090688	<2e-16
Gender_w	-0.089332	0.176307	0.61276
School_ENAC	-0.141822	0.069833	0.04316
School_IC	-0.130849	0.078736	0.09760
School_STI	0.138186	0.058639	0.01910
School_SV	0.094931	0.074945	0.20627
School_CDM	-0.306595	0.110183	0.00574
Rank_PATT	0.004453	0.078373	0.95472
Rank_PO	0.091523	0.056758	0.10792
Rank_PT	-0.072633	0.082132	0.37723
Lab space needs_low	-0.120041	0.071255	0.09311
Lab space needs_high	0.108713	0.077833	0.16354
Equipment needs_high	0.107954	0.058314	0.06513
Employment_part-time	-0.229212	0.078222	0.00365
Gender_w:rank_PATT	-0.031015	0.149625	0.83593
Gender_w:rank_PO	0.082622	0.156243	0.59734
Gender_w:rank_PT	-0.178831	0.198402	0.36813
Gender_w:lab_space_needs_low	0.150513	0.190323	0.42968
Gender_w:lab_space_needs_high	0.067761	0.187167	0.71758
Gender_w:equipment_needs_high	0.009880	0.141842	0.94451
Adjusted R2	0.3035		
F-statistic p-value	<2.2e-16		

A.2.6. Time to promotion

Time to promotion, i.e., the time an individual professor spends as PATT or PA before being promoted to PA or PO, respectively, was considered. The stop-the-clock additional year was removed from the time to promotion for the women whose tenure clock was delayed by one year due to a pregnancy. In addition to, School and gender, the additional variable ‘type of promotion’ was considered. This corresponds to promotion to PA or PO. For non-numerical explanatory variables, the default values were: Gender= man; School= STI; Promotion to= PO. Four data points were discarded as outliers (and were justified by the underlying data). For individuals who are affiliated with several Schools, one was selected (the major affiliation where discernable). This analysis was run repeatedly with or without the gender and type or promotion interaction (because few women were promoted to PO) and by varying the default School (to facilitate data presentation) and the results were robust.

Explanatory variables and interactions	coefficient	Residual std. error	p-value
intercept	0.0291958	0.0328747	0.37621
Gender_w	-0.0372901	0.0665027	0.57599
School_SB	-0.2161441	0.0408198	5.23e-07
School_ENAC	-0.0380699	0.0560077	0.49794
School_IC	-0.1011139	0.0518728	0.05352
School_SV	-0.0834938	0.0488405	0.08986
School_CDM	-0.2211072	0.0682817	0.00154
Type_of_promotion_PO	-0.0100101	0.0306241	0.74432
Gender_w:School_SB	0.2525863	0.1174969	0.03352
Gender_w:School_ENAC	0.0019601	0.1136019	0.98626
Gender_w:School_IC	0.0002897	0.1781554	0.99871
Gender_w:School_SV	-0.0293625	0.0994860	0.76838
Gender_w:School_CDM	-0.2370636	0.1997012	0.23746
Gender_w:promotion_to_PO	-0.226947	0.0957287	0.81299
Adjusted R2	0.1897		
F-statistic p-value	0.000134		

A.2.7. Teaching load

Only lectures and exercises (referred to as CE by SAC) data were considered due to the large variation in the data for other types of teaching. The teaching load is given by the number of credits allocated to the course times the lecturer's fractional contribution. For instance, if a 5-credit course is taught by two people, each teaching half the course, then they are each allocated a teaching load of 2.5. The data were averaged to teaching load per year over a five-academic year period (2013-2014, 2014-2015, 2015-2016, 2016-2017, 2017-2018). The normalized data were base-10 log-transformed. For non-numerical explanatory variables, the default values were: Gender= man; School= SB; Rank= PA. Four data points were discarded as outliers. The data included PT.

Explanatory variables and interactions	coefficient	Residual std. error	p-value
intercept	0.983975	0.036270	<2e-16
Gender_w	-0.125646	0.088686	0.157256
School_ENAC	0.047473	0.040613	0.243072
School_IC	-0.092446	0.044065	0.036472
School_STI	-0.119411	0.035242	0.000766
School_SV	-0.335700	0.042387	1.91e-14
School_CDM	0.112250	0.060010	0.062066
Rank_PATT	-0.152213	0.040757	0.000212
Rank_PO	-0.057169	0.033456	0.088182
Rank_PT	-0.125747	0.046517	0.007128
Gender_w:school_ENAC	0.040149	0.105200	0.702903
Gender_w:school_IC	-0.013469	0.133721	0.919813
Gender_w:school_STI	0.075820	0.088522	0.392177
Gender_w:school_SV	0.145339	0.093987	0.122725
Gender_w:school_CDM	0.136477	0.197325	0.489526
Gender_w:rank_PATT	-0.059829	0.088996	0.501759
Gender_w:rank_PO	0.0004686	0.090956	0.958936
Gender_w:rank_PT	0.267030	0.114739	0.020397
Adjusted R2	0.2329		
F-statistic p-value	<2.2e-16		

A.3. Appendix III – Report from interviews and focus groups.**Study on the status of women faculty at the EPFL**

February 17, 2020

Prof. Eric Davoine /Dr. Xavier Salamin /Christelle Zagato

Executive summary**Objectives and method of the qualitative study**

Objectives of the qualitative study were 1) exploring individual and collective representations of the status of EPFL women faculty through interviews, 2) identifying major topics and issues to develop potential recommendations.

The study is based on interviews with EPFL professors: 30 women, 15 men (sub-sample built with a pair-matching process) and 6 Deans (1 woman, 5 men). The sampling dimensions were validated by the commission. All interviews were transcribed and validated by the interviewees.

The interview guide structure was validated by the commission and the major topics that make up the content identified from previous studies.

The analysis was led by the three researchers who interviewed the participants. It included the following steps: listing of all the topics identified, evaluation of the frequency and intensity of the discussion of major topics, and a systematic comparison of the men and women sub-samples. The main issues are presented below.

Gender Climate

EPFL is seen as an attractive employer with good work conditions by most of the interviewees, men and women. As far as the gender climate is concerned, most women interviewed expressed some dissatisfaction even if they recognized that the climate has been improving in the last few years and that several schools had undertaken measures to improve the situation.

This dissatisfaction is mostly linked to two categories of issues:

- The feeling of being a minority within the professor population, with low representation in higher rank positions, and very low representation in management positions.
- Frustrating experiences where inequality, injustice or simply inappropriateness of practices were perceived. These experiences are associated with topics presented in the next points. The actual issues may vary individually and might have been experienced with different intensities by individuals.

Gendered dimension of non-gendered organizational issues

Three major organizational issues have been cited by interviewees (men and women) as sources of the most frustrating experiences. Though these issues are not directly gender issues, they all contain a gender dimension:

- The managing process of grievances (especially those coming from PhD students) has been criticized by many interviewees, men and women (mentioned by 28/51 interviewees). Many women and some men highlighted the fact that students – and colleagues – may have different behavioral and role expectations for men and women, which may have an impact on grievances and grievance procedures.
- The tenure-track pressure and the lack of support perceived during this phase where young professors face new and simultaneous challenges (leading a team, obtaining project funds, teaching, positioning themselves within the faculty and, for some of them, managing work-family balance and the needs of dual career partners). This was mentioned by 42/51 interviewees.
- The management culture of EPFL was often criticized by men and women as being a top-down and often personalized decision-making culture (29/51 interviewees). The fact that only few women are appointed in decision-making positions reinforces, among women, the feeling of being a minority with a lesser voice.

Some difficulties reported in interactions in the workplace

Most of the women professors interviewed reported good work conditions and good interactions to their colleagues in general. Like in former studies, the positive work climate seems to vary depending on the school or institute, which is also confirmed by the men interviewed. Some difficulties, mostly associated with inappropriate comments, lack of recognized legitimacy, or a lack of respect, were identified in the following areas by the women interviewed:

- Some incidents with senior colleagues, mostly colleagues who have never had female colleagues previously in their careers (16/30W)
- Some incidents with individual members of the administrative or technical staff (10/30W).
- More difficulties and incidents reported by women in their interactions with students, PhD students and team members, especially for young faculty members (18/30W - 2/15M).
- The possible influence of other factors like ethnic group, language skills, cultural distance or sexual orientation were also identified by diverse interviewees (6/45).

Inequalities perceived in career and decision-making processes within EPFL or Schools

Inequalities perceived in one's own hiring or promotion process are rare, and concerns a minority of women interviewed, but inequalities were often discussed in the current recruiting, promotion and decision-making processes (43/45 mention at least one topic). The main topics were:

- Inequality in the evaluation of candidates, due to lower percentages of female candidates, gender biases in the evaluations, and the role of informal (mainly male) social networks (29/45). The training to identify gender bias was generally viewed very positively.
- Inequality of voice in decision-making processes due to the lower percentage of women

professors in higher ranks or management positions (18/30W - 4/15M).

- The additional burden perceived for women involved in administrative and representation tasks, a new issue resulting from the requirement of having at least one woman in committees, commissions and representation actions (22/30W - 8/15M).

Gendered issues of work-life balance

Work-life balance is a very personal topic and has been presented with very diverse and personal formulations by professors, men and women. Some issues of work-life balance seemed to be more gendered:

- Negotiating dual career priorities and sacrifices with partners (8/30W - 8/15M mention a career sacrifice of the partner or an ending partnership).
- Combining family life with a professor's career – especially in the tenure-track phase - is difficult for young parents (14/30W - 4/15M) and perceived as more difficult for young mothers.
- The cultural (social norms on roles...) and institutional (school hours, childcare...) dimensions of the Swiss gender regime were perceived as an additional difficulty for young mothers (36/45).

Focus groups & potential final recommendations

During the interviews, we also collected a list of recommendations to improve the status of women at EPFL. The commission discussed the proposed measures and made a first selection of 26 measures to be presented in focus group sessions with other EPFL faculty members. Focus group objectives were: 1) Presenting research results and potential recommendations to participants, 2) Collecting individual ratings (from 0 to 20; 20 being the most important) for each potential recommendation from participants, 3) Opening one-hour discussions to gather pro and counter arguments for each potential recommendation and benefit from any additional input. Focus groups participation was opened to all 350 EPFL professors, out of which 38 could participate. Four focus group sessions took place with small groups of 8-12 female and male EPFL faculty members, one session was specially organized for female and male faculty members with management responsibilities. The potential final recommendations, considered **highly important** by the focus group participants, are listed below under different categories.

Salary and resource allocation

- “Establish transparency regarding resources and space allocation, committee work and teaching load and renew qualitative and quantitative assessment every 5 years.” (15,03/20)

Work-life balance

- “Provide additional daycare facilities within and nearby EPFL (Wednesday's and holiday activities included) for all EPFL faculty members, PhD students and Postdocs.” (16,63/20)
- “Department heads should strongly discourage holding meetings before 8:30 AM or after

5:00 PM. If no other time slot appears possible, the necessary childcare infrastructure should be provided. When possible avoid lunch breaks.” (15,7/20)

- “Offer the possibility for non-birthing parents (father or person of same sex) to benefit from one-month parental leave and 6 months stop-the-clock per birth in tenure-track when desired. Non-birthing parent postdocs and already hired PATTs shall have the same right.” (15,68/20)
- “Ensure teaching relief systematically in all schools for PATTs following maternity and parenthood by creating a specific fund to hire a substitute. Planning ahead shall be the responsibility of the Section.” (15,62/20)

Representation of women professors

- “Substantial efforts should be made to invite more women speakers in all seminar series and increase their visibility to foster a faster cultural change.” (15,87/20)

Hiring

- “Ensure the implementation of current EPFL policy and target through control and monitoring.” (17,21/20)

Gender climate

- “Provide bias awareness training and self-evaluation to all faculty members and include self-evaluation.” (16,79/20)
- “Provide bias awareness training and self-evaluation to undergraduate and PhD students. Define clearly what acceptable behaviors at EPFL are.” (18,5/20)

Leadership and administration

- “Establish state-of-the-art procedures for grievance cases including regular evaluation of the grievance procedures.” (17,34/20)
- “Create specific senior leadership seminar for heads of institutes.” (15,92/20)

Based on the average scores, no recommendation appeared in the category highly important for the area “**Tenure track period**”, but PATT were underrepresented in the focus group sessions and we recommend further investigation of these specific issues. No recommendation appeared in the category highly important for the area “**Integration**”, but this was probably due to the fact that proposed measures are already existing or are currently being reviewed.

A.3.1. **Qualitative Study**

Objectives and method of the qualitative study

Objectives of the qualitative study were 1) exploring individual and collective representations of the status of EPFL women faculty through interviews, 2) identifying major topics and issues to develop potential recommendations. Thus, this qualitative study enables to access information that is not easily quantifiable and brings complementary information to institution and survey reports.

The study is based on interviews with EPFL professors: 30 women, 15 men (sub-sample built with a pair matching process) and 6 Deans (1 woman, 5 men). The sampling dimensions (academic rank, scientific discipline, EPFL school, family status and configuration) were validated by the Commission Status of Women Faculty (hereafter: commission). Interviews were conducted between April and August 2019 by a gendered balance team of researchers constituted of one male and one female interviewer; except for two interviews due to the difficulty of scheduling some meetings. Interviews lasted on average 1h 20 minutes were transcribed and validated by the interviewees.

The interview guide structure was validated by the commission and the major topics that make up the content were identified from previous studies (e.g., MIT 1999, 2002, 2011; Caltech, 2001; Princeton, 2003) and research in the fields of HR, international management and gender (e.g., Garcia project, 2015; Broadbridge & Simpson, 2011; Mäkelä & Suutari, 2011; Schütter & Boerner, 2013).

The analysis was led by the three researchers who interviewed the participants (see appendix for details). It included the following steps: listing of all the topics identified, evaluation of the frequency and intensity of the discussion of major topics, and a systematic comparison of the men and women sub-samples. The main issues are presented below. Note that ♂ represents a man interviewee and ♀ represents a woman interviewee.

