Diversity is Excellence

Politecnico di Torino Gender Equality Report 2020

| EXTENDED ABSTRACT

EQUAL OPPORTUNITIES PROJECT IMPLEMENTED BY
POLITECNICO DI TORINO

POLITECNICO
DI TORINO

Politecnico di Torino | 2020

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WeAreHERe scholarship holders and testimonials who have kindly granted permission to use their pictures

Gender Report 2020 Politecnico di Torino

EXTENDED ABSTRACT

Students AY 2019/2020

Enrolled in Bachelor's and Master's Degree Courses
71,05% | 28,95% out of 34.687

Level I and II Master and Executive Master
72,67% | 27,33% out of 300

PhD Students
66,84% | 33,16% out of 763

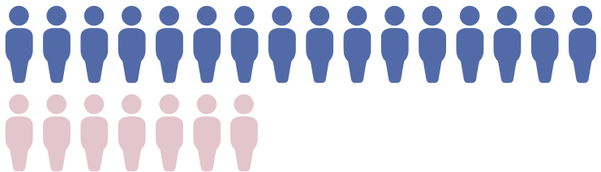
Teaching and research staff

Full Professors (FP)
83,27% | 16,73% out of 269

Associate Professors (AP)
68,75% | 31,25% out of 400

RTI and RTD-A/B Assistant Professors
59,94% | 40,06% out of 317

Research Fellows (RF)
68,57% | 31,43% out of 544



Technical-administrative and library staff

Executives
50% | 50% out of 6

EP
50% | 50% out of 36

D (including TE and CEL)
32,81% | 67,09% out of 462

C
50% | 50% out of 346

B
32,43% | 67,57% out of 37

Governing bodies

Rector
100% | 0% out of 1

Director-General
0% | 100% out of 1

Pro-Rector
0% | 100% out of 1

Vice Rectors
50% | 50% out of 6

Rector's Delegates
50% | 50% out of 6

Rector's Advisors
66,6% | 33,4% out of 21

Members of the Board of Directors
80% | 20% out of 5

Academic Senate
75% | 25% out of 24

Heads of Department
90,9% | 9,1% out of 11

College Coordinators
73,3% | 26,7% out of 15

It is with great pleasure that I introduce the publication of the first Gender Equality Report of Politecnico di Torino: a process that I have supported since before its launch, sharing the various steps and the first results, discussing the methodological choices with the scientific group that has developed it and the in-depth analyses that became necessary and which were often proposed by the support team itself as the study progressed.
My heartfelt thanks go to these two mixed and interdisciplinary working groups of teaching and administrative staff, who occupy different roles and come from different cultural backgrounds but have worked together enthusiastically for months on our Gender Equality Report. We now have a valuable tool, rich in precise evidence, which offers a clear picture of the strengths and, above all, the weaknesses, that characterise the three communities of our university (the student community, the teaching and research community, and the technical-administrative and library staff) on the theme of Gender Equality.
Weaknesses that, in the years to come, with the Gender Equality Plan that the Politecnico intends to develop shortly on the basis of this evidence, we will all have to consider as challenges to face and overcome together, aware of the fact that gender inequalities are a problem of equity but also of efficiency and effectiveness of the system.

The issue of gender in our technical university has been close to my heart since before the beginning of my term of office, and I immediately dedicated particular attention to the theme of Equal Opportunities, and its manifestations, including Gender Equality, creating two academic positions, as a Vice-Rector and a Rector's Advisor, with specific goals within the PoliTo4Impact Strategic Plan.

Section 6 of our Strategic Plan, "Which Kind of University", reads: "(...) by sharing and implementing the principles of the European Charter for Researchers, our University will launch new initiatives to monitor and govern equal opportunities with respect to the various aspects of diversity, starting from gender diversity. This will ensure that all actors are offered full and equal opportunities to carry out their activities and pursue paths of cultural, professional and career growth in a merit-based perspective".

Section 7 of our Strategic Plan "Objectives and Actions", and Objective 5 of the Staff Policies in particular, is: "To foster the conditions for a 50% reduction in the gender gap between candidates competing for academic positions", by "Implementation of a Gender Equality Report for developing a plan of targeted policies; strengthening of the multidimensional nature of the evaluation of candidates in recruitment procedures; adoption of wider time margins (1.5 years) for measuring the impact of maternity leave and other types of leaves on scientific productivity; implementation of monitoring systems to evaluate the effectiveness of these measures on a continuous basis".

So we are "on the right track": the university's first Gender Equality Report is ready and, as of today, will guide the most appropriate actions and set a benchmark for objective comparison with future Gender Equality Reports, which will be drawn up every three years, recording the results of the actions implemented.

I hope that this tool will be distributed as widely as possible and that the Politecnico community will participate in the discussion triggered by it.

Guido Saracco
The Rector

I am very pleased that our Politecnico has produced the first edition of its Gender Equality Report and would like to thank all the people who have contributed, in various ways, to achieving this important goal. The Report is a fundamental tool for the pursuit of gender equality within our community. Its aim is to ensure that the positive effects of the commitment to remove obstacles which continue to prevent the full accomplishment of equal opportunities will reverberate within the Politecnico and radiate into the social fabric of the territory where we are located.

As a woman, these issues are particularly important to me and, as Director-General, I consider the commitment to achieving conditions that allow full opportunities for everyone, men and women alike, with particular reference to the issues of work-life balance, extremely important. During my career, which has been so full of satisfaction, I have had the chance to meet and work with people with extensive vision and great foresight, but I am aware of the fact, and grateful, that I have been lucky, and that a cultural change is necessary to allow such experiences to become as widespread as possible.

In this sense, the publication of the Gender Equality Report can be the starting point to gain awareness of the gender distribution in the three categories that make up the Politecnico community - students, academics, and technical, administrative and library staff - and will be the basis for the development of specific policies to fill the distribution gaps that emerge and to permeate our actions from a gender perspective.

Thanks to subsequent editions over the years to come, we will be able to monitor the effectiveness of the measures we have put in place, gradually implementing them in order to achieve the ambitious goal of gender equality and to further refine our policies.

This is an important cultural step, a turning point in the approach to problems and in outlining plans and programmes for future development as well as policies in favour of Equal Opportunities and the promotion of gender specificities necessary to the harmonious development of the Politecnico community, which has always been based on the fundamental principles of democracy and transparency.

Ilaria Adamo
The Director-General

161 years after its foundation, and after awarding a degree in 1908 to Italy's first female engineer, Emma Strada, Politecnico di Torino presents its first Gender Equality Report. For several decades now, the Politecnico community has been debating on the wide-ranging issue of Equal Opportunities, which is regulated by an extensive legislative framework, as it is considered crucial in order to ensure that everyone's abilities are developed and implemented successfully.