Gender Climate

EPFL is seen as an attractive employer with good work conditions by most of the interviewees, men and women. As far as the gender climate is concerned, most women interviewed expressed some dissatisfaction even if male and female professors recognize that the gender climate has been improving in the last few years and that several schools had undertaken measures to improve the situation.

Moreover, some interviewees suggest that gender marginalization occurs not just within EPFL but within scientific communities outside EPFL (see also MIT study 2011).

A major source of dissatisfaction among women professors is the – objective – perception of being a minority within the professor population, with a low representation in higher rank positions, and a very low representation in management positions. All women interviewed refer to this feeling of belonging to a minority. This minority feeling is stronger in schools where the population of women is lower than 20%.

♂ “I think the most challenging issue is always going to be that we are still such a minority. You know, you’re always still the “odd man out”. And I think people wrote this kind of critical threshold somewhere around 30% or so after which you [supposedly] stop feeling like this.”

♀ “If we are not in a minority it is less condescending, it becomes the norm and it means that it is

not, “ahhhh! we have also a woman in our organization”....it becomes normal.”

- “The very first challenge, is that they come maybe in the room to discuss things where there are 18 men and 1 woman and people tell you “so what? We are here to discuss Science”, but I tell them, “sure, how would you feel if you entered a room where you are 1 man and 18 women?”, not that they are going to aggress you or something, but it is weird, it is like there are 18 cats and you in the room, it is weird! If it is mixed, it is less weird.”
- “When I entered the room, I had ten male professors in front of me, zero women. When you enter a room and you have only male professors, how would it feel for a female candidate?”
- “[...]you always feel a bit uncomfortable if it is all male colleagues though they are super nice, † but still [...], I don't know if something can be done.”

The culture of EPFL – stronger in some schools – is clearly considering that the norm as professor, researcher and student, is the man, a culture that can be observed in many details also reported by men.

- “When there is a majority of a gender in one place, you create a culture of it, which may be a problem for the minority.”
- “When we are teaching in big and large classrooms you have a microphone and until a female colleague pointed it out, I didn't realize that if you are not wearing pants, there is no way to attach this thing. No male colleague has ever experienced that because you just put it in your pocket or [attach it to] your belt, but if you are wearing a dress, you basically have to leave it in your hands.”
- “[During a presentation, the speaker said] : «We thank professors for doing this or that and we thank our secretaries [...]» - and he (the speaker) pulls out a slide [...] with a woman with very big breast and a short skirt. [In the room] there were students, postdocs, secretaries. And we head a «Woooooh». They (speakers) thought it was funny [but] my female coworkers came to me like: «Jesus Christ still...seriously?!» And I [was] like: «What can I do?» - but then, that has to do with, you know, the mentality...”

Some women interviewees also complain that in many occasions, no woman has been considered for prestigious events, representations, invitations of guest speakers or external experts. There is also an expressed need for more female role models and a criticism that male networks usually tend to propose other men as guests, experts or external candidates.

- “They are organizing an event and they forget to invite women. In the sense, that on the list of † speaks [there are no women names]. While they say loud and clear: «we will look for the best people who will lead this day». Then, we look at the list and there is not a single woman. We had to remind them. And [this] happens today, it's not ten years ago, it's now that it happens.”
- “The best example is when we have this faculty retreat which we have every year. They † managed to have one where there was basically no female appearing on the stage in any of the discussions. We had to say something.”
- “You know, “informal male networks”, that was the situation going on in (this school). I hope it † has improved a bit, but I mean it was really bad there.”

Interviewees report frustrating experiences where inequality, injustice or simply inappropriateness of practices were perceived. These experiences are associated with various topics presented in the next points. The issues reported may vary individually and were experienced with very different intensity grades. One interviewee gives a clear insight into the fuzzy frustration feeling of being a woman in a man's organization and in a man's society:

○ “The most challenging issue is that there is not one challenging issue but there is a bag of issues, about everything we talked about here. Not getting the respect, hiring the right people, knowing how to interview the right people so you have a good team, the little slights you're getting from your colleagues, maybe a macho dean (or not)...There is a family, life-balance issue, parents, everything...There is a bag of little issues that are so ill-defined. Because everyone can say: “well I have that too”. You can always find an excuse for every issue but pulling them all together can just be wearing and tearing. And I think this is the biggest challenge. That it is not a single issue.”

Gendered dimension of non-gendered organizational issues

Three major organizational issues have been cited by interviewees (men and women) as sources of the most frustrating experiences. Though these issues are not directly gender issues, they all contain a gender dimension.

The first organizational issue concerns the process of managing grievance cases (especially those coming from PhD students). 28 out of 51 interviewees, respectively 7 men professors out of 15, 17 women professors out of 30 and 4 deans out of 6, speak negatively about the grievance procedure, criticizing the lack of support of the administration towards professors, as well as the opacity and the slow pace of the procedure. They also highlight the very negative consequences for professors, men and women, concerned by grievances.

○ “The procedures that are established that don't work at all...make these administrative investigations last months...it's very hard on the minds of professors, all those who face that, they're mentally destroyed...many of them and it's pretty serious in the sense that they really feel bad and so it's something that's happening a lot right now and that's very worrying for us professors, even for those who haven't been affected by it.”

○ “It can really have a huge influence on a career to have worries like that and not feel supported by your institution because your institution tends to want to defend the name of EPFL rather than the name of the professor... And do we have the right to complain?”

○ “The most negative thing, is that we have an administration which I guess is not yet adapted to the size and the structure of the university. We have an administration which I think is not competent enough, and also has a leadership structure where instead of support, it is sort of a “blame culture”. So, everyone tries to make sure that they keep themselves safe instead of really solving problems. That leads to a very, very strange atmosphere sometimes. An atmosphere where, I think, administration tries to solve problems by pressuring people.”

Grievance cases were often described as affecting unequally women professors in comparison to their male colleagues. Many women and some men highlighted the fact that students – and colleagues – may have different behavioral and role expectations to women, which may have an impact on grievances and grievance consequences.

♀ “These problems with students blaming professors and when I read the study that was done † that it is mostly women who are blamed; I don’t find that normal.”

♀ “The effect on these people, whether they’re male or female, is the same. They don’t want to talk about it, they don’t want to open the emails that deal with it, they’re in burn-out, they can’t do research and that whether they’re male or female, I observe exactly the same thing. But now there are more women.”

A strong majority of women interviewed, respectively 23 out of 30, mentioned that women cannot act as men do, if they do not want to be perceived as being “bossy”, or that they have to be softer and friendly, like mothers. Some explain the unequal rate of grievances by such expected behaviors.

♀ “I think it comes back a lot to this unconscious bias, accepting a woman as your boss where † sometimes you have to do stuff which you are not a 100% in line, it seems to be more difficult for some people than others.”

♀ “Because people don’t accept to be told by young-looking women that they need to improve † their work and properly document their data. But that’s what professors have to do (and I see many of my younger colleagues who are much more strict with their people than I am). Science is full of deadline that professors, but also graduate students and postdocs, have to respect. But if a (young) female professor tells people to improve and submit reports by a given deadline, she is often considered as “aggressive” or “too demanding”.

♀ “They expect a more maternal approach from women than men and when it doesn’t match, † then it can create conflicts. That’s my theory, I don’t know if it’s true, but I’m very maternal, so I meet expectations.”

This has also been confirmed by men colleagues and Deans.

♀ “Why are women more targeted than men? [...] the women that are in a place like this, they ↓ are the survivors. They have beaten the system and many of them have beaten the system by being tougher than anyone else. So, when they come here, that’s how they survived the “tough like stone”, and they keep pushing through.”

♀ “That is hearsay[...], some of our (female) colleagues and I understand it, feel handicapped ↓ compared to men because doctoral students may lack the respect they would have towards a guy. And I can understand the situation, especially since there may be on the side of the female professor, the fear of fragility in this regard.”

♀ “I think it is difficult teaching-wise for example, getting full acceptance of students. If you are standing in front of first year students here and they have a certain expectation of what a mechanical engineering professor is, and if this person (either because of gender or racial background or so), doesn’t really fit the expectations, the respect level seems to be sometimes a little bit low.”

The tenure-track pressure is another important category of issues. 42 out of 51 interviewees, respectively 12 men professors out of 15, 25 women professors out of 30 and 5 deans out of 6 mentioned the tenure-track period as considerably lacking support, from the administration and from senior colleagues who did not experience such a process themselves. The tenure-track period is a period where young professors face new and simultaneous challenges (leading a team, obtaining project funds, teaching, positioning themselves within the faculty and, for some of them, managing work-family balance and needs of dual career partners). There is an expressed need for training courses and supporting measures in the integration phase to prepare young professors to manage teams:

♀ “[...] what I find difficult is everything that is recruiting staff and managing staff, that is the most difficult part.”

♀ “I think something needs to be done about this, maybe giving to tenure-tracks, the time before they come in, before the clock starts for example. Just give them some guidelines, training of how to manage the lab, that is another big issue. You know, we are not managers when we are hired, we are scientists, that is why they hire us.”

♀ “I think the tenure-track system is pretty hard on women [...] it’s really incredible, I admit that I myself wouldn’t have wanted to go through this, it’s a complicated age... it’s catastrophic, really and I didn’t go through it so it’s really an external judgment.”

EPFL integration has been described in positive terms in most cases, with a few (M/W) negative experiences depending rather on the department than on gender issues.

♀ “In my department, everyone did what they could to help me [...] After that, I remember I was often invited to dinners to make me feel good, we do coaching here and we take an interest in each other. I think it’s not the same everywhere at EPFL, but in my department, it’s different. For me it is important, it is a treasure to be here and therefore it was important to stay because it is not often that we find this atmosphere, but I am aware that it is not the same everywhere at EPFL.”

We also heard regular critiques towards official mentoring practices. From both men and women:

♀ “There was a faculty meeting on which one person said “oh, he can be your mentor”, but to be honest, I never really received any useful feedback from this person.”

♀ “You know, EPFL has this mentor system, right? But at the end of the day, depending on the problem that I have, I will ask advice from different colleagues. And I think there are certain issues where I am more likely to approach a woman over one of my male counterparts.”

♀ “I was assigned a mentor who, I perceived to be a real sexist and this became kind of a struggle that defined my tenure-track.”

The third category of organizational issue concerns the management culture of EPFL. 29 out of 51 interviewees, respectively 12 men professors out of 15, 15 women professors out of 30 and 2 deans out of 6, criticized the top-down and often personalized decision-making culture. In some schools, informal social networks - including mostly men - seem to play a major role in decision-making processes. The fact that only few women are appointed in power positions reinforces among women the feeling of being a minority with a lesser voice.

♀ “I would say, especially at the management, dean and faculty levels, we are still a little too far from a critical mass to really be well, but we still have hope that we will succeed. But we need absolutely more women and a diversity of women in the governing bodies so not just women who are part of the club, because it does not make things move forward.”

♀ “I also see that there are a lot of networks going on, because what happens many times is that you go to a faculty meeting and you hear that a certain decision has been made and you don’t know actually how it was made and what came into this decision being made, but you always have the feeling that this was two or three people who somehow agreed to something and then they tell the others what the decision is.”

♀ “So I like to be told it’s “bottom up” and all that, but frankly, I don’t see it at all like that... it’s all “top down” and as a professor, I really feel sometimes that we have no power...”

♀ “No, absolutely, 100%, no [women do not have the same voice as men in decision making processes].”

Some difficulties reported in interactions in the workplace

Most of the women professors interviewed reported good work conditions and good interactions to their - male and female - colleagues in general. 25 out of 30 women professors perceive their relationships with colleagues as pretty good or extremely good. 5 interviewees consider their relationships with colleagues as superficial or negative. The positive work climate seems to vary according to schools, institutes or departments, which is also confirmed by the men interviewed.

Some difficulties were identified by the women interviewed, mostly associated with inappropriate comments or a lack of recognized legitimacy or a lack of respect. 16 women professors out of 30 interviewed mentioned specific difficulties or incidents with some older and senior colleagues, mostly colleagues who have never had female colleagues in the first steps of their careers. Some women reported cases of inappropriate comments:

♀ “Actually, yes, it’s shocking that he called me “ma belle”, not great, isn’t it? (Laugh)...[...] how do you want me to call you? “My handsome guy,” what do you want me to say?”

♀ “Some said: “This Professor, she is a real man. But I’m saying this in the positive way” And that was the best compliment you could give her (laugh).”

♀ “Talking about these young professors (especially female ones) with their first name, on their first name basis, when the other professors are professor X, Y.”

- “One of my senior faculty members...There was a news report and he decided that rather than commenting on the scientific content, he needed to tell me that I was hot (on the picture).”
- “I often have people walk through my office door and ask me whose assistant I am. This happens consistently. I understand the reason people do this is because statistically speaking more professors are men, but it is still bothersome.”
- “The older generation of Swiss scientists have been grown up in a country in which women historically did not have a lot of rights.”
- “I tell to myself it’s okay, the old generation, where you do feel that there are problems...My thinking for the future is that they will disappear, eventually, because they will retire and we cannot do anything.”
- “Interactions with my young colleagues are fantastic, interaction with my older colleagues can be a bit strained.”

A phenomenon identified in several studies is the difficulty for women to socialize and to develop social networks as easily as men in scientific communities and organizations dominated by men:

- “There are deep friendships that then generate groupings effectively. These friendships are male, because it is naturally easier to become a man-to-man friend than a man-to-woman friend, unfortunately because there is always a small ambiguity. It’s something that exists, it’s true and I see it. There are strong friendships that make that after when we are friends, we will help each other etc. That’s true. It’s hard for a woman to be as friendly with a man as two men with each other.”
- “In general, the social/professional network is much weaker. So, male colleagues have a beer together and their wives know each other, they have dinner together, and so on. So, somehow, they are held in this network [...]. Within women, we don’t do that often.”
- “We used to play soccer with some Profs and PhD students, just pick up some people and play on Saturday and at that point I don’t remember any female PhD student. But again, it wasn’t like if anyone was excluded but it might have changed naturally, from the activity.”
- “It isolates a lot when you’re a minority, in the sense that when you go to a conference, you have to network and if you’re a girl among a thousand men, you can’t network, because it’s immediately misinterpreted, because there’s immediately the gender that takes over, on scientific networking and that’s something that I found very complicated.”

Some women complain that they get lower attention than male colleagues.

- “It is true that when I speak at meetings, I have the impression that what I say does not have much influence, that my voice is less listened to than that of other male colleagues. At a meeting once, I got angry with my Dean and had to tell him: “stop interrupting me” what he did, and I could finish my sentence. But then he acted as if I hadn’t spoken. It was quite annoying. Then another colleague picked up on what I had said and the Dean listened to him.”

- “There are really some text-book examples, like you can be in a discussion and you say something and nobody [pays attention], and 5 minutes later a male colleague says the same and everybody says it’s a good idea.”

10 out of 30 women professors reported incidents in the interaction with individual members of the administrative or technical staff. Two women mentioned the fact that some information systems still address messages to all professors by considering them as men:

- “I continue to receive emails to «Monsieur le Professeur»[...] Their answer: “No, no, but listen, it’s the system that does that by default”. I don’t know, but the computer system could still have integrated gender categories.”

Some difficulties with administrative staff can be explained by limited local language skills or higher cultural distance, rather than gender, or by a mix of factors:

- “You are told that there is this form by the city of Lausanne; so, you fill it in, and send it off, and then you think that something will happen. But you figure out that actually nothing happens. It only happens when you pick up the phone and call the people in charge.”
- “Do they have a bias depending on where people come from? I don’t know, it’s possible, but on the other hand, I feel like it helped me to be from here. Not being a woman, but being from here.”
- “I don’t know if it’s because I’m a man, but I feel like it’s more because I’m Swiss - I felt like I almost got them to help me because I spoke French to them at one point on the phone.”
- “You get different answers whether you pick up the phone or you write an email. Simply because a phone call is not documented. On the phone suddenly things are possible. If you speak French, much more is possible. And if you are an important person, speak French and you know specific people in the administration all rules and limitations are essentially irrelevant.”

More difficulties and incidents reported by women in the interactions with students, PhD students and team members, especially for young faculty members. This has been observed in evaluation feedbacks of courses and seminars:

- “I have definitely seen unconscious bias from students [...], where we get evaluated for our courses, where they have different language, they use on women teaching. Like “oh she is so timid, so shy” and this and that.”
- “Some of the bachelor and masters’ students making comments where I would think...Again I have no proof, but they might have chosen a different wording, for grey-haired men.”
- “We know, this (the comparative study of gender evaluations) has been documented. There is an effect of about 0.5 on a score of 1 to 5 on the evaluations. 0.5 is still not negligible, especially in this school.”

8 out of 30 women professors reported difficulties in the interactions with male students and male PhD students coming from countries with different gender cultures:

- “With students, I would say that it changes depending on the countries they come from [...] I can see, again, for certain cultures, where they do not accept authority from women.”
- “One of them, he is a wonderful person, very respectful... but he is from the traditional Muslim culture and he doesn’t shake hands with women which is kinda offending. I am fine with this, it was weird at the beginning when I tried to shake hands. I decided for myself that it is okay and that we should also accept specificities of other cultures.”

Other factors than gender like ethnic group, language skills, cultural distance or sexual orientation were also identified by 6 out of 45 interviewees as potential factors that can intertwine with gender in the interactions.

Inequalities perceived in career and decision-making processes within EPFL or Schools

Inequalities perceived in one’s hiring or in one’s promotion process are rare, and concerns a minority of women interviewed, but inequalities regarding the current recruiting, promotion and decision-making processes were discussed by 43 out of 45 interviewees, respectively 14 men professors and 29 women professors who mentioned at least one of the three indicated topics.

A few women perceived their careers as being slower than those of their male colleagues with comparable performance:

- “There are people here at EPFL who have really the same career trajectory as I have, but they are male and for them they were considered as the next big thing and hired as associate professor or promoted quickly...[...]. And there, I had the feeling that if my gender was different, perhaps, I would have...”
- “You have people with big mouths which are usually more male colleagues and then when you actually go and look at their track record, you may see that this is more comparable to others [...] then there is the perception and then this person maybe gets promoted earlier.” [...] so, it is maybe almost arbitrary, when someone gets promoted, when you look at them, especially if they go directly to Full, then usually it is something else than just a track record...”

Women and men formulate criticisms towards official promotion practices and their lack of transparency:

- “They say you have to be excellent in everything more or less, they push for more and more when you have this yearly meetings with the deans or midterms, it is never enough what you do, so I don’t think it is very clear what you should have, you should just always have more than what you have and it is maybe on purpose, that they don’t put down very clear achievable goals.”

○ “I think they (promotion criteria) are still quite clearly established. At least at the tenure-track level. Perhaps it is less clear from the promotion from associate professor to full professor. Then, the feeling [that I have] is that despite all these criteria, it’s a bit like “if they want to destroy a candidate, they will always be able to find something”. It’s kind of the feeling of people who are on tenure-track (laugh).”

As far as the evaluation of candidates in recruitment processes, many interviewees, men and women were aware of recruitment biases, due to lower percentages of female candidates, gender biases in evaluations and the role of informal (mainly male) social networks (29 interviewees out of 45, respectively 9 men and 20 women, mentioned one of these topics).

○ “I think that if it is diverse, it is less risky. These networks are often men (we see it like that) over 55 who are all together and who agree. That is what we often feel in these commissions. If it is more diverse, that there is a woman, I think it is less risky. [When men agree together] the background selections are biased. The idea [should not be] to use each other (we are not in that state of mind), it should rather be to stop the old style men’s club.”

○ “I often heard them fighting to get men they knew from other networks and get them in, but that wasn’t the case with women.”

Many interviewees, including the Deans, insisted on the scarcity of potential female candidate pool:

○ “One issue that should be considered in the hiring phase is that typically we receive fewer applications from females than males. I think, from what I have seen, the number of applications is 20-25% women and the rest are males. I don’t understand why, because if you look at the postdoctoral level, I think we are at 50%-50%. Maybe there is a bit more males in this field, because it is engineering, but still there is not such a gap at the postdoctoral level.”

Some interviewees criticized the solution of selecting women as shortlist candidates with lower profiles than the men:

○ “I know one or two [women] who suffered a lot from being invited to sixty interviews to become a professor and then each time it was the «alibi file» because [they] wanted a woman in the process.”

○ “It happens that we put women on the list just to have women on the list and then we know that they have no hope of getting the job, we let them come from Canada, from the United States.”

○ “There are no women of any level, so we put women a little lower, who have no hope, it is an overhead on the woman who is on the list, who get hopes, who does her best, who prepares her presentation and who will be sunk afterwards. This is very hard, this mechanism is absolutely very hard.”

○ “...and so, we will find ourselves looking for a woman in the “bottom of the bin”.”

Some Women insisted on cognitive biases, e.g., biased perceptions of candidates, different presentation styles, as well as on different gendered communication styles:

- “Even in situations where everybody agrees that the quality of the science is very good, I often † also hear things like “she was a bit colorless... he is kind of more impressive.”
- “I see this consistently in my role on tenure committees: women consistently present themselves † differently to men. Men are always... I mean this is general, there are always exceptions, but on the average men are quite self-promoting whereas women are quite self-effacing. So women are always saying: “we did this, we did that”, whereas a man would say “I did this, I did that.”

Some refer to the training on cognitive biases, which have been much appreciated.

- “I think some of the gender bias trainings going on at EPFL are quite good. For instance, our † department just had a speaker come during our retreat who was focused on this topic, and I think more events like this would help improve the situation.”
- “What’s improved is that every [search committee] Chair has to go through unconscious bias... † it’s not training, because you don’t get trained, but you become aware and I think many (and I include myself) have discovered that we have this unconscious bias, men and women have this.”

22 out of 45 interviewees, respectively 4 men professors and 18 women professors report inequalities of voice in the decision-making processes due to the lower percentage of women professors in higher ranks or management positions.

- “I would say, especially at the management, dean and faculty levels, we are still a little too far † from a critical mass to really be well, but we still have hope that we will succeed. But we need absolutely more women and a diversity of women in the governing bodies so not just women who are part of the club, because it does not make things move forward.”
- “If you are a female Dean, yes, you are a big powerhouse. If you are a regular female scientist/ † administrator at EPFL, not necessarily. Unless you are part of the inner circle of the current leaders.”

We collected some positive reports about the experience of women in power positions and especially in management teams.

- “I don’t know, there was a lot more kindness, I would say. It was terrible [when] there were only † guys. There, with these two women, the atmosphere was different.”
- “ They say that women are like that, but (she) was very open, generous, she listened to people. † Is it a personal quality of (her) or is it due to the fact that she is a woman? I should experiment another Dean to answer you, now I don’t know.”

30 out of 45 interviewees, respectively 8 men professors and 22 women professors mentioned the additional burden perceived for women involved in administrative and representation tasks, an issue resulting from the new requirements of having at least one woman in committees, commissions and representation actions.

- “I’m in a lot of commissions and last week I think I didn’t do anything for science, nothing for my lab, because I had so many other things and then I said to myself: “this is too much!”. There is a huge load, I don’t know how to stop it, now I’m lost [...] there comes a time when it’s too much.”
- “I see that women are very often in a lot of committees, which on one hand is reasonable and is good, but since there are only a couple of women that can be in these committees, they happen to be in a lot of them.”

The situation has been confirmed by men interviewees:

- “In terms of committees, the problem is that women have too many things they are asked to do at EPFL and outside EPFL.”
- “There are 17% female professors at EPFL. Everyone wants to have women professors in the commissions so they have more work than men.”
- “I think one of the big challenges (they have) is that overall the numbers are small. This becomes a problem because there is an enormous emphasis on having the right numbers of women in committees, both here, nationally and internationally, whenever some board is being created somewhere there has to be X number of women. But the numbers are not there so this means that these few women are over stretched.”

Gendered issues of work-life balance

Work-life balance is a very personal topic and has been presented with very diverse and personal formulations by professors, men and women. However, a majority of interviewees mentioned difficulties to get an adequate balance:

- “We are professors, we don’t worry about things like that (work-life balance).”
- “It is a painful question (to ask about work-life balance). You should be childless and single in order to succeed.”

18 out of 45 interviewees respectively 4 men professors and 14 women professors mentioned that combining family life with a professor’s career – especially in the tenure-track phase - is difficult for young parents and perceived as more difficult for young mothers.

- “[What I perceive as being the main issue for women at EPFL] is the work-life balance. At some point, when we are going through this promotion process, we are told : «you have to be a good researcher, good teacher, you have to sit on [many] committees, administration, you have to travel a lot, you have to network and everything». And the point is that for women and men alike, it is impossible to do that in 24 hours. You always have to make some sacrifices. And, you know, if people start having children [it is even more difficult], especially to travel.”
- “I think we also have to be realistic...being an academic today is a competitive sport. You can agree or disagree with this but this is basically the situation. You are competing on a global market, with global players who may play with different rules. So, if that is what you want to

do (and that is a decision only the family can make), there's probably going to be a sacrifice somewhere. But I don't want EPFL to make that decision."

○ "[What I perceive as the main challenge for women at EPFL] is having children. I mean, when
 † you are hired you go to these sessions on PATT and they say: «We just want you to be in the top 5 in the world.» This is EPFL expectations and we accept the challenge."

From the perspective of the men, there were some contradictory perceptions of the “stop the clock” as exclusive measure for female tenure track faculty:

○ "you know, sometimes for women, they get some extra time for things like preparing promotion
 ↓ or applying to ERC projects or things like this where it is taken into account if they have children, but I mean, men also, when the child comes have their life disrupted (laugh). So, I didn't sleep either for the first two years, so I mean, this kind of things should maybe also be taken into account. Always assume that automatically men have nothing that changed for them and life didn't become more complicated, not as much as for women I agree, but things do get a bit tougher for us as well."

○ "[...] a message that is very clear that EPFL sends is that it is women who take care of children.
 ↓ If you have children and you are a female professor there is recognition that you have a family responsibility so you get teaching relief and things like that. On the other hand, men do not need it because they do not take care of children (ironically). The message is clear: if you are a female professor, you need [time to take care of your children]. I know that Swiss society is behind on this issue, but I do not understand why EPFL could not get ahead of itself on this issue."

○ "The greatest challenge is to be a sleep-deprived mom who is expected to be excellent wife
 † and top-notch researcher wearing 10 hats at the same time."

Work-family issues for women does not only include children care but also the care of older family members

○ "One thing that from a “work-life balance” is challenging for me is that my Mom passed away
 † six years ago (and my father needs care). This is additional social pressure that we have to carry and that makes me feel constantly guilty."

○ "So there's a lot of things in the family, it's not just children, it's also elderly care."
 †

Another gendered dimension of work-life balance is the negotiation of dual career priorities and potential sacrifices of partner careers, this concern was mentioned by 16 out of 45 interviewees. Whereas 8 men professors out of 15 reported career sacrifices from their female partner, 5 women professors out of 30 reported that their male partner accepted a career sacrifice, and 3 mentioned an ending partnership.

○ "I think it is a lot easier for men to get a woman to follow when they take a new position. I
 † basically had to choose when I came to EPFL between my job and my partner."

○ "The professor's job is a job that has been “designed” for a man who has a wife at home."
 ↓

♀ “She (my wife) was working for some time, but it is not easy combining with the life of a husband who is in academia.”

♀ “During my first years here, my husband was abroad. After two years I had my daughter, I raised my daughter alone on a tenure-track, that was enough for me.”

The cultural (social role expectations) and institutional (rules and explicit regulations) dimensions of the Swiss gender regime were perceived as an additional difficulty for young mothers. 36 out of 45 interviewees, respectively 12 men professors and 24 women professors described the gender role distribution in Switzerland as being very much traditional:

♀ “I had a doctoral student, she had a child during the thesis and when she went to pick up her daughter, she was told, “Madam, why are you coming at 5:00 PM? “, because that’s it, the nursery is open until 7:00 PM. “But, normal mothers, they already come at 3:00 PM”.”