Alessandra Colombelli

Tania Cerquitelli

International evidence shows that quality and innovation in teaching, research, development and technology transfer activities increase with policies of gender equality, diversity and inclusion. Human capital, which includes both women and men, has the potential to achieve excellence in all disciplines, including STEM, making the most of the various talents in the community: diversity is excellence.
The Politecnico community was analysed from a gender perspective, applying the CRUI guidelines and supplementing them, where necessary, with more specific analyses of the reality of our university. The gender breakdown of the university's student community, the teaching and research staff, and the technical, administrative and library staff was systematically examined in order to characterise the evolution and specificities of the Politecnico community.
In keeping with international

Arianna Montorsi

good practices, the document is the first step in the circular process known as the Gender Equality Plan, which will design and implement the necessary rebalancing policies, with the introduction of specific positive actions.

Claudia De Giorgi

[1]*STEM: Science, Technology, Engineering and Mathematics*

A pink-blue ribbon

We are celebrating the publication of the first Politecnico di Torino Gender Equality Report with a pink and blue edition with the aim of visually testifying the value of the combination of male and female genders, while revealing the inconsistency of the stereotype according to which pink is seen as a colour for girls and blue as a colour for boys.
Historian Jo B. Paoletti, University of Maryland, in her Pink and Blue: Telling the Boys from the Girls in America, Indiana University Press, (2013), says that pink has only very recently been associated with the female dimension.
Until the early twentieth century, blue and pink had absolutely no association with baby boys and girls (who wore mainly white clothes, which were easier to wash and bleach). Neither pink nor blue were considered as colours related to one gender only, the way they are today.
On the contrary, pink was often associated with the male world as a relative of red, a colour that symbolised strength and power, while blue was associated with the female world (white and blue being the colours of the Madonna's veil).
But from the Thirties-Forties, perhaps also supported by Freud's theories linked to sexuality and gender distinction, children's clothing manufacturers began increasingly using the colours blue and pink for boys and girls respectively, generating a phenomenon which, from the Fifties onwards, possibly also due to the popularity of Barbie and her artificial pink universe, has never stopped. Since then, and with further emphasis on the significance in the 1980s, when pre-natal ultrasound scanning enabled early diagnosis of the sex of unborn babies, pink has become "the colour of girls".
It is highly likely that it was the market that determined the behavioural changes that we still see today, along with the affirmation of a stereotype which is starting to be a problem for everyone in our complex contemporaneity, including men. So much so that there have recently been signs of change: first and foremost among those young men who were prevented from wearing pink in the 1980s and who are now playing with their own clothing and that of their sons, rejecting early sexualisation and leaving them free to choose. And this is also extending to the new digital generations, who see Millennial Pink (a term coined by the New York Times) not as a colour but as a no-gender, fashionable, anti-stress attitude, which has also been the subject of attention from The Guardian and GQ.
In 2016, for the very first time, Pantone decided not to choose a single shade as "colour of the year", preferring a combination, or a blend, of Rose Quartz 13-1520 and Serenity 15-3819 (https://www.pantone.com/eu/it/articoli/color-of-the-year/color-of-the-year-2016) in symbolic assonance with the emerging values of greater gender equality and fluidity and in anticipation (as seen today) of a trend that is becoming more and more established and sees "fuzzy", freedom and complex combinations as the new way to bring opposites together. The fluid variations between pink and blue that characterise the publication of our Gender Equality Report reflect Pantone's strong choice of 2016 and bear visual witness to the guiding concept of the project according to which, regardless of the figures, which unfortunately often still see the penalisation of women, people of both genders are present in the research groups of teachers and researchers, in administrative offices and in the study groups of our students generates enrichment, creativity and variety in terms of cognitive and cultural approaches.

These values, which are also expressed in other types of primary diversity (with gender diversity being joined by cultural diversity) and secondary diversity ageing diversity and disability diversity), should always be pursued in every organisation, making the most of the multi-faceted variety that also manifests itself chromatically - light and dark skins and eyes, white or variously pigmented hair - going beyond the stereotypes of black, white and pink to celebrate hybridisations and mixtures.
In the case of gender, this means developing the ability to think together, men and women - teachers, administrators and students - with a pink and blue androgynous mind. In her essay on the female condition, A room of one's own (1929), Virginia Woolf writes: "In each of us two powers preside, one male, one female. [...] The androgynous mind is resonant and porous; it transmits emotions without obstacles; it is naturally creative, incandescent and undivided".

Neither pink, nor blue,
but incandescent and undivided
pink and blue,
polytechnic and polychrome.

1 The Politecnico Community

For several decades now, the Politecnico community has been debating on the wide-ranging issue of Equal Opportunities, considered crucial in order to develop and implement everyone's skills.
One of the first Equal Opportunities Committees (CPO) at national level was founded at the Politecnico di Torino way back in 2000, and this later went on to become the Equality Committee (CUG) to comply with the regulations. Attention to the gender balance of the student and staff communities dates back to the same period. With contributions from the European Social Fund and Regione Piemonte, the "Donna professione Ingegnere" (Women Engineer) initiative was launched in 2001. Within the space of three years, the initiative succeeded in increasing the percentage of female students enrolled in Engineering Degree Courses at the Politecnico from 15% to over 20%. The percentage remained stable in the years that followed, despite the considerable changes taking place in the working world, requiring both male and female graduates with increasing technological specialisation.
A study on the gender breakdown of the university's teaching and research staff was subsequently carried out within the scope of the same initiative. The results published in the dedicated report "Equal Opportunities and Scientific Careers at the Politecnico di Torino - Perceptions, Realities and Expectations" highlight the strong gender imbalance in career development.
In 2016, the University CUG drafted a proposal for a Gender Equality Report annexed to the 2017 annual report (available on the University intranet), which contained a first systematic survey of the gender breakdown of the University's technical, administrative and library staff.
In 2017, Guido Saracco, who later became Rector, published the report "Politecnico Women and Men" as part of his election programme.
In 2018, in order to strengthen the impact of Equal Opportunities initiatives at governance level, a Vice Rector for Quality, Welfare and Equal Opportunities was appointed, along with a Rector's Contact for Gender Equality and Diversity. The Politecnico's Strategic Plan for 2018-2024, PoliTo4Impact, introduces gender equality goals. PoliWo (Politecnico for Women), a discussion group and mailing list for teaching and research staff on diversity and gender issues, was launched and now has over a hundred members. The Governance Bodies approved a project with the same name which implemented the WeAreHERe initiative and campaign, with a concept conceived by the Politecnico student community, to raise awareness among girls at secondary school of the appeal of Engineering Degrees. Newly enrolled students for the 2019-20 Degree Courses reached 26% in Engineering and exceeded 30% at university level.
The Politecnico's Gender Observatory was appointed by Rector's decree in 2019 and assigned the task of coordinating the gender-related aspects of university policies and preparing the Gender Equality Plan. The Observatory created the work group that prepared this Gender Equality Report. The Politecnico is involved in various European projects on gender equality. It is also a member of the Gender Group of CRUI, the National Conference of University Equality Bodies, and a supporting member of STEM by Women, an association of local companies that promotes participation by women in STEM careers.