♀ “I think that in Switzerland, the tradition is still that the woman takes care of the children, it’s really the good old Swiss-German tradition and to make the children their roestis at noon (laughs). It is also seen as much better to stay at home in the afternoon with your mother.”

♀ “There is a huge weight in society, that men work and women stay at home, it’s still true... I mean, it won’t go away overnight.”

This cultural dimension of the Swiss gender regime is reinforced by institutional elements like the limited childcare, school time schedules, shopping hour limits, family tax regulations.

♀ “It is difficult in Switzerland to have children and to work 100% and that is the reality.”

♀ “The Swiss environment is not designed for women to work. That’s for sure. As long as they do not open all the facilities with a canteen and a guard until 6:00 PM, this means that it is not done for women to work.”

♀ “Public school time schedules when children must be picked up at times that are impossible. So yes, the Swiss environment is not easy.”

♀ “When I got married, he (my husband) had to sign to say that he allowed me to keep my name, for me it is clear that we are not at the same level, we are not treated the same.”

Perception of evolution and need for further improvements

Most interviewees perceive also an evolution in recruitment and promotion practices.

♀ “The rule has been set that when you are in a hiring committee, you need to follow this training, which is very good.”

♀ “The very positive thing is that the number of women is increasing; the negative is that the gender culture hasn’t changed, really.”

♀ “I think this institute here is extremely proactive in recruiting[women].”
↓

The establishment of the Commission “Status of Women Faculty” as a positive signal

♀ “I think it is amazing that there is this commission first of all. I never would have predicted it.”
+

♀ “There is an evolution in the activities of the “equal opportunity office”, the programs they set up, it didn’t exist before.”
+

♀ “There were commissions set up[...]. I think the current presidency takes it very seriously.”
↓

♀ “Maybe when you live here it’s normal, but I think it’s a very nice thing. Even the fact than you can do such studies [like this one]. It’s part of the process, right? It means that they care, they are trying to address issues and for that they do research. It is all positive, it’s constructive.”
↓

The development of the Women professor network is also seen as a positive factor to transform the gender climate:

♀ “The most positive thing for me has been to join the women professors’ group and it has been a great network for me. I can always go, we have lunch every month. I can just, you know, feel like if I was with friends, so that was always really nice, very supportive.”
+

♀ “Every month, a female teacher invites and we ask how many[people] come and that’s great. It’s just for women, it’s going very well, it’s very useful.”
+

♀ “We have a network, so we organize lunches, things like that and then there are some people with whom we create affinities and we also meet outside the EPFL.”
+

♀ “Actually, it is very nice for professors [to have] a women professors’ lunch and this help a lot. To [get to] know other women and to meet them, again it is a question of having peers, right?”
+

We also collected positive feedbacks about the implementation of trainings on Gender cognitive biases:

♀ “I think some of the gender bias trainings going on at EPFL are quite good. For instance, our department just had a speaker come during our retreat who was focused on this topic, and I think more events like this would help improve the situation.”
+

♀ “What’s improved is that every [search committee] Chair has to go through unconscious bias... it’s not training, because you don’t get trained, but you become aware and I think many (and I include myself) have discovered that we have this unconscious bias, men and women have this.”
↓

♀ “We are actually implementing measures to avoid gender bias. I think there may be unconscious gender bias against women. I have this feeling.”
↓

Interviewees were also asked to express recommendations for further measures and actions to improve current situation. These recommendations have been discussed during focus group and commission meetings. The steps and the results of these discussions are presented in the next section.

A.3.2. Discussion of current measures and recommendations

Objectives and analysis of the focus group sessions

Potential recommendations to improve the status of women at EPFL were collected systematically in the interviews and listed in a document submitted to the commission. The commission discussed the proposed measures and made a first selection of 26 measures to be presented in focus group sessions with other EPFL faculty members. The 26 presented recommendations were grouped into key categories including work-life balance, representation of women professors, hiring, gender climate, administration and management, tenure track support and integration support (see appendix).

Focus groups objectives were:

- Presenting research results and potential recommendations to EPFL faculty members;
- Collecting of individual ratings (from 0 to 20; 20 being the most important) for each potential recommendation from the 38 participants;
- Opening one-hour discussions to gather pro and counter arguments for each potential recommendation and benefit from additional inputs.

Focus groups participation was opened to all 350 EPFL professors, out of which 46 responded positively (excluding Commission members). Based on their availability, 44 participants could be distributed in four focus groups; three composed of female and male faculty members, the fourth composed of female and male professors with management responsibilities. The first focus group consisted of 12 participants (0 PATT, 6 PA, 3 PO, 3 PT; 7 Men/5 Women), the second of 12 participants (4 PATT, 2 PA, 5 PO, 1 PT; 7 Men / 5 Women), the third of 12 participants (2 PATT, 3 PA, 5 PO, 2 PT; 8 Men / 4 Women), and the fourth of 8 participants (2 vice-presidents, 4 deans, 2 head of institutes; 5 Men / 3 Women). Overall, 3 participants had to excuse themselves or missed the meeting, and 3 participants did not hand in their ranking sheet. 38 individual rankings were considered for the final recommendations, among these 14 women, 20 men, and 4 who did not mention their gender.

After being rated by participants, potential final recommendations were classified into four categories, based on their average scores across all participants:

- **Category 1:** Highly important, score > 15
- **Category 2:** Important, score >10-15 ≤
- **Category 3:** Moderately important, score > 5-10 ≤
- **Category 4:** Less important, score ≤ 5

Below, the results of the focus groups are discussed with the following final structure:

- Salary and Resource allocation
- Work-life balance
- Representation of women professors
- Hiring
- Gender Climate
- Leadership and administration
- Tenure-track period
- Integration

Results are presented in the following manner: first, a synthesis of the key issues identified in the qualitative investigation, followed by potential recommendations collected through individual interviews, thereafter arguments addressed by the focus group participants are described. The potential final recommendation is formulated in the last paragraph. Recommendations are listed by topic according to their average scores (ratings by focus group participants).

Salary and Resource allocation

Issue

Many interviewees complained about the lack of transparency in the allocation of space, resources, committee work and teaching load. Many interviewees (mostly women) reported that “good citizens” existed on the campus and were therefore systematically solicited to attend committees. Women reported as well a higher degree of involvement in student mentoring. Over time, these duties impact their productivity. They expressed that this type of work is rarely recognized by EPFL.

Potential recommendations

When asked what measures could be implemented to improve the resource allocation, interviewees suggested the two following recommendations:

- Establish transparency regarding resources and space allocation, committee work and teaching load, and renew qualitative and quantitative assessment every 5 years,
- Recognize “good citizen” work by offering a yearly envelope bonus from the president.

Potential recommendation:

Establish transparency regarding resources and space allocation, committee work and teaching load, and renew qualitative and quantitative assessment every 5 years.

Category 1: Highly important

The global average score is 15.03 with a maximum of 20 and a minimum of 0. Average for women is 17.07. Average for men is 13.10. Average for gender unreported is 17.50.

The measure “Establish transparency regarding resources and space allocation, committee work and teaching load, and renew qualitative and quantitative assessment every 5 years” was considered necessary by the majority of participants, who however agreed that it is difficult and time consuming to implement. Some participants did not agree with this statement and assume full transparency may be negative and lead to jealousy and dispute.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- “Establish transparency regarding resources and space allocation, committee work and teaching load and renew qualitative and quantitative assessment every 5 years”

Potential recommendation:

Recognize «good citizen» work by offering a yearly envelope bonus from the president.

Category 2: Important

The global average score is 11.49 with a maximum of 20 and a minimum of 0. Average for women is 15.36. Average for men is 7.58. Average for gender unreported is 17.50.

The measure “Recognize “good citizen” work by offering a yearly envelope bonus from

the president” was partially approved. While recognizing the work of good citizen was considered important by participants, the main difficulty remained the incentive. In fact, allocating money was considered a risky incentive, possibly leading to unethical behaviors. Alternatives such as teaching relief were proposed. Many participants, however, considered administrative work as being a normal duty, thus insisting on the need to review the distribution of tasks to make it more equal.

In any case, the current situation, described as rewarding “bad citizen” behaviors, has to change since publishing is still perceived as highly valued in contrast to service work. According to participants, a cultural change regarding service work is needed. In fact, service work is of paramount importance for the institution itself; recognizing and rewarding people who take time for service is therefore essential. This reflects Misra et al. (2011) findings, who consider “institutional housekeeping” crucial for the ongoing health of an institution.

Regarding the implementation of this measure, a participant suggested that counting the number of duties per faculty would be the most efficient way to proceed. This proposition was promptly criticized by some participants who argued that some faculty members sign up for committees but never show up. Therefore, measuring the service work by simple count “on paper” might not accurately reflect the reality of people’s investment in these tasks. In any case, it seems that Department chairs should start by reviewing service work with faculty members to ensure that certain faculty members, especially women, do not disproportionately take on more work than their male counterparts (Misra et al.2011).

Other strategies were proposed, such as voting who should be considered as a good and a bad citizen, in order to incentivize faculty members to participate to service work when it is not yet the case.

Finally, it is interesting to note the high contrast between the average score for women and for men faculty members, women’s score being twice as high as men’s. These results may shed a light on the fact that women faculty members who participate in service work at a higher level want their work to be rewarded.

Based on the above comments and high contrast of opinions of focus groups, the commission should further discuss the legitimacy of the above measure.

Work-life balance

Issue

When interviewed, both women and men faculty members expressed their difficulty in achieving an adequate work-life balance, particularly when having children. The major concern is the shortage of daycare facilities and holiday activities. Teaching after maternity leave appeared to be a concern for women faculty members.

Regarding dual-career support, interviewees criticized the lack of EPFL’s assistance considering it insufficient to help partners find a new position. Finally, some male interviewees pointed to EPFL’s culture reinforcing traditional gender roles; indeed, no parental leave or stop-the-clock procedures are offered to non-birthing parents (father or person of same sex).

Potential recommendations

When asked what measures could be implemented to achieve a better work-life balance, interviewees suggested the seven following recommendations:

- Provide additional daycare facilities within EPFL (Wednesday's and holiday activities included) and nearby and secure priority access for (1) Women PATTs, (2) Women PhD students and Postdocs, (3) Women PAs and POs,
- Strongly discourage holding meetings before 8:30 AM or after 5:00 PM,
- Offer one-month parental leave and 6 months stop-the-clock per birth to the non-birthing parent (father or person of same sex) in tenure-track,
- Ensure teaching relief for PATTs following maternity and parenthood by creating a specific fund to hire a substitute. Planning ahead shall be the responsibility of the Section,
- Ensure systematic teaching relief for PAs following maternity leave,
- Dedicate funds and support for dual careers. Integrate equal opportunity constraints and monitoring to ensure an impact on women faculty members hiring,
- Provide support to PATT travelling to conferences with small children and equip all meeting rooms with adequate video conference systems.

Discussions and final recommendations:

Below, the scores and discussions of pro and counter arguments raised by participants during the focus groups are relayed. In light of these arguments, we then formulate the final recommendations.

Potential recommendation:

Provide additional daycare facilities within EPFL (Wednesday's and holiday activities included) and nearby and secure priority access for (1) Women PATTs, (2) Women PhD students and Postdocs, (3) Women PAs and POs.

Category 1: Highly important

The global average score is 16.63 with a maximum of 20 and a minimum of 5. Average for women is 16.93. Average for men is 17.00. Average for gender unreported is 13.75.

The measure "Provide additional daycare facilities within EPFL (Wednesday's and holiday activities included) and nearby and secure priority access for (1) Women PATTs, (2) Women PhD students and Postdocs, (3) Women PAs and POs" received a clear consensus among participants, however, a majority pointed to the importance of providing equal daycare facilities to both male and female faculty members; to avoid reproducing traditional gender roles. Still, a participant has insisted on the importance of being able to prioritize the child of incoming female faculty in order for EPFL to be attractive to new female talents.

Concerns about the legal and administrative difficulties were raised, a participant notably indicated that priority can only be provided through private funding; this issue needs to be investigated.

Finally, many participants have reiterated their satisfaction of Wednesday’s and holiday activities offered by EPFL and insisted on the necessity to offer additional spots. Moreover, the need to maintain the primary school for kids from level 1 to 4 on the campus was expressed.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- **“Provide additional daycare facilities within and nearby EPFL (Wednesday’s and holiday activities included) for all EPFL faculty members, PhD students and Postdocs”**

Potential recommendation:

Strongly discourage holding meetings before 8:30 AM or after 5:00 PM.

Category 1: Highly important.

The global average score is 15.70 with a maximum of 20 and a minimum of 5. Average for women is 14.29. Average for men is 16.11. Average for gender unreported is 18.75.

The measure “Strongly discourage holding meetings before 8:30 AM or after 5:00 PM” was considered by many participants as unexpansive, simple and very important to implement, especially for decision-making committees. However, some participants have raised doubts regarding the best way to enforce it and appeal to organizers’ common sense. It was suggested that if a meeting should take place after 5:00 PM, providing the adequate childcare is necessary, it would also enable faculty members to participate in informal socialization with colleagues after the meeting.

For few participants, strongly recommending that no meetings should be held before 8:30 AM or after 5:00 PM implies having meetings during lunch break; this isn’t considered a good alternative, as it is also a social time that people living nearby like to enjoy with their children.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- **“Department heads should strongly discourage holding meetings before 8:30 AM or after 5:00 PM. If no other time slot appears possible, the necessary childcare infrastructure should be provided. When possible avoid lunch breaks.”**

Potential recommendation:

Offer one-month parental leave and 6 months stop-the-clock per birth to the non-birthing parent (father or person of same sex) in tenure-track.

Category 1: Highly important.

The global average score is 15.68 with a maximum of 20 and a minimum of 0. Average score for women is 14.5. Average score for men is 16.53. Average for gender unreported is 15.75.

The measure “Offer one-month parental leave and 6 months stop-the-clock per birth to the non-birthing parent (father or person of same sex) in tenure-track” was considered by many participants as essential to break traditional gender roles and promote equality between male and female faculty members. However, some participants have judged this measure rather symbolic than of prior necessity for the promotion of women faculty members. In fact, a few participants recognized that such a measure may increase the gender gap if not used properly. This argument reflects Antecol et al. findings (2018) about men publishing more in top-5 journals after the policies are implemented, while women do not.

Participants emphasized that this measure should not be mandatory, but rather an option for new non-birthing parents who wish to benefit from it. Finally, the wish to see this measure extended to recently-hired postdocs, PATTs and adoptive parents was raised, as no policies for these persons are in place yet. Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- **“Offer the possibility for non-birthing parents (father or person of same sex) to benefit from one-month parental leave and 6 months stop-the-clock per birth in tenure-track when desired. Non-birthing parent postdocs and already hired PATTs shall have the same right.”**

Potential recommendation:

Ensure teaching relief for PATTs following maternity and parenthood by creating a specific fund to hire a substitute, planning ahead shall be the responsibility of the Section.

Category 1: Highly important.

The global average score is 15.62 with a maximum of 20 and a minimum of 5. Average for women is 15.36. Average for men is 15.84. Average for gender unreported is 15.50.

The measure “Ensure teaching relief for PATTs following maternity and parenthood by creating a specific fund to hire a substitute, planning ahead shall be the responsibility of the Section” was considered by the majority of participants as already in place, however it does not seem to be systematic in all institutes. Some participants admitted that this is a challenging measure to implement as it is difficult to find a substitute professor; therefore, planning ahead seems of prior necessity. A dedicated fund should allow to bring in an external faculty to avoid overloading faculty colleagues. Few participants have also suggested that the stop-the-clock policy should be extended to one year. The request of enlarging the policy to all EPFL’s members (PA, PO, PT, MER, Postdocs, etc.) was also brought up, as well as the release of research in addition to teaching. Finally, the need to see this measure extended to adoptive parents was mentioned as well.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- **“Ensure teaching relief systematically in all schools for PATTs following maternity and parenthood by creating a specific fund to hire a substitute. Planning ahead shall be the responsibility of the Section.”**

Potential recommendation:

Ensure systematic teaching relief for PAs following maternity leave

Category 2: Important.

The global average score is 14.50 with a maximum of 20 and a minimum of 3. Average for women is 15.36. Average for men is 14.35. Average for gender unreported is 12.25.

The measure “Ensure systematic teaching relief for PAs following maternity leave” is of particular importance for women who voiced the necessity of systematically having the right to teaching relief as teaching is a major source of pressure after maternity leave. While this measure seems to be already implemented in some institutes, it does not seem to be the case across the entire campus. The concern regarding the difficulty to find a substitute professor was raised.

Finally, while some participants did not consider this measure of prior necessity as PA professors already have tenure, others required its extension to non-birthing parents and all EPFL members in order to stay consistent with the prior measures described.

It is interesting to note that the scores given by women for this measure and the previous one are identical (15.36), possibly reflecting their need of systematic teaching relief after pregnancy as teaching is a serious responsibility requiring a considerable amount of energy, which they may not have in the months following giving birth.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- **“Ensure teaching relief systematically for all women faculty members following maternity leave and parenthood.”**

Potential recommendation:

Dedicate funds and support for dual careers. Integrate equal opportunity constraints and monitoring to ensure an impact on women faculty hiring

Category 2: Important.

The global average score is 14.49 with a maximum of 20 and a minimum of 4. Average for women is 13.86. Average for men is 15.23. Average for gender unreported is 13.00.

According to participants, the measure “Dedicate funds and support for dual careers. Integrate equal opportunity constraints and monitoring to ensure an impact on women faculty members hiring” requires many efforts to be implemented and stressed that funding a position for all spouses was impossible. However, participants have raised the importance of such a measure to promote women faculty, as they believe women are more likely to be in dual-career couples than men. This belief is supported by the findings of Dubach et al. (2012), about dual career couples in Swiss universities. In any case, a change in EPFL’s culture is needed in order to demonstrate a proactive service culture.

Finally, some participants have argued that this measure already exists, yet it seems to lack uniform implementation. In fact, participants have reported that not all faculty members could benefit from the same dual career support; indeed, the profile of the person requesting support appears to play an important role in management’s final decision.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- **“Dedicate funds and support for dual careers. Integrate equal opportunity constraints and monitoring to ensure an impact on women faculty members hiring and provide transparency to requesting applicants”**

Potential recommendation:

Provide support to PATT travelling to conferences with small children and equip all meeting rooms with adequate video conference systems

Category 2: Important.

The global average score is 12.86 with a maximum of 20 and a minimum of 5. Average for women is 13.43. Average for men is 12.37. Average for gender unreported is 13.25.

According to participants, the measure “Provide support to PATT travelling to conferences with small children and equip all meeting rooms with adequate video conference systems” should be divided into two separate measures. The following statement appears better:

- **“Provide support to PATT with small children when traveling”**
- **“Equip all meeting rooms with adequate video conference systems”.**

While providing support to PATT travelling to conferences with small children seems important to participants, many argued that it is less relevant than other measures discussed above. However, the low representation of PATTs during the focus group may have impacted the results.

The degree of legality of this measure was brought up by a participant; it is possible that EPFL policies are unable to cover the costs of non-employees. This issue needs to be investigated. Other participants have suggested that rather than travelling with the child, local support should be provided. The request to expand this measure to all EPFL’s members (PA, PO, PT, MER, PhDs, Postdocs etc.) was expressed.

Equipping meeting rooms with adequate video conference systems is a measure perceived by participants as very expensive and not so effective. Yet, some participants considered this measure as a good idea and expressed their will to be able to join conferences from their home as well.

Based on the above comments and high contrast of opinions of focus groups, the commission should further discuss the legitimacy of the two above measures.

Representation of women professors

Issue:

Only 17% of faculty members at EPFL are women. This underrepresentation was perceived during the interviews as women regularly expressed their feeling of being part of a minority. The need to hire more women was clearly expressed. The fact that only few women have been appointed in decision-making committees and to executive bodies reinforced their feeling of being a minority with a lesser voice. Being part of an underrepresented group also implies having to serve on many committees as EPFL requires that women should be represented on each committee; this in turn impacts their productivity. Finally, women have regularly voiced their disappointment regarding the lack of female speakers during conferences and events as this constitutes recognition of their expertise and feeling of belonging to the community.

Potential recommendations:

When asked what measures could be implemented to foster change regarding the underrepresentation of women, interviewees suggested the four following recommendations:

- Increase visibility of women by inviting external female speakers,
- Nominate women in decision-making committees and executive functions,
- Hire female Full professors,
- Open “Female faculty member only” positions.

Discussions and final recommendations:

Below, the scores and discussion of pro and counter arguments raised by participants during the focus groups are relayed. In light of these arguments, we then formulate the final recommendations.

Potential recommendation:

Increase visibility of women by inviting external female speakers

Category 1: Highly important.

The global average score is 15.87 with a maximum of 20 and a minimum of 5. Average for women is 15.93. Average for men is 16.00. Average for gender unreported 15.00.

The measure “Increase visibility of women by inviting external female speakers” was perceived by participants as likely to significantly impact the campus culture for both EPFL’s community and students. Additionally, participants have indicated the need of gender-balance in all events, including research days and workshops. These arguments show that participants believe that a change is possible, but requires conscious actions. This argument is supported by Débarre et al. (2018).

On the other hand, some participants have expressed doubts about this recommendation, declaring it might only be a “nice decoration” and would not be significant enough to

foster measurable change. It was mentioned that, since this recommendation is “easy” to implement, it should not pre-empt other measures requiring more attention.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- **“Substantial efforts should be made to invite more women speakers in all seminar series and increase their visibility to foster a faster cultural change”**

Potential recommendation:

Nominate women in decision-making committees and executive positions

Category 2: Important.

The global average score is 14.80 with a maximum of 20 and a minimum of 2. Average for women is 16.71. Average for men is 13.18. Average for gender unreported is 16.65.

The measure “Nominate women in decision-making committees and executive positions” was seen as important by participants, however, the prevailing concern is the risk for women to be overburdened. Participants suggested that to alleviate this risk, women should be appointed on decision-making committees with priority and be discharged of committees having a lower impact. These thoughts align with conclusions from previous studies, expressing the necessity for Departments to designate more female faculty members as leaders of recognized administrative committees, rather than small ones (Misra et al., 2011; Henley, 2015). Finally, participants proposed that to bridge the gap, committees should be open to other bodies such as female PhD students and postdocs.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- **“The notable contributions of women being needed, nominate women in decision-making committees and executive positions in priority and discharge them of lower impact committees”**

Potential recommendation:

Hire female Full Professors

Category 2: Important.

The global average score is 13.31 with a maximum of 20 and a minimum of 1. Average for women is 15.00. Average for men is 13.45. Average for gender unreported is 6.75.

The measure “Hire female Full Professors” in order to increase the number of women at EPFL is seen as a good strategy by participants, some suggesting that Full Professors searches (‘par appel’) should be restricted to women. Others expressed their wish to see this recommendation extended to a broader level, thus hiring high level female PATTs as well. A participant indicated that strategic hires by the direction board occurred every year and that it should be mandatory to have a certain percentage of women among them.

Some participants were more reticent about this measure, considering it not important enough to foster a cultural change. This argument reflects Wahl's (2015) conclusion that increasing the number of women in an institution cannot foster real change without pairing it with a deep organizational cultural change.

Finally, recruiting female Full Professors has also raised an ethical question being that "stealing" women from other institutions may not be beneficial to the overall situation.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- **"Hire female Full Professors in priority and privilege high level female Professors of any level when possible"**

Potential recommendation:

Open "Female faculty member only" positions

Category 3: Moderately important.

The global average score is 8.00 with a maximum of 20 and a minimum of 0. Average for women is 10.86. Average for men is 6.70. Average for gender unreported is 4.50.

The measure "Open "Female faculty member only" positions" raised mixed opinions and sparked vigorous debates. While a few participants considered opening "female faculty member only" positions as a drastic measure to close the wide gap (at least temporarily) and force hiring committees to enter a more active search, others have pointed to hidden positive discrimination and have expressed that if implemented, this recommendation would require transparency to avoid inequality against men.

Some male participants have expressed their worries about women being labeled and receiving condescending comments following their appointment such as "you got the position only because you are a woman". Interestingly, few women participants reacted to these concerns, which suggests that they routinely receive such comments anyway; therefore, this measure would be effective to increase gender balance. Two participants who were appointed through this process were present, one raised her voice and reported positive experience.

Finally, concerns that this measure might only be "equality cosmetics" and not important enough to foster a real cultural change were raised.

Based on the above comments and high contrast of opinions of focus groups, the commission should further discuss the legitimacy of the above measure.

Hiring

Issue

Inequalities and lack of transparency in the recruitment process were regularly discussed by interviewees, particularly by women who considered the hiring process as biased against female candidates. For women, the major issue seemed to be the existence of an “old boy network” where the “similar-to-me” effect occurs, resulting in men appointing other men. The lack of clear criteria in the recruitment procedures results in high levels of subjectivity, and therefore continuously disfavors women. This issue resonates with Nielsen’s (2015) findings. Additionally, not having enough women sitting on the recruitment committees, as well as the absence of a neutral external expert, were also presented as potential causes to the problem. Finally, for many interviewees it is the responsibility of the leadership to emphasize the importance of gender balance, which did not appear to be perceived at the time of the interviews.

Potential recommendations

When asked what measures could be implemented to improve the recruitment process in order to hire more female candidates, interviewees suggested the four following recommendations:

- Ensure the implementation of current EPFL policy and target,
- Leadership (President, VPs, Deans) shall highlight a message of culture of inclusiveness,
- Have an expert (and/or member from HR or equal opportunities office) in hiring committees to ensure EPFL policies are followed,
- When a female faculty member from a high standard academy²⁵ has been appointed, allocate extra budget to appoint a second female faculty member

Discussions and final recommendations:

Below, the scores and discussions of pro and counter arguments raised by participants during the focus groups are relayed. In light of these arguments, we then formulate the final recommendations.

25 For example, NAS (National Academy of Science) or NAE (National Academy of Engineering)

Potential recommendation:

Ensure the implementation of current EPFL policy and target

Category 1: Highly important.

The global average score is 17.21 with a maximum of 20 and a minimum of 5. Average for women is 17.07. Average for men is 16.85. Average for gender unreported is 19.50.

The measure “Ensure the implementation of current EPFL policy and target” did not raise any debate during the focus groups as it was considered to be the norm by the vast majority of participants. Participants highlighted the need for control and monitoring of the search committees in order to implement this measure correctly.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- **“Ensure the implementation of current EPFL policy and target through control and monitoring”**

Potential recommendation:

Leadership (President, VPs, Deans) shall highlight the importance of a culture of inclusiveness

Category 2: Important.

The global average score is 14.82 with a maximum of 20 and a minimum of 3. Average for women is 14.29. Average for men is 14.80. Average for gender unreported is 16.75.

According to participants, the measure “Leadership (President, VPs, Deans) shall highlight the importance of a culture of inclusiveness” is of particular importance given that EPFL is a top-down environment. Participants mentioned that a message sent by the leadership would get more legitimacy and would help the “old practices” to be abolished. Comments about the need to promote clear rules and monitor a homogeneous implementation of this culture throughout the schools and institutes were brought up.

However, some participants were much more skeptical about this measure and highlighted the importance of actions and facts over words, pointing sometimes to the risk of lip service. Examples such as Mediacom’s website, where women are not portrayed on any pictures over a considerable time span, were reported as highly problematic.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- **“Leadership (President, VPs, Deans) shall highlight the importance of a culture of inclusiveness”**

Potential recommendation:

Have an expert (and/or member from HR or equal opportunities office) in hiring committees to ensure EPFL policies are followed.

Category 3: Moderately important.

The global average score is 9.68 with a maximum of 20 and a minimum of 0. Average for women is 10.00. Average for men is 10.65. Average for gender unreported is 3.75.