The Gender Equality Report Process

2

The first references to a Gender Equality Report date back to the last century. In the proceedings of the Fourth United Nations World Conference on Women held in Beijing in 1995, for example, we read that governments "should promote an active and visible policy of mainstreaming a gender perspective into all policies and programmes, so that, before decisions are taken, an analysis is made of the effects on women and men, respectively". A few years later, in the Report to the European Parliament filed on 16 June 2003 A5-0214/2003 FINAL "Report on gender budgeting - The construction of public budgets from a gender perspective", Fiorella Ghilardotti, of the Committee on Women's Rights and Equal Opportunities, pointed out that "gender budgeting - understood as the application of the principle of gender mainstreaming in the budgetary procedure - (. ...) places emphasis on the analysis of the impact of public policies on women and men, incorporates the gender perspective at all levels of the process of building public budgets and aims at restructuring revenues and expenditures in order to promote gender equality".
The Directive of the Minister for Reform and Innovation in Public Administration and of the Minister for Rights and Equal Opportunities dated 23 May 2007 indicates that the Public Administration must:

• prepare all personnel statistics broken down by gender, with reference to all the variables considered, including remuneration and length of service;

• promote budget analyses that highlight "how many and which items are addressed to women, men, or both", in order to allocate resources to services according to the different needs of men and women. It is hoped that the Gender Equality Report will become a consolidated practice in the social reporting of Public Administration.

Legislative Decree no. 150 of 27 October 2009 states that, "in order to ensure the quality, comprehensibility and reliability of the documents on performance, in accordance with the provisions of article 15, paragraph 2, letter d), public administrations, prepare the following annual reports: (omissis) b) a document, to be adopted by 30 June, called: "Report on performance", which shows the previous year's organisational and individual results achieved in relation to the individual targets and resources, highlighting any deviations, and the Gender Equality Report prepared".
The Directive of the Minister for Public Administration and the Minister for Equal Opportunities dated 4 March 2011 also presents "Guidelines for the operations of the CUG".
The proactive tasks assigned to the Equality Committees include "gender analysis and planning that take into account the needs of women and men (e.g. Gender Equality Report)".
Over the last decade, several Italian universities have started to prepare a Gender Equality Report. Starting from these first experiences and from international references, the National Conference of Equality Bodies of Italian Universities has published the first national guidelines for the preparation of a gender budgeting process in universities.
The qualifying point of the process, of which this document constitutes the initial moment of gender auditing, is to move towards a gender budgeting logic, with the subsequent planning and allocation of resources for the achievement of diversity enhancement aims, promoting organisational well-being, overcoming gender asymmetries and combating discrimination. The process progresses through the management phase and ends with the reporting and subsequent Report, in order to highlight the impacts of the decisions made choices made, according to gender-based approach (among others).

In 2017, the Conference of Rectors of Italian Universities (CRUI) recommended that universities adopt the Gender Equality Report to monitor their progress in terms of Gender Equality, and, in 2018, the MIUR reiterated the recommendation, presenting "Indications for Positive Actions in Universities and Research" to optimise the impact of Equal Opportunities initiatives.

In 2018, the CRUI set up a Gender Work Group, implementing the guidelines with a view to providing a national reference point for comparisons between Italian and international universities, and formulating a number of recommendations implemented by the CRUI, including the recommendation for individual universities to adopt the Gender Equality Reporting guidelines prepared.

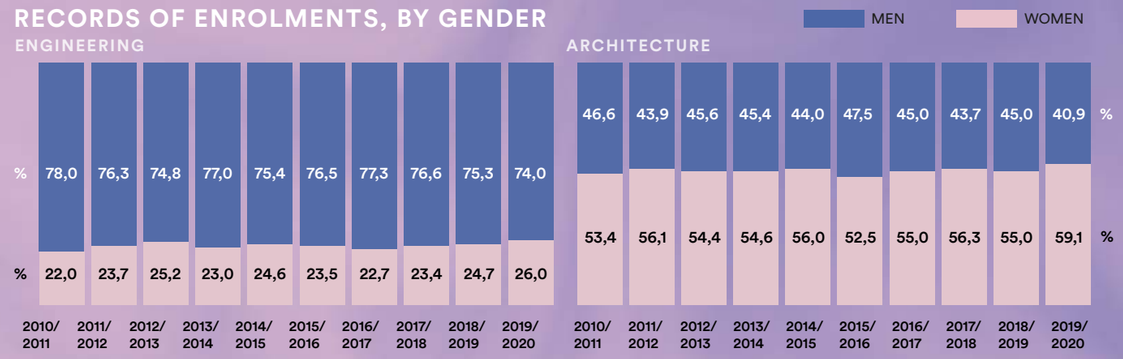
This Gender Equality Report has been drawn up in compliance with the above-mentioned guidelines, thanks also to the CRUI work group that drafted them, and supplemented, where necessary, with more analyses that are more specifically related to our University.

Analysis of the student Community

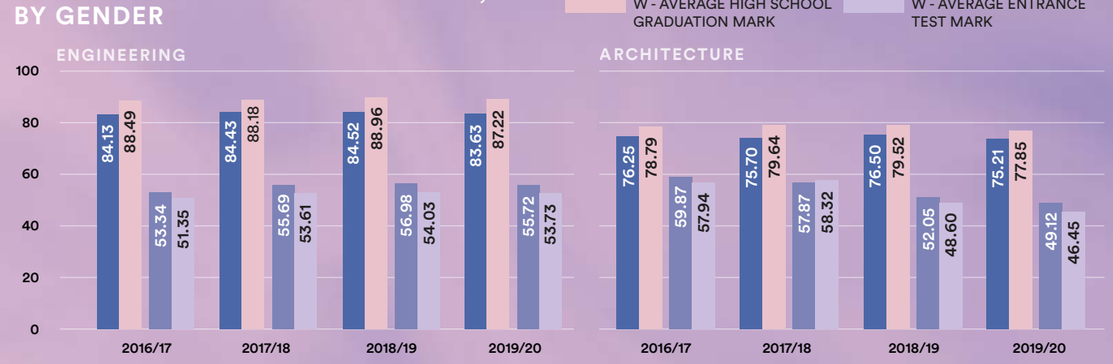
3

Bachelor's Degree

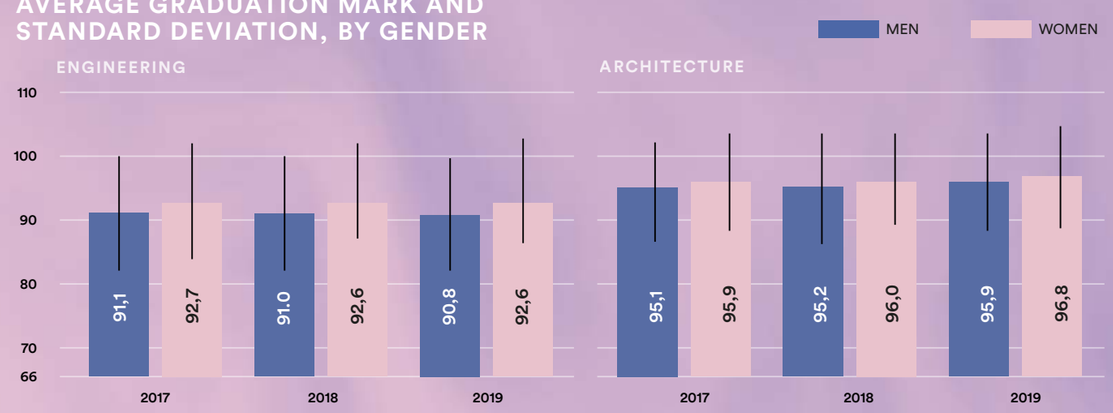
RECORDS OF ENROLMENTS, BY GENDER



AVERAGE HIGH SCHOOL GRADUATION MARK AND ENTRANCE TEST MARK, BY GENDER

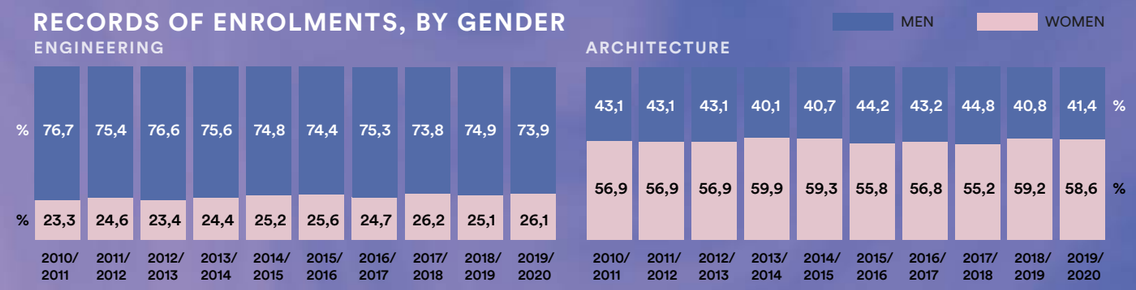


AVERAGE GRADUATION MARK AND STANDARD DEVIATION, BY GENDER

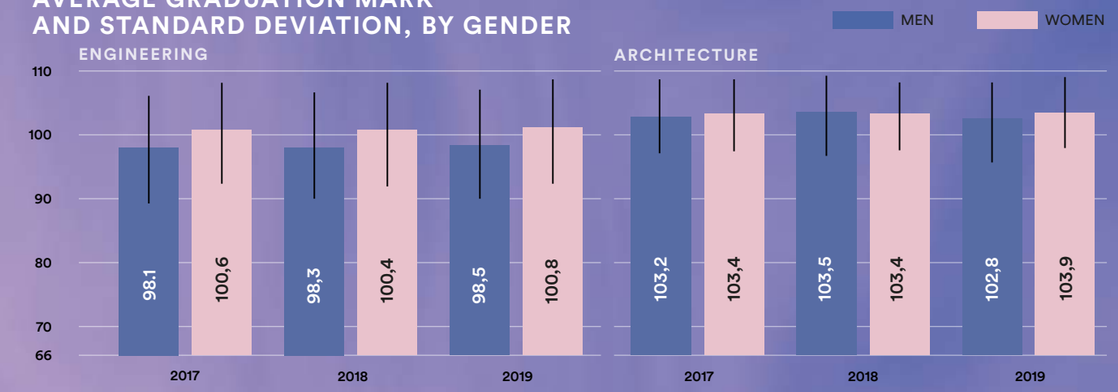


Master's Degree

RECORDS OF ENROLMENTS, BY GENDER

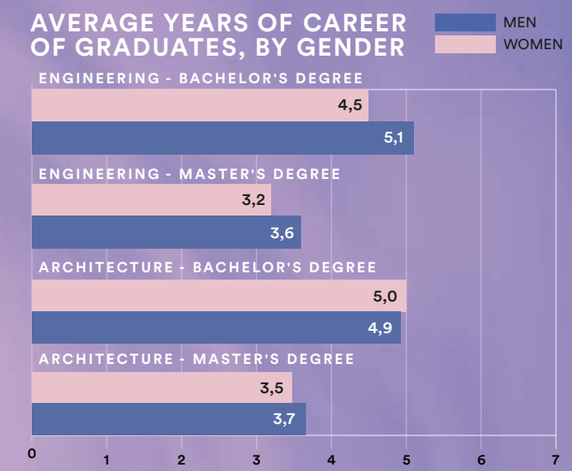


AVERAGE GRADUATION MARK AND STANDARD DEVIATION, BY GENDER

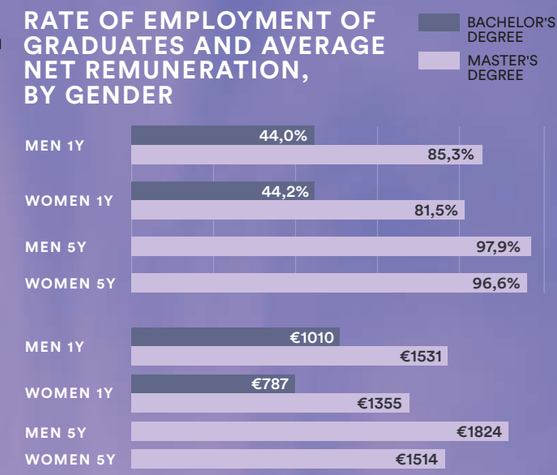


Bachelor's/Master's Degree

AVERAGE YEARS OF CAREER OF GRADUATES, BY GENDER

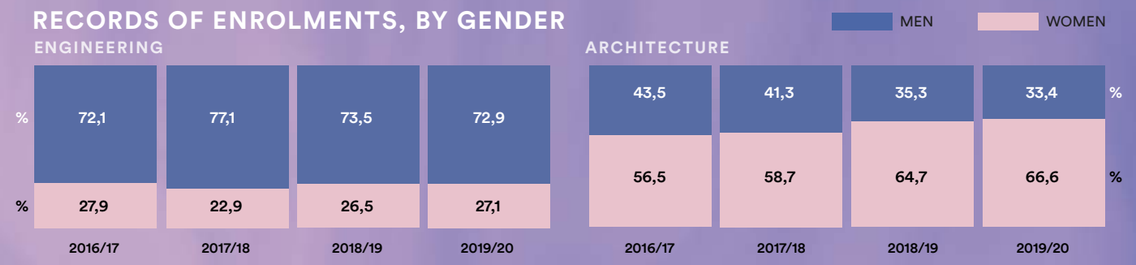


RATE OF EMPLOYMENT OF GRADUATES AND AVERAGE NET REMUNERATION, BY GENDER



PhD

RECORDS OF ENROLMENTS, BY GENDER



The analysis of the student community of Politecnico di Torino is divided into different areas of investigation - breakdown, mobility, performance in studies, employment rate and remuneration of graduates - which provide a complete picture of the entire educational path. The results of the analysis highlight clear and significant gender differences.