The measure “Have an expert (and/or member from HR or equal opportunities office) in hiring committees to ensure EPFL policies are followed” raised mixed reactions. Some participants reported a very positive outcome to this type of measure in the past and insisted on the need for the person to come from a different field. Moreover, a participant suggested to have a set catalogue of questions to be used in interviews and throughout the recruitment process, to ensure equality among all interviewed candidates.

On the other hand, some participants considered that having an expert on the hiring committee was not a guarantee for good results. Globally, participants have instead proposed to focus on the composition of the recruiting committees, highlighting the importance of gender diversity among members. This argument aligns with the findings of Van den Brick et al. (2006), showing that female applicants have a greater chance to be appointed as the number of women in the selection committees increases. Finally, the importance of training the Chairs and the members against any type of gender bias was raised as well.

Based on the above comments and high contrast of results provided by focus groups, the commission should further discuss the legitimacy of the above measure.

Potential recommendation:

When a female faculty member from a high standard academy²⁶ is appointed, allocate extra budget to appoint a second female faculty member

Category 3: Moderately important.

The global average score is 9.38 with a maximum of 20 and a minimum of 0. Average for women is 12.38. Average for men is 8.35. Average for gender unreported is 4.75.

The measure “When a female faculty member from a high standard academy is appointed, allocate extra budget to appoint a second female faculty member” did not generate any particular debate during focus groups, however results show that participants do not support this recommendation. The purpose of this measure was to increase the number of women and show that EPFL’s culture favors gender equality.

According to a participant, this measure was already implemented in the past in the STI School and showed very successful results by dramatically increasing the percentage of women faculty. In fact, STI is the school with the highest percentage of women as compared to its student population. This may explain that some participants (especially women) insisted on the importance of this measure to increase the number of female faculty at EPFL.

Based on the above comments and high contrast of results provided by focus groups, the commission should further discuss the legitimacy of the above measure.

²⁶ For example NAS (National Academy of Science) or NAE (National Academy of Engineering)

Gender Climate

Issue

Gender climate is an important part of the work atmosphere and most women interviewed expressed some dissatisfaction to this regard. In fact, during the interviews, many women reported that they experienced gender bias while interacting with colleagues and students. Condescending comments from colleagues about their work, grants, position or physical attributes were reported. Women also indicated that prejudice may occur when stereotypes about social roles are held. The main concern is the expected behaviors they are supposed to exhibit. In fact, many women reported that students expected them to act as nurturing academic mothers, thus resulting in extra demands. In turn, these remarks and extra burdens contribute to their feeling of exclusion in the workplace. In connection with this topic, the particular importance of leadership roles was also emphasized and is further discussed in the section “Leadership and administration”.

Potential recommendations

When asked what measures could be implemented to improve the gender climate, interviewees suggested the three following recommendations:

- Provide bias awareness training to undergraduate and PhD students,
- Provide bias awareness training to all faculty members, through rolling schedule and/or in faculty retreats,

Discussions and final recommendations:

Below, the scores and discussions of pro and counter arguments raised by participants during the focus groups are relayed. In light of these arguments, we then formulate the final recommendations.

Potential recommendation:

Provide bias awareness training to undergraduate and PhD students

Category 1: Highly important.

The global average score is 18.5 with a maximum of 20 and a minimum of 10. Average for women is 19.00. Average for men is 18.1. Average for gender unreported is 18.75.

The measure “Provide bias awareness training to undergraduate and PhD students” received a very clear consensus among participants, who believe students need to be educated on gender-bias, especially because of the higher number of grievances filed against women. In fact, it was mentioned that students regularly hold special expectations towards female faculty members that they do not hold against male faculty members. Many studies have described these discrepancies (El-Alayli et al., 2018; MacNeill et al., 2015).

Moreover, participants insisted on the need to include self-evaluation during the bias awareness trainings to force students to become aware of their own biases. Given the high percentage of international students and the diversity of cultural backgrounds at EPFL, the need to clearly define what the acceptable behaviors are, thus to avoid any misunderstanding was, also mentioned.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- **“Provide bias awareness training and self-evaluation to undergraduate and PhD student. Define clearly what are acceptable behaviors at EPFL.”**

Potential recommendation:

Provide bias awareness training to all faculty members, through rolling schedule and/or in faculty retreats

Category 1: Highly important.

The global average is 16.79 with a maximum of 20 and a minimum of 5. Average for women is 17.21. Average for men is 16.35. Average for gender unreported is 17.50.

The measure “Provide bias awareness training to all faculty members, through rolling schedule and/or in faculty retreats” reached a high consensus. Some participants, however were more skeptical about the final results. On one hand, some participants stated that bias training allows people to become conscious of many elements they were unaware of and is required to initiate a change; in line with Jackson’s et al (2014) belief that education and awareness of gender-biases can help shape a better climate in time and encourage women in advancing in the STEM fields. On the other hand, few other participants argued that a single seminar on gender bias would not be enough to enable a real and durable cultural change. Some participants who already had experienced bias awareness training reported negative experiences regarding some of their faculty colleagues. In fact, they insisted that only people who were “open-minded” benefited from the training, as they were eager to acquire new knowledge. In contrast those appearing to be more “narrow-minded” might be more resistant to positive change and new ideas regarding gender equality. Again, the importance of including self-evaluation was raised.

Few participants mentioned that the implementation of mandatory gender training may be faced with resistance and might not be taken seriously by certain faculty members. Therefore, they suggested that general trainings could be more effective.

Comments on the fact that gender-bias awareness training should be offered preferentially to male professors and faculty members over 50 years old were made; these comments confirmed the results from our qualitative study. Finally, a comment was brought up by one participant who suggested that better results might be obtained by training women to deal with these situations, rather than by offering bias training to all faculty members.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- **“Provide bias awareness training to all faculty members and include self-evaluation.”**

Leadership and administration

Issue

The importance of the role of leadership (institute directors) was highlighted as a strong component for cultural change: the importance of their administrative position, facilitating the transfer of a message of inclusiveness, may result in a more supportive climate for women faculty members. Regarding administration procedures, these were often criticized during the interviews. In particular, the process of managing grievance cases was not considered appropriate and lacking support. The opacity and the slow pace of the procedure was criticized as well.

Potential recommendations

When asked what measures could be implemented to improve the administration and management issues, interviewees suggested the four following recommendations:

- Establish state-of-the-art procedures for grievance cases including regular evaluation of the grievance procedures,
- Create a specific senior leadership seminar for heads of institutes.
- Establish in each School a gender equality committee and ensure coordination with other Schools,

Discussions and final recommendations

Below, the scores and discussions of pro and counter arguments raised by participants during the focus groups are relayed. In light of these arguments, we then formulate the final recommendations.

Potential recommendation:

Establish state-of-the-art procedures for grievance cases including regular evaluation of the grievance procedures

Category 1: Highly important.

The global average score is 17.34 with a maximum of 20 and a minimum of 4. Average for women is 18.36. Average for men is 16.1. Average for gender unreported is 20.00.

The measure “Establish state-of-the-art procedures for grievance cases including regular evaluation of the grievance procedures” did not raise any debate during the focus group discussions; the vast majority of the participants judging that it is crucial to review the grievance procedure that is in place. The fact that power should be divided between the prosecutor, a judge and an investigator, who cannot be the same person was highlighted. Some participants have mentioned that a committee has been put together to investigate this major issue.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- “Establish state-of-the-art procedures for grievance cases including regular evaluation of the grievance procedures”

Potential recommendation:

Create a specific senior leadership seminar for heads of institutes

Category 1: Highly important.

The global average score is 15.92 with a maximum of 20 and a minimum of 0. Average for women is 16.36. Average for men is 15.55. Average for gender unreported is 16.25.

The measure “Create a specific senior leadership seminar for heads of institutes” appeared highly important to participants who mentioned that due to their administrative positions, leadership members should acquire effective skills to enhance a culture of inclusiveness. Additionally, some participants added the importance, for heads of institutes, to be provided the necessary knowledge about the gender dimensions hidden in non-gender issues. These thoughts are reflected in Bystydzienski et al. (2017), results, who report that agents who are provided with the necessary skills and tools regarding gender challenges were in the long run more likely to disclose a cultural transformation in their departments and colleges. Moreover, it was mentioned that only individuals who are committed towards a good gender climate shall be appointed to these important positions. Comments about the need to extend the training to deans, VPs and president were brought up. Finally, a participant mentioned that most people holding high positions were already conscious of these issues, and therefore that this measure was not a pressing one.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- **“Create specific senior leadership seminar for heads of institutes”**

Potential recommendation:

Establish for each School a gender equality committee and ensure coordination with other Schools

Category 2: Important.

The global average score is 12.01 with a maximum of 20 and a minimum of 0. Average for women is 13.57. Average for men is 11.33. Average for gender unreported is 10.00.

The measure “Establish for each School a gender equality committee and ensure coordination with other Schools” was perceived as a good initiative, by participants who nevertheless commented on the need of widening the gender equality committee to a campus level. Participants suggested to appoint a representative in each School to ease the coordination of the process. A participant mentioned that to obtain more legitimacy the gender equality committee should be led by men. Finally, the concern to see an extra committee being opened, which would increase the amount of administrative work, was regularly brought up.

According to Winchester & Browning (2015), this type of measure has been seen to positively impact gender equality, by raising awareness and disseminating successful strategies.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- **“Establish a campus wide gender equality committee and appoint a representative per School, when possible the representative shall be a male faculty member”**

Tenure-track period

Issue

The tenure-track pressure and the lack of support perceived during this phase were highly criticized during the interviews. In fact, a majority of young faculty members reported struggling when facing new and simultaneous challenges, such as leading a team, obtaining project funds, teaching, setting up their lab, hiring, positioning themselves within the faculty, etc. Additionally, the criteria for achieving tenure were criticized as being vague and difficult to understand. Though these issues were addressed by both men and women; women seemed to struggle more with them.

Potential recommendations

When asked what measures could be implemented to improve the tenure-track support, interviewees suggested the two following recommendations:

- Provide guidelines and/or training sessions to PATTs,
- Provide coaching through a trained psychologist with experience as faculty to support and provide objective advice.

Discussions and final recommendations

Below, the scores and discussions of pro and counter arguments raised by participants during the focus groups are relayed. In light of these arguments, we then formulate the final recommendations.

Potential recommendation:

Provide guidelines and/or training sessions to PATTs

Category 2: Important.

The global average score is 14.84 with a maximum of 20 and a minimum of 5. Average for women is 15.79. Average for men is 13.90. Average for gender unreported is 16.25.

The measure “Provide guidelines and/or training sessions to PATTs” seemed useful to participants, who moreover suggested that these guidelines should be homogenous throughout the schools and institutes. Some participants have indeed criticized the current heterogeneous situation; it was mentioned that this measure was already implemented in certain schools, but not all. Additionally, it was highlighted that expectations should be clearly stated in these guidelines; the actual system of interview with the dean being insufficient for some participants. In contrast, other participants pointed out that this measure is not directly related to gender issues and therefore shouldn’t be marked as important. Finally, participants insisted on mentioning that these guidelines should be accessible to both women and men.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- “Schools and institutes should establish new, more detailed guidelines and training sessions that take into account the successes and failures of previous practices in order to provide a better support to PATTs”

Potential recommendation:

Provide coaching by a trained psychologist with experience as faculty to provide support and objective advice.

Category 2: Important.

The global average score is 13.65 with a maximum of 20 and a minimum of 5. Average for women is 14.93. Average for men is 13.37. Average for gender unreported is 10.50.

The measure “Provide coaching by a trained psychologist with experience as faculty to provide support and objective advice” was perceived as extremely relevant by many participants who mentioned that having an interlocutor for special cases, especially in situations when grievances are filed is necessary. The wish to see this measure extended to all faculty members, postdocs and PhD students was expressed. A participant stressed the importance for EPFL to make this person visible and communicate about this new measure. Participants insisted on the fact that the reference person needs to be extremely knowledgeable of the work process and the professorship issues. In contrast, other participants pointed to this measure as not directly addressing gender issues and therefore they favored other measures.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- **“Provide coaching to all faculty members, postdocs and PhD students through a trained psychologist with experience as faculty to advise, support and be objective; and communicate this new measure throughout the campus”**

Integration

Issue

While integration on the EPFL campus was overall described in positive terms by most interviewees, regular critics towards official mentoring practices were expressed. The mismatch between the incoming faculty member and the attributed mentors seemed to be the major issue. Comments regarding the absence of availability and the lack of good advice were reported. Difficulties to integrate and interact for language reasons were also brought up.

Potential recommendations

When asked what measures could be implemented to improve the integration support, interviewees suggested the two following recommendations:

- Review the mentorship program,
- Offer intensive private language tutoring.

Discussions and final recommendations

Below, the scores and discussions of pro and counter arguments raised by participants during the focus groups are relayed. In light of these arguments, we then formulate the final recommendations.

Potential recommendation:

Review the mentorship program

Category 2: Important.

The global average score is 14.33 with a maximum of 20 and a minimum of 5. Average for women is 14.86. Average for men is 13.83. Average of gender unreported is 15.00.

The measure “Review the mentorship program” appeared relevant to participants, however it was mentioned that EPFL recently started to review the mentorship program. Hence, arguments about the need to uniformize the mentorship programs across schools were brought up. The fact that incoming faculty members should absolutely have someone who has experienced the tenure-track system was mentioned. Finally, a participant suggested to appoint a reference person when the mentorship relation did not meet the expectations of the incoming faculty member.

Based on the above comments and results provided by focus groups, the commission could propose the following recommendation:

- **“Schools and institutes should establish new, more effective mentorship programs that take into account the success and failures of previous mentoring practices and uniformize the procedure throughout the schools. A reference person should be appointed for difficult cases.”**

Potential recommendation:

Offer intensive private language tutoring

Category 2: Important.

The global average score is 10.88 with a maximum of 20 and a minimum of 0. Average for women is 12.64. Average for men is 9.98. Average for gender unreported is 9.25.

The measure “offer intensive private language tutoring” was perceived as already in place by participants, however the existence of tutoring should be better communicated. Few participants highlighted that it was the recruitment committee’s responsibility to emphasize this point when a new faculty member is hired. The wish to see this measure extended to spouses was raised. Finally, a few participants pointed to this measure as not addressing gender issues and therefore favored other measures instead.