First of all, Politecnico di Torino reveals a limited female presence, accounting for 28.95% of the total student community in the 2019-2020 academic year. The results offer a rather heterogeneous image between Engineering and Architecture and even more so between the various specialisations within the departments, highlighting the phenomenon of horizontal segregation, which in this specific case determines the concentration of women in specific areas of study.

The limited presence of women is quite constant over time. However, there seems to be a slight but constant increase in enrolments by women for the bachelor's degree courses, with an acceleration in the last two years, and a record number of enrolments in Engineering (26% for academic year 2019/2020), indicating the effects of the WeAreHERe project communication campaign dedicated to supporting the enrolment of girls in the Engineering Courses offered by Politecnico di Torino.

Figures show that women attain better university career results than men. On average, female students graduate with higher marks than men and take less time to obtain both bachelor's and master's degrees. However, the drop-out rate is higher for women than for men in the bachelor's degree (while it is the same in the master's degree), reflecting the greater difficulties women face in a new environment in which they represent a minority. It is also interesting to note that, on average, female students attain lower grades than men in the entry tests, despite the fact that the average high school graduation grade is higher.

Employment data relating to graduates from Politecnico di Torino reveal significant gender differences and highlight both vertical and horizontal segregation phenomena. The employment rate of women one and five years after graduation is 3.8 and 1.3 percentage points lower than that of men, respectively. Women also have a lower average net salary than men and the difference is increasing over time (delta of Euro 300 a month). The proportion of women in permanent employment positions is lower than that of men and, as a result, is higher for non-standard work positions without a contract and self-employment. These gender differences are accentuated over time (five years after graduation, 73.1% of men have a permanent job compared to 59.2% of women). Women are also segregated in specific sectors, mainly in the service sector.

Our records for enrolments in the Master's and Lifelong Learning School by gender for academic years 2016/2017 to 2019/2020 show a strong and constant gender imbalance, with a slight increase over time. The disaggregate data for Engineering and Architecture reveal a substantial difference between the two areas: the presence of women is very limited in courses related to Engineering (range 20.2%-25.6%), while the opposite is true in Architecture (range 56.9%-88.6%).

The records relating to the percentage of students enrolled in the PhD courses offered by the Politecnico di Torino for the academic years 2016/2017 to 2019/2020 reveal a stable female quota which is constantly lower than that of men (range 32.8% - 33.2%), with an increase of just 0.4 percent in the last four years. Engineering and Architecture present very different pictures: the presence of women in Engineering (from 27.9% to 27.1%) is limited and has dropped slightly over time, while in Architecture it is growing constantly and is higher than that of men (from 56.5% to 66.7%).

ANNA'S STORY

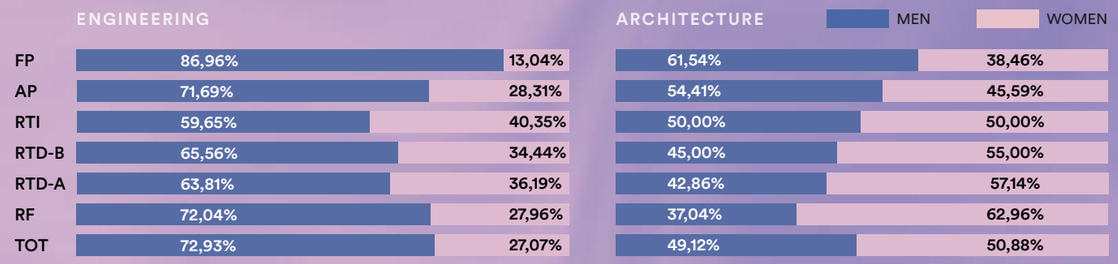
My name is Anna Tranquillini and I'm in my final year of Computer Engineering. I'm originally from Udine, where I grew up and attended the scientific high school.

My dream has always been to study and find myself an interesting and rewarding career. This has meant that every time I've had to make a choice, I've had to ask myself which subjects I enjoyed most and then continue in that direction.
The first important choice was undoubtedly which university to go to, and like many boys and girls like me it wasn't an easy decision. The only think I was certain of when I graduated from high school was that I loved maths. This conviction and passion for a technical and problem-solving approach made me realise that Engineering was the right direction to take.
But Engineering is such a broad term... Which specific kind of Engineering was right for me? I didn't know, so I decided to take a gap year. I travelled a lot, gained new experiences and met people from the most varied backgrounds. The gap year didn't help me make a rational choice, but it gave me the courage to follow my passions and "dive in", knowing that I could change course if necessary.
So, I enrolled in the Mechanical Engineering Degree Course at Politecnico di Torino. Why Politecnico di Torino? First of all because it's a prestigious institution acknowledged throughout Italy, a high-level school, but also because I felt at home in Turin from day one.
With about a year to go before I complete my studies at Politecnico di Torino, I can say that the experience of studying at this university has been amazing, even though it's been extremely challenging. During the first year I realised that Mechanical Engineering wasn't for me and decided to switch to Computer Engineering. Since then I have learned a lot, discovering new areas of computer science every semester and becoming absolutely fascinated by it. I'm not only receiving an academic training; I've also been given the opportunity to continue visiting the world. During my Bachelor's degree I was part of a double degree project in Shanghai and now, as I'm writing this story, I am in my flat in Stockholm where, thanks to an Erasmus project, I'll be spending the next year and a half studying and preparing my dissertation. The Politecnico has also given me the chance to be part of the WeAreHere project, mentoring girls who are interested in a degree in Engineering. Last but not least, at the Politecnico I have been able to join student groups and make new friends with the same passions and interests as me.
What does it mean to be a girl at the Politecnico? For me, it has meant being aware that I am part of a minority, giving me a chance to grasp the positives and negatives: sometimes it means feeling special and out of the ordinary, more often it makes you constantly question yourself to the point of feeling out of place (but rarely). When that's happened to me, it's been more because of me than others. I've never felt that I've being judged differently by my fellow students or professors because I am a woman; on the contrary, I think that the greatest limits and fears have come from within me, and from my natural inclination to expect a lot from myself.
Now I'm in my final year. I've had an excellent academic career and despite this I still wonder if I'm good enough and if I really deserve the results I've achieved.
But there comes a time when we have to stop listening our doubts and start giving ourselves credit, telling ourselves that we are strong, competent and smart, and letting those around us know it too.
This is why I advise all girls who are interested in this path not only to ignore the opinions of others, but also never to doubt themselves.
Seek your own path by pursuing your passions without ever comparing yourself to others.

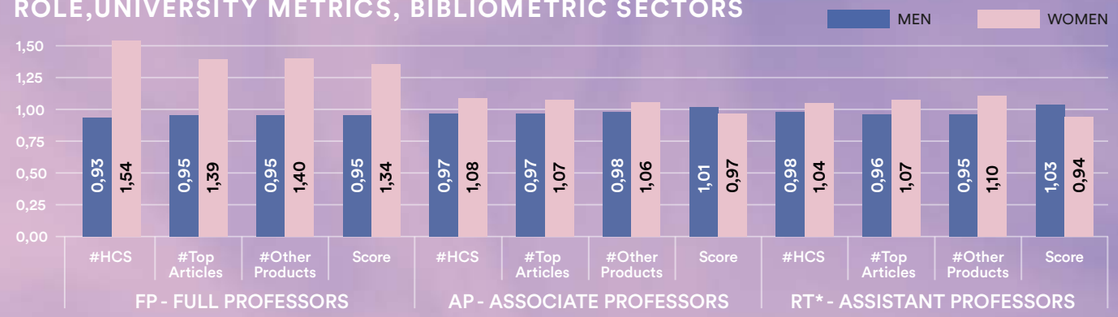
Teaching and research staff analysis

4

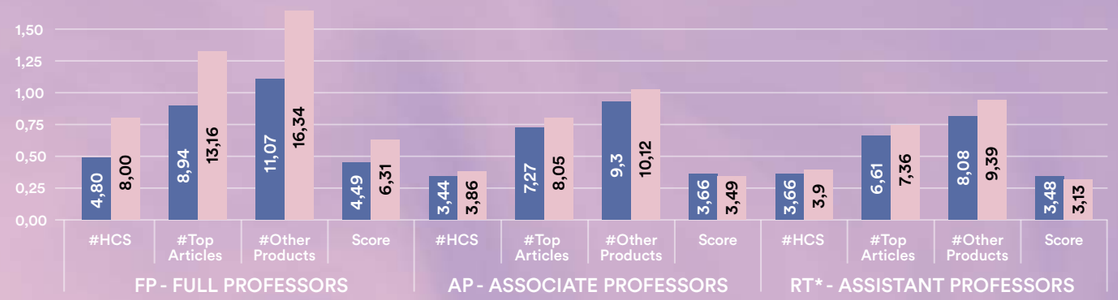
BREAKDOWN BY GENDER AND ROLE AT 31.12.2019



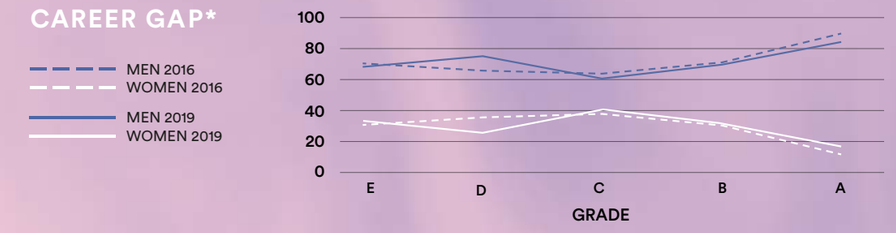
NORMALISED VALUE OF SCIENTIFIC PRODUCTIVITY BY GENDER AND ROLE,UNIVERSITY METRICS, BIBLIOMETRIC SECTORS



AVERAGE VALUE OF SCIENTIFIC PRODUCTIVITY BY GENDER AND ROLE, UNIVERSITY METRICS, BIBLIOMETRIC SECTORS



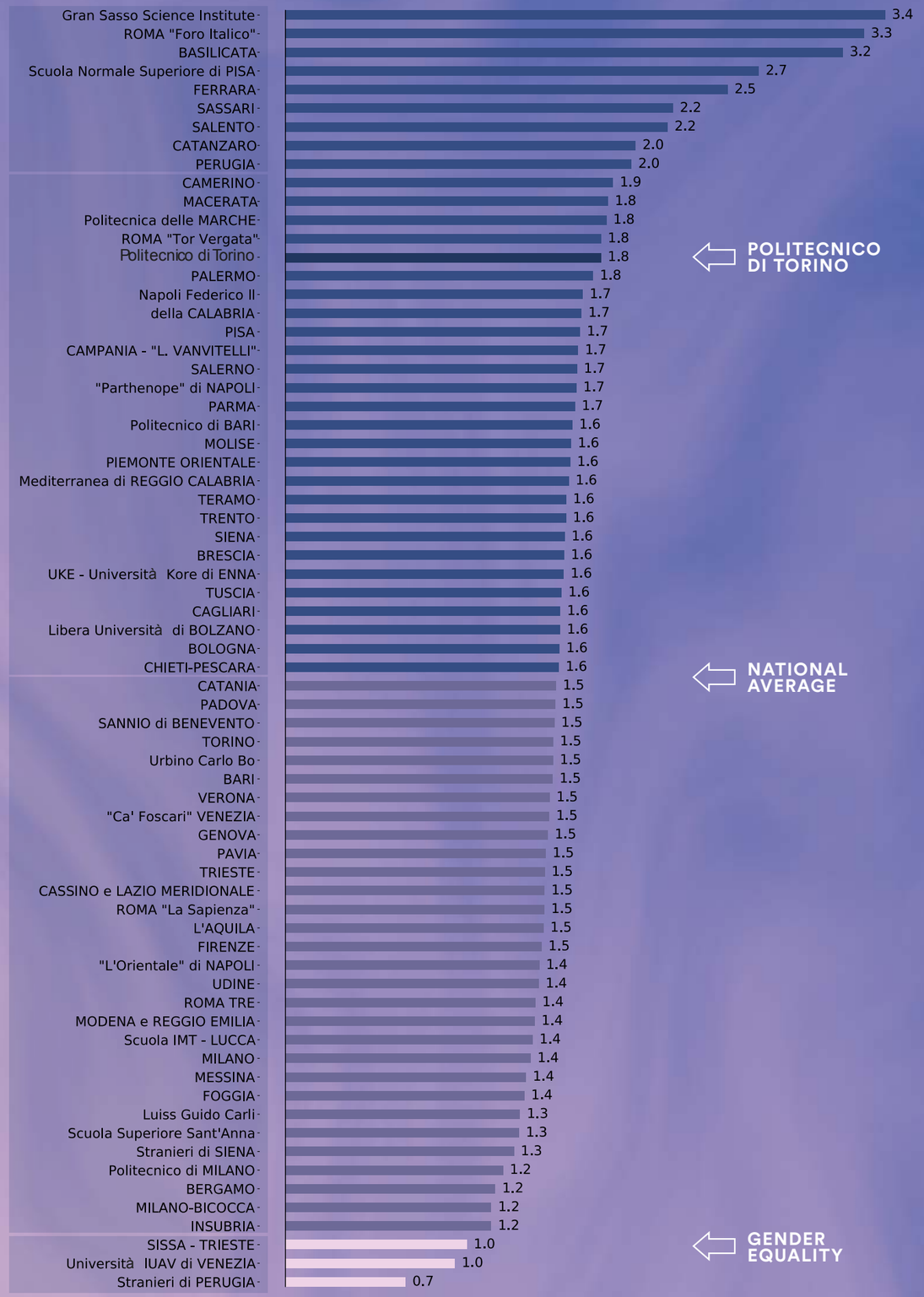
CAREER GAP*



*Percentage of women and men in a given role (Grade A, B, C, D)/level of training (Grade E) out of the total population in the role/level of training.