Based on the above comments and high contrast of results provided by focus groups, the commission should further discuss the legitimacy of the above measure.

Summary

The table below summarizes the results of the focus groups regarding the importance of each recommendation by key topic.

Key topic	Importance	Recommendation
Salary and Resource allocation	Highly important	Establish transparency regarding resources and space allocation, committee work and teaching load, and renew qualitative and quantitative assessment every 5 years
	Important	Recognize “good citizen” work by offering a yearly envelope bonus from the president
Work-life balance	Highly important	Provide additional daycare facilities within EPFL (Wednesday’s and holiday activities included) and nearby and secure priority access for (1) Women PATTs, (2) Women PhD students and Postdocs, (3) Women PAs and POs
		Strongly discourage holding meetings before 8:30 AM or after 5:00 PM
		Offer one-month parental leave and 6 months stop-the-clock per birth to the non-birthing parent (father or person of same sex) in tenure-track
	Important	Ensure teaching relief for PATTs following maternity and parenthood by creating a specific fund to hire a substitute. Planning ahead shall be the responsibility of the Section
		Ensure systematic teaching relief for PAs following maternity leave
		Dedicate funds and support for dual careers. Integrate equal opportunity constraints and monitoring to ensure an impact on women faculty members hiring
Representation of women professors	Highly important	Increase visibility of women by inviting external female speakers
	Important	Nominate women in decision-making committees and executive functions
		Hire female Full professors
Hiring	Moderately important	Open “Female faculty member only” positions
	Highly important	Ensure the implementation of current EPFL policy and target
	Important	Leadership (President, VPs, Deans) shall highlight a message of culture of inclusiveness
		Have an expert (and/or member from HR or equal opportunities office) in hiring committees to ensure EPFL policies are followed
Gender climate	Highly important	When a female faculty member from a high standard academy has been appointed, allocate extra budget to appoint a second female faculty member
		Provide bias awareness training to undergraduate and PhD students
Leadership and administration	Highly important	Provide bias awareness training to all faculty members, through rolling schedule and/or in faculty retreats
		Establish state-of-the-art procedures for grievance cases including regular evaluation of the grievance procedures
	Important	Create a specific senior leadership seminar for heads of institutes
Tenure-track period	Important	Establish in each School a gender equality committee and ensure coordination with other Schools,
		Provide guidelines and/or training sessions to PATTs
Integration	Important	Provide coaching through a trained psychologist with experience as faculty to support and provide objective advice
		Review the mentorship program
		Offer intensive private language tutoring

A.3.3. References

Antecol, H., Bedard, K., & Stearns, J. (2018). Equal but inequitable: who benefits from gender-neutral tenure clock stopping policies?. *American Economic Review*, 108(9), pp. 2420-41.

Broadbridge, A., & Simpson, R. (2011). 25 years on: reflecting on the past and looking to the future in gender and management research. *British Journal of Management*, 22(3), pp.470-483.

Bystydzienski, J., Thomas, N., Howe, S., & Desai, A. (2017). The leadership role of college deans and department chairs in academic culture change. *Studies in Higher Education*, 42(12), pp. 2301-2315.

Caltech (2001). Committee on the Status of Women Faculty at Caltech, Final report 2001. <http://wff.yale.edu/sites/default/files/files/CSFWFINALREPORT1.pdf>

Débarre, F., Rode, N. O., & Ugelvig, L. V. (2018). Gender equity at scientific events. *Evolution letters*, 2(3), pp.148-158.

Dubach, P., Graf, I., Stutz, H., & Gardiol, L. (2012). Dual-career couples at Swiss universities: Evaluation of the Swiss Federal Equal Opportunity at Universities Programme, 3rd period 2008-2011 (Summary). In 7th European Conference on Gender Equality in Higher Education, pp. 29-31

El-Alayli, A., Hansen-Brown, A. A., & Ceynar, M. (2018). Dancing backwards in high heels: Female professors experience more work demands and special favor requests, particularly from academically entitled students. *Sex Roles*, 79(3-4), pp. 136-150.

GARCIA - Gendering the Academy and Research: Combating Career Instability and Asymmetries (2015). <http://garciaproject.eu/>, See Nicky Le Feuvre (ed.) (2015) Contextualizing Women's Academic Careers: Comparative Perspectives on Gender, Care and Employment Regimes in Seven European Countries, *GARCIA working paper* n. 1, University of Trento (ISBN 978-88-8443-609-2), pp.139-184, accessed on line in March 2020

Henley, M. M. (2015). Women's success in academic science: Challenges to breaking through the ivory ceiling. *Sociology Compass*, 9(8), pp. 668-680.

Jackson, S. M., Hillard, A. L., & Schneider, T. R. (2014). Using implicit bias training to improve attitudes toward women in STEM. *Social Psychology of Education*, 17(3), pp. 419-438.

MacNeill, L., Driscoll, A., & Hunt, A. N. (2015). What's in a name: Exposing gender bias in student ratings of teaching. *Innovative Higher Education*, 40(4), pp. 291-303.

Mäkelä, L., & Suutari, V. (2011). Coping with work-family conflicts in the global career context. *Thunderbird International Business Review*, 53(3), pp. 365-375.

MIT Faculty Newsletter (1999) Special Edition. A Study on the Status of Women Faculty in Science at MIT: How a Committee on Women Faculty came to be established by the Dean of the School of Science, what the Committee and the Dean learned and accomplished, and recommendations for the future, Vol. XI No. 4 March 1999. <http://web.mit.edu/fnl/women/women.html>

MIT (2002). Reports of the Committees on the Status of Women Faculty 2002. https://facultygovernance.mit.edu/sites/default/files/reports/2002-03_Status_of_Women_Faculty-All_Reports.pdf

MIT (2011). A Report on the Status of Women Faculty in the Schools of Science and Engineering at MIT, 2011. <http://news.mit.edu/sites/mit.edu.newsoffice/files/documents/women-report-2011.pdf>

Misra, J., Lundquist, J. H., Holmes, E., & Agiomavritis, S. (2011). The ivory ceiling of service work. *Academe*, 97(1), pp. 22-26.

Nielsen, M. W. (2016). Limits to meritocracy? Gender in academic recruitment and promotion processes. *Science and Public Policy*, 43(3), pp. 386-399.

Princeton (2003), Report of the Task Force on the Status of Women Faculty in the Natural Sciences and Engineering at Princeton. <https://pr.princeton.edu/reports/sciencetf/sciencetf-9-19-03.pdf>

Schütter, H., & Boerner, S. (2013). Illuminating the work-family interface on international assignments. *Journal of Global Mobility: The Home of Expatriate Management Research*, 1(1), pp. 46-71

Van den Brink, M., Brouns, M., & Waslander, S. (2006). Does excellence have a gender?: A national research study on recruitment and selection procedures for professorial appointments in The Netherlands. *Employee Relations*, 28(6), pp.523-539.

Wahl (2015), Gender Perspectives on Academic Organizations. Structure, Culture and Power, SV Seminar, EPFL, 23. October 2015, <http://video.epfl.ch/2850/1/10> (limited access)

Winchester, H. P., & Browning, L. (2015). Gender equality in academia: a critical reflection. *Journal of Higher Education Policy and Management*, 37(3), pp. 269-281.

A.3.4. **Documentation**

A.3.4.1. **Interview samples (Women and men)**

Women faculty sample characteristics (n=30) (n total=62)															
Single without children 9 (18)			Partnership Without children 3 (6)				Partnership with child(ren) 17 (36)				Single with child(ren) 1 (2)				
PO 9 (17)			PA 8 (20)				PATT 9 (18)				PBFN 1 (1)			PT 3 (6)	
AR 1 (3)	CH 6 (9)	EL 2 (4)	GC 2 (3)	GM 1 (4)	INF 1 (2)	MA 3 (5)	MT 3 (5)	MX 3 (7)	PH 1 (4)	SC 1 (2)	SIE 1 (3)	SV 5 (9)	CDH 0 (1)	IF 0 (1)	
SB 10 (18)		SV 5 (9)		STI 9 (20)			IC 2 (4)		ENAC 4 (9)		CDH 0 (1)		CDM 0 (1)		
Recruited from America 13 (26)		Recruited from UE 8 (17)				Recruited from Switzerland 6 (15)			Recruited from Oceania 0 (1)			NA 3 (3)			
0-8 seniority 12 (30)					9-15 seniority 11 (24)					16+ seniority 7 (8)					
0-5 lab members 4 (14)		6-10 l.b. 13 (24)			11-15 l.b. 7 (14)			16-20 l.b. 4 (7)			20+ l.b. 2 (3)				
30-39 y.o. 9 (18)			40-49 y.o. 13 (24)				50-59 y.o. 7 (15)				60+ 1 (5)				
Dual Career at EPFL = Yes 5 (13)				Dual Career at EPFL = No 19 (35)						Dual Career at EPFL = Y/N or N/A 6 (14)					

Men faculty sample characteristics (n=15) (n total=311)															
Single without children 4			Partnership Without children 2				Partnership with child(ren) 9				Single with child(ren) 0				
PO 5			PA 4				PATT 4				PBFN 0			PT 2	
AR 1	CH 3	EL 1	GC 1	GM 2	INF 0	MA 1	MT 1	MX 1	PH 1	SC 1	SIE 0	SV 2	CDH 0	IF 0	
SB 5		SV 2		STI 5			IC 1		ENAC 2		CDH 0		CDM 0		
Recruited from America 8		Recruited from UE 3				Recruited from Switzerland 4			Recruited from Oceania 0			NA 0			
0-8 seniority 4					9-15 seniority 7					16+ seniority 4					
30-39 y.o. 3			40-49 y.o. 6				50-59 y.o. 4				60+ 2				

A.3.4.2. Interview guide (Women)

Themes	Main questions	Follow-up questions
Introductory questions	1. Could you describe your professional trajectory?	
	2. Could you describe your educational trajectory?	■ E.g .Where did you get your undergraduate degree(s)? graduate degree(s)? PhD? Post Doc etc.
	3. What does it mean for you to be a Professor? Was it always a career goal?	
	4. Overall regarding your trajectory, have family issues influenced your career? If so, in what ways ?	
	5. If relocated internationally: what are the reasons for your international mobility to Switzerland?	<ul style="list-style-type: none"> ■ Did you come specifically for this job? ■ What other reasons played a role in this decision to relocate?
Recruitment	6. What was your experience of the hiring process ? How would you describe it ?	
	7. Have you negotiated some elements during this hiring process with your department head? Or Dean?	■ If yes were you successful in getting what you asked for or were promised?
	8. If you went through hiring processes in other academic institutions, how would you compare your experience at EPFL against those?	
	9. With regard to your gender, what were your perceptions about EPFL during the interview process?.	■ Have they changed (or not) since you arrived? Please explain
	10. Tell us about your subsequent experience upon joining EPFL, in the first integration phase. What was your experience when you first arrived?	<ul style="list-style-type: none"> ■ Were you welcomed? Resources provided? Well accompanied and integrated? ■ Could EPFL improve something in the integration phase? Were you expecting something else?
	11. Have you ever received an outside offer?	■ If so, how was it handled by your department chair or the dean?
	12. So far, have you seriously considered leaving EPFL, and if so, why?	■ Attractiveness: What could make you leave EPFL for another institution? Why do you stay here ?

Themes	Main questions	Follow-up questions
Experiences at EPFL	13. How do you perceive decisions in your department or School about: <ul style="list-style-type: none"> ■ Faculty hires? ■ Resource and space allocation (e.g. salary, space, internal funds)? ■ Leadership positions attribution? ■ Allocation of incentives, prizes and awards? ■ Promotions 	<ul style="list-style-type: none"> ■ Do you think there might be a gender dimension in these decisions? ■ Do you have any personal experiences related to one or more of these issues? ■ Do you think that the criteria to be met for your promotions are clearly established?
	14. Do you perceive that department chores (e.g., advising, administration, hosting guests, sitting on committees) have been equitably assigned, or that you have in some cases been unduly burdened?	<ul style="list-style-type: none"> ■ Do you think there might be a gender dimension in this situation?
	15. How do you perceive your influence in decision making processes? Do you have the impression that these additional administrative tasks are linked with more influence in decision processes ?	<ul style="list-style-type: none"> ■ Rather strong? Rather weak? Why do you perceive this (examples, explanations, etc.)?
	16. What has been... <ul style="list-style-type: none"> ■ the most positive thing about being at EPFL? Examples? ■ What has been the most difficult thing? Examples? 	
	17. Are you able to perform in your job at EPFL as you had expected or wished?	<ul style="list-style-type: none"> ■ What are the facilitating or hindering factors? ■ What could be done to improve your performance?
	18. Since coming to EPFL have you been mentored?	<ul style="list-style-type: none"> ■ Do you wish to have a mentor? ■ Do you think having a mentor has a positive impact on your career? Can help with promotion?
	19. Have you experienced a promotion since you joined EPFL?	
	20. To what extent do you perceive you and your work (research, teaching and service) to be valued at EPFL?	<ul style="list-style-type: none"> ■ Why do you perceive that they are or are not?
Interactions in the workplace	21. Do you feel there is a difference between the ways your work is perceived at EPFL as opposed to the national or international arena of your field?	
	22. How would you describe your interactions with... <ul style="list-style-type: none"> ■ your colleagues? ■ your subordinates? ■ your students? ■ your supervisors (if any)? ■ the central administration? 	
	23. What factors influence the quality of such interactions?	<ul style="list-style-type: none"> ■ Do you think there might be a gender dimension?
	24. Are there specific interaction situations where you feel more challenged? Or uncomfortable? Why?	
	25. How do you perceive formal and informal networks in your department / institution?	<ul style="list-style-type: none"> ■ Are you able to attend informal meetings as much as you would like (e.g.. lunch with colleagues, etc.)?