Data analysed at 21.12.2016 and 31.12.2019

GLASS CEILING INDEX OF ITALIAN UNIVERSITIES IN 2019



This analysis provides gender-based details on breakdown, career, research and teaching of teaching and research staff (including research fellows).

The evidence on gender breakdown reveals a limited presence of women in all academic career roles at Politecnico di Torino (30.12% of teaching staff and 31.43% of research fellows). There is, however, a certain heterogeneity between the different roles: women are less represented in the top academic positions, corresponding to full and associate professors's role respectively, highlighting the phenomenon of vertical segregation (39.68% RTD-A Assistant Professors, 3.18% RTD-B Assistant Professors, 43.21% RTI Assistant Professors, 31.25% Associate Professors, 16.7% Full Professors). There are more women in the Architecture department than in Engineering. Vertical segregation is present in both departments. Records on gender breakdown from 2012 to 2019 show a slight but constant increase in the presence of women in all career roles (from 29.9% to 30.6% in 8 years) and the trend is confirmed for both Engineering and Architecture.

The National University Council cross-section of Departments in general shows that the Department most represented at Politecnico di Torino (Industrial and Information Engineering) is also the one with the lowest female presence, while the least represented Departments (Natural Sciences, Social Sciences and Humanities) are those with the highest female presence.

A detailed analysis offers interesting insights into the gender gap in university careers at the Politecnico, highlighting the presence of vertical segregation.

The feminisation ratio confirms the limited presence of women and reveals values that diminish in the transition to top roles. Similarly, the analysis of the ratio of the number of full professors to the total number of teaching and research staff shows a significant gender disparity in top positions, both in Engineering and Architecture, although Engineering presents a more marked gender gap.

This evidence is confirmed by the analysis of the range of university and academic careers, which shows a sharp drop in the presence of women in the transition to top positions in academic careers.

The Glass Ceiling Index (GCI), which measures the relative probability of women, compared to the whole, reaching top positions in academic careers, also shows that women are under-represented in top roles at Politecnico di Torino, both in Engineering and Architecture, and reveals that Politecnico di Torino belongs to the quartile of Italian universities with the highest GCI, with a higher index value than the other Italian polytechnics (GCI POLITO 1.8; POLIBA 1.6; IT 1.56; POLIMI 1.2; GENDER EQUALITY 1). Although the GCI records show a positive trend (decreasing GCI) for Politecnico di Torino, vertical segregation is still present in all age groups, with the exception of under-34s, for which, however, the significantly low numbers of level C teachers do not allow statistically significant conclusions to be drawn.

The analysis of transitions in role by gender shows more significant differences in the most relevant transitions in role for academic career progression, i.e. the transition from RTDB to PA and from PA to PO. The disaggregate data for Engineering and Architecture confirms the same dynamics for both departments, although the picture is more critical for Engineering.

The presence of wide gender gaps in academic careers is also highlighted in relation to the composition of recruitment commissions at all levels, with a peak in the case of recruitment commissions to fill the full professors role.

The gender-related ability of the teaching staff to attract funds and research contracts offers interesting food for thought. While men attracted more funds and contracts in 2019 - with the exception of Commercial Activities - in 2018, women showed a greater capacity of attraction than men in terms of Institutional Research-Ministerial Projects, Institutional Research-European Projects and Other Non-Research Projects. However, it should be noted that there are differences, some of which substantial, from one year to the next in terms of the number of projects and amount of funding obtained, and this makes it difficult in some cases to detect regularity in the evidence reported. The results of the analysis of the scientific productivity of the teaching staff by gender and role through standardised quality indexes of research outputs highlight a superior quality of scientific productivity for women in all roles, with a particularly marked gender difference in the case of full professors. This evidence is confirmed for both Engineering and Architecture.

PATRIZIA'S STORY

My name is Patrizia Lombardi, although my mother would have preferred to call me Silvia; it was my aunt Lella, who later became famous for scoring points in Formula 1, who convinced her. Now there aren't many Patrizias, but, deep down inside, I always thank my aunt, because I think that a bit of my character is due, in part, to my name. I was born in a little village in the province of Alessandria, with a community of about 2000 citizens. I went to the scientific high school in the provincial capital, reluctantly. "You're going to ruin the career of an artist" said my eighth-grade art teacher to my mother, horrified by my decision not to go to an artistic high school. My enrolment at university was another vague decision. At the time I was enraptured by Philosophy, but my mother dissuaded me from tackling that challenge. When I enrolled in the Architecture course in Turin, I had no idea that I would be lucky enough to fall in love with the territory, its towns and cities and the local communities. I was particularly attracted to Project Appraisal and Planning Evaluation, its potential and vibrancy: the formulation of estimates, the knowledge of tools capable of helping us attribute "value" to tangible and intangible resources, to marketable commodities and those that have no market, public and environmental heritage and assets, such as clean air, beauty, common heritage. And so began my adventures in study and research - which are still in progress - into the field of sustainable development.