Themes	Main questions	Follow-up questions
Work-life balance (WLB) and interactions outside EPFL	26. To what extent does your personal life (e.g. family life) impact your professional life at EPFL?	<ul style="list-style-type: none"> What particular factors from your private life are the most challenging for you to reach a balance?
	27. To what extent does your work life at EPFL impact your personal life? What appears to be the most challenging?	<ul style="list-style-type: none"> In addition, are you involved in compensated outside professional activities? E.g. Consulting, Founding a startup, Board assignments, etc.?
	28. If you are in a dual-career relationship, how do you manage this? How does this impact your balance?	<ul style="list-style-type: none"> Do you think EPFL should support dual-careers better?
	29. What support (people e.g. family, institutions, practices, etc.) helps you achieving a better work-life balance? Could you describe your support network?	<ul style="list-style-type: none"> This can apply to psychological/social support or practical / organizational support.
	30. Do you think EPFL supports your work life balance sufficiently?	<ul style="list-style-type: none"> If not, what could be done? What would be useful to you? In comparison to other academic institutions you know?
	31. Do you perceive the Swiss general environment as supportive in terms of work-life balance?	<ul style="list-style-type: none"> e.g. daycare opportunities, general culture, etc.
	32. Do you have particular strategies in place to help reaching a balance between professional and personal spheres?	
	33. Overall, how do you perceive your balance between personal and professional spheres?	<ul style="list-style-type: none"> How would you compare your work-life balance during your experience here with previous experiences?
34. Do you think women and men face different realities in terms of work-life balance? Do you think gender has an impact on work-life balance?	<ul style="list-style-type: none"> More generally do you perceive the Swiss environment and culture as supportive towards women's career? Why? 	

Themes	Main questions	Follow-up questions
<p>Specific questions about the impact of gender on experiences at EPFL</p>	35. What critical incidents related to your gender – whether positive or negative – do you recall at EPFL?	
	36. Are there specific experiences or instances where you think being a woman/man has helped or hindered you at EPFL?	
	37. Have you noticed any situations in your department, or more broadly at EPFL, where equally qualified women and men fared differently?	
	38. Do you think women at EPFL have a voice in decision-making processes to the same extent as men?	
	39. Please comment on the leadership role of women in your department/unit.	
	40. From your perspective, what are the most challenging issues for women at EPFL?	
	41. Have you had any experience with harassment at EPFL? And discrimination?	
	42. Have you had any experience with grievance procedures? Could you explain how this occurred?	
	43. Have you developed any strategies that would be useful to other female professors?	
	44. Do you think EPFL women faculty serve as positive role models for students and postdoctoral scholars? Please explain.	
	45. Overall, how do you perceive the general environment related to gender at EPFL?	<p>■ How is this environment similar/different from that of other academic institutions you have worked for?</p>
	46. If you have been here for several years already, have you seen any evolution in the environment related to gender at EPFL?	
	47. What would you recommend to improve the situation at EPFL? What could be done in priority?	
<p>Concluding questions</p>	48. Is/Are there any other topic(s) or issue(s) that come to mind that you would like to share with us, or that we should have addressed, but overlooked?	
	49. In your opinion, if this research could ensure one result/outcome, what would that be?	

A.3.4.3. Declaration of confidentiality



UNIVERSITÉ DE FRIBOURG
UNIVERSITÄT FREIBURG

To the interview participants

Département des Sciences du Management
Chaire Ressources Humaines et
Organisation
Prof. Dr. Eric Davoine
Boulevard de Pérolles 90
CH-1700 Fribourg

Confidentiality agreement

This document aims at confirming all steps that we commit to undertake in this qualitative study to ensure data confidentiality and anonymity of participants.

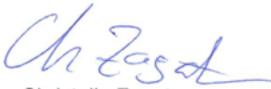
Our standard procedure for data collection, analysis and presentation of results is characterized by the following elements :

- Interviews are usually recorded, although in some cases we can imagine to record the first part and take notes about the second part, or have some periods off the record upon request.
- Interviews are transcribed, and the audio file of the interview is then erased.
- We send the transcription (including notes if necessary) back to the interviewee to check if there is anything that she or he wants to suppress from the text.
- Only three people from our research team at University of Fribourg: Eric Davoine, Christelle Zagato and Xavier Salamin will have access to this data. The transcription texts will never be shared with commission members, or any other person.
- In the analysis of data, we use text extracts with coded origin in thematic tables.
- In the presentation of the data, we only use interview extracts without context elements which could help readers to identify the persons. All information will be anonymized in such a way that participants can never be recognized.

Feel free to contact us should you have any further question on this topic.



Eric Davoine



Christelle Zagato



Xavier Salamin

Tel : ++41 / (0) 26 / 300 82 41 / 82 40

www.unifr.ch/rho

A.3.4.4. **Steps of data analysis**

Stage	Activities	Outcomes
1. Transcript reliability and familiarity	Each participant reviewed and validated her/his transcript to make sure it reflected accurately the ideas formulated. All 51 transcripts were then read by the 3 researchers to gain overall familiarity of content. Margin notes capturing researchers' observations were made.	Researcher familiarity with complete and accurate set of 51 interview transcripts (each between 9-22 pages) totaling 453'827 words.
2. Participant case files	Case files for all 51 participants were created, which summarize key elements of their experiences and answers. Case files include details on the participant (EPFL School, marital status, presence of children, etc.) as well as other data such as high-level interview extracts, researchers' field notes and margin notes from step one. The case files were reviewed and discussed by the 3 researchers.	51 individual case files, each comprising between 5 to 25 verbatim extracts
3. Pre-identified thematic categories	The data analysis followed King's (2004) template analysis method which suggests starting the analysis with pre-identified thematic categories (e.g. from previous research on a similar topic, such as MIT Studies 1999, 2002, 2011 in our case), but allows flexible changes through the course of the analysis (King 2004, p.256). Hence, in the first step, we started the thematic analysis with categories referring to the themes and structure of our interview guide which had previously been validated by the Commission.	A document of 25 pre-identified categories belonging to 8 broader themes (8 themes are visible in the Interview guide).
4. Independent sample coding by two researchers and final coding template	These pre-identified categories were then applied independently by two data coders on a sub-set of the data (6 transcripts). This step thus enables to clarify when needed on coding labels and instructions, and to adapt categories where needed in order to develop a coding template which captures the specificities of our data. We identified e.g. the importance of clearly distinguishing the phenomena that are gender vs. non gender specific in our final coding template (Tenure track, integration period...). The three researchers discussed and validated the coding template which was used as the structure for the first presentation.	Two-person coding of 6 transcripts, clarification of coding instructions and labels. Development and validation of coding template.
5. Data coding and reduction	One researcher used the coding template to analyze the 51 full transcripts. This included some clarifications among the research team on some text extracts. Such latter exchanges were facilitated by the fact that interviews have systematically been conducted by a team of 2 researchers, implying that knowledge about the content and context of interviews were always shared within the research team. Text extracts considered particularly representative or insightful were highlighted and anonymized to be used as illustrations in the presentation.	Coded transcripts for all 51 interviews, inserted into a draft "findings" table and cross-referenced with representative quotations. (PPT presentation)
6. Complementary systematic analysis of 30 women	We have complemented our analysis through a systematic analysis of the 30 women interviews. This enabled us to identify more clearly and systematically the frequency and the intensity of major topics.	Systematic analysis of frequency, evidence and intensity of key topics
7. Complementary systematic 15 M/W matched pair analysis	We have further complemented our analysis with a systematic man/woman matched pair analysis. More specifically, 15 men were selected based on a matching with 15 women participants in terms of key criteria (School, marital status, rank). We have systematically compared each pair of man and woman on 10 key topics/criteria identified as key in our findings above. Results were then discussed among the research team and aggregated in a comparative table enabling to identify gender differences and similarities.	Systematic comparative gender analysis on identified key topics
8. Validation steps of the findings and key themes	Several initiatives were undertaken to enhance validity of our qualitative analysis: Collaboration and interactions at each step among the whole research team; thus, exploring diversity of perspectives and minimizing risks of unconscious biases; Triangulation of data, i.e. collecting data from different sources "as we need to check and validate the information we receive from various sources and examine it from different angles" (Ghauri 2004, p.115). During the course of the project, we constantly performed this exercise by confronting existing literature, internal information (e.g. Commission, statistics, reports, etc.), and interview contents. Presentation of first analysis to Commission members, with most attendees confirming preliminary findings Presentation and discussion of first draft report and executive summary, with most attendees confirming results.	Validation of research findings

Stage	Activities	Outcomes
<p>9. Additional analysis of recommendations proposed by interviewees</p>	<p>Complementary to the process above, we have systematically collected all recommendations proposed by interviewees including deans as well as discussion elements. The commission discussed the proposed measures and made a first selection of 26 measures to be presented in focus group sessions with other EPFL faculty members. They were grouped into key topics including work-life balance, representation of women professors, hiring, gender climate, administration and management, tenure track support and integration support. We confronted these recommendations to other cases and existing literature.</p>	<p>Systematic listing of recommendations with link to main issues</p>
<p>10. Analysis of focus group data and final recommendations</p>	<p>The 4 focus groups which took place enabled to collect individual rating (from 0 to 20; 20 being the most important) for each potential recommendation from participants, and gather pro and counter arguments for each potential recommendation and benefit from additional input.</p> <p>After their rating by participants, potential final recommendations were classified into four categories, based on their average scores across all participants:</p> <ul style="list-style-type: none"> • Category 1: Highly important, score > 15 • Category 2: Important, score >10-15 ≤ • Category 3: Moderately important, score > 5-10 ≤ • Category 4: Less important, score ≤ 5 <p>In order to have a refined view of these average scores, differentiated average ratings between men and women have been calculated and reported, which enabled to identify the degree of consensus on a recommendation. In addition, arguments expressed by participants during the focus groups were reported for each recommendation, allowing to better make sense of the average scores (e.g. emphasize contradictions, etc.).</p>	<p>Recommendations for each main topic classified into 4 main categories (from highly important to less important), with participants' arguments as well as differentiated men-women scores.</p>

A.3.4.5. **Questionnaire of the focus groups**

Instructions

Please rate each recommendation (A1, A2, B1, B2, etc..) from 1 to 20 (20= most appropriate) on all four sheets. When finished, please go to the poster boards and place:

- 2 yellow stickers next to recommendations you rated ≤ 5
- 1 yellow sticker next to recommendations you rated >5 and ≤ 10
- 1 orange sticker next to recommendations you rated >10 and ≤ 15
- 2 orange stickers next to recommendations you rated >15

We will collect these four sheets at the end of the session.

	Challenge/issue	Recommendation	Rating (1-20)
A-Work-Life balance	Shortage of daycare spots Shortage of availability of spots for Wednesdays and holiday activities	A1. Provide additional daycare within EPFL and nearby and secure priority access for women PATT women PhDs and postdocs women PAs and POs	
	Exclusion of non-birthing parent from family support programs, reinforcing traditional gender roles	A2. Offer 1-month parental leave and 6 months stop-the-clock to non-birthing parent in tenure-track (per birth)	
	Difficulties handling teaching for PATTs with a newborn	A3. Ensure teaching relief for PATT following maternity and parenthood by: specific funding to hire someone, and planning ahead under the responsibility of the Section	
	Difficulties handling teaching for PAs with a newborn	A4. Automatic teaching relief after maternity for PAs.	
	Difficulties traveling abroad with a young child	A5. Provide support to PATT travelling to conferences with small children; and equip all meeting rooms with adequate video conference systems	
	Difficulties attending EPFL professional meeting with children	A6. No meetings before 8:30 AM or after 5:00 PM	
	Lack of dual-career support	A7. Dedicated fund and support for dual careers. Integrate EO constraints & monitoring to ensure impact on increased hiring of women faculty	
B-Women as an under-represented group	Lack of female representation and voice in committees and executive bodies	B1. Nominate more women in decision-making committees and in executive functions	
	Minority feeling as a result of low number of female faculty members	B2. Open "female faculty member only" positions	
		B3. Hire female Full professors in order to engineer faster change	
	Lack of visibility of female scientists/ engineers/architects	B4. Increase female visibility by inviting external women speakers	

	Challenge/issue	Recommendation	Rating (1 -20)
C-Hiring	Lack of female faculty members	C1. Ensure implementation of current EPFL policy and target	
		C2. Make gender equality a priority by allocating extra budget to appoint a second female faculty member when a female faculty member from NAS (US National Academy of Sciences or US National Academy of Engineering) or NAE* has been appointed.	
	Tendency towards in-group selection vs. diversity (various dimensions of diversity)	C3. Top-down (President, VPs, Deans) message highlights a culture of inclusiveness C4. Expert (and/or a member from HR or equal opportunities office) in hiring committees to ensure EPFL policies are followed	
D-Gender climate	Existence of gender bias in everyday interactions	D1. Provide bias awareness training to all faculty members, through rolling schedule and/or in faculty retreats. D2. Provide bias awareness training to undergraduate and PhD students	
	Role of institute directors for advancing diversity	D3. Create specific senior leadership seminar for heads of institutes	
E-Administration and management	High degree of participation of female faculty members (and "good citizens") to committees High degree of involvement of some faculty members in student mentoring	E1. Recognition of 'good citizens' by yearly envelope bonus from the president	
	Lack of transparency	E2. Establish transparency regarding resource and space allocation, committee work and teaching load and renew qualitative and quantitative assessment every 5 years.	
	Lack of support coming from the administration during grievance procedures	E3. Establish state-of-the-art procedures for grievance cases including regular evaluation of the grievance procedures	
	Lack of coordination and knowledge sharing regarding gender equality amongst Schools	E4. Each School establishes a gender equality committee and ensures coordination with other Schools	
F-Tenure-track support	Lack of "getting started" skills for tenure-track profs (set up the lab, teaching, hiring, leadership skills, etc.)	F1. Provide guidelines and/or training sessions to PATT	
	Very high degree of stress during tenure-track	F2. Provide coaching – a trained psychologist with experience as faculty - who can advise, support, be objective.	
G-Integration support	Lack of functioning mentorship program for incoming faculty	G1. Mentorship program should be reviewed	
	Difficulties to integrate and interact for language reasons	G2. Offering intensive private language tutoring	