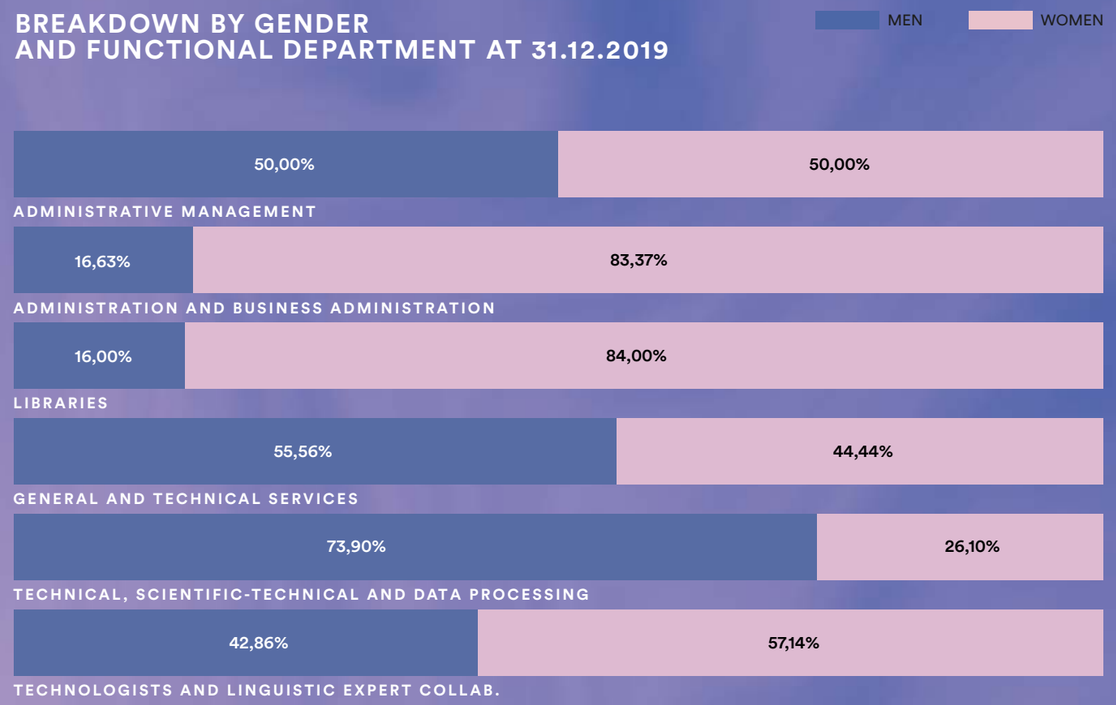
I realised then, in my post-graduate precariousness, that my dream was to become a university professor. But how on earth do you become a professional "academic"?

I started offering my collaboration free of charge, working as a "lover of the subject" in the field of Project Appraisal and Planning Evaluation. I used to teach at Alexandria prison to support myself. Then, one day, an opportunity arose to enter the Politecnico di Torino as a "post-graduate lab technician" in the Casa Città Department, where the Project Appraisal and Planning Evaluation sector was located. I didn't hesitate to enrol, despite the fact that this wasn't actually my "dream job". It was hard work and extremely demanding because there were no boundaries. The job extended to tasks and roles held by others and, worst of all, it gave me no satisfaction whatsoever, and no opportunities to grow in terms of science and training. I knew that I had to leave Turin.
I got the chance in Lisbon, where I met Professor Brandon, then pro-vice chancellor of the University of Salford, in Greater Manchester, UK. He suggested that I enrol in his PhD course. I started studying while working in Italy, and I spent one in every six months in Salford near Manchester to catch up with my studies.
The fruits of this immense effort came even before I'd finished my PhD (which lasted five years instead of three, obviously because I was doing it part-time). I won a position as a university researcher at the IUAV in Venice and moved there for a couple of years. And when I finally got my PhD, obviously discussing a thesis on philosophy (the Cosmonology of Reality to understand complex systems like cities and support decisions within the scope of sustainable development), I was lucky enough to return to Politecnico di Torino, as a researcher.
It wasn't easy to walk through the door as a Professor in Project Appraisal and Planning Evaluation. It took me another ten years to become an Associate and if it hadn't been for the "career acceleration" operation set up by a visionary Rector like the former Minister Profumo, who wanted to internationalise the university, I would never have become a Full Professor in my field. I was the first woman in Italy, ten years ago, and I like to associate the tenacity and passion that have characterised my actions and my career with those of my aunt Lella in the sports world. This is why that I love to associate my achievements with her immense and extraordinary success. In 2012, I was elected Director of the new Interactive Department of Territorial Science, Design and Policies; in 2018 I became Pro-Rector in the Council led by Saracco, and almost simultaneously President of the Network of Universities for Sustainable Development - RUS, which I set up in 2015 and which now numbers 78 Italian universities. I came from nothing. I was not the classic "career woman". I was always insecure, with a need to prove my worth. Along the way, I have met both monsters and masters in their field, but the serenity of a home, my two children and a smart and wise man by my side have helped me cope with the difficulties. I am convinced that the great Walter Rolfo is right: success at work is commensurate with the level of happiness one has in life. I'm sure that the app he'll be presenting at this year's challenge for Politecnico di Torino's Enterprising Talents project will be a huge success.

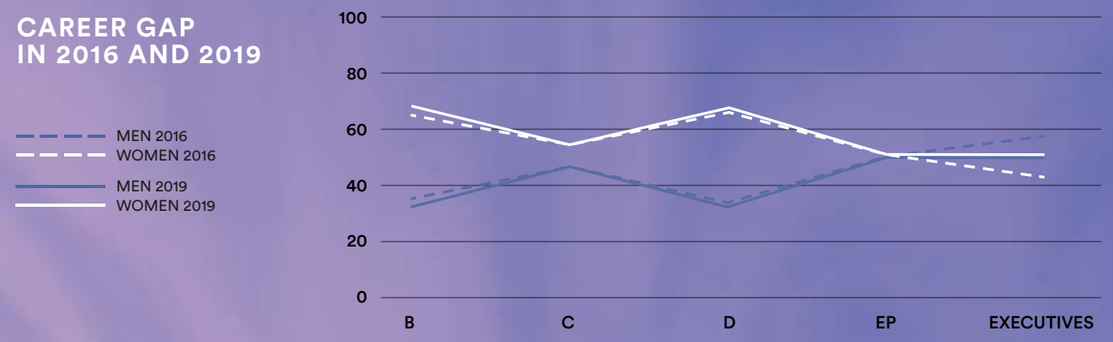
5

Technical-administrative and library staff analysis

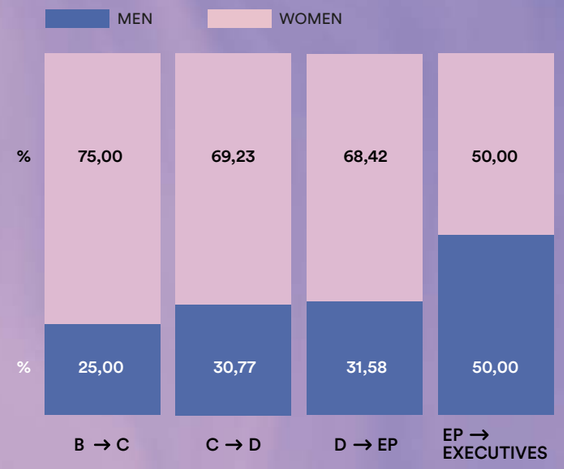
BREAKDOWN BY GENDER AND FUNCTIONAL DEPARTMENT AT 31.12.2019



CAREER GAP IN 2016 AND 2019



CHARACTERISATION OF FLOWS RELATING TO CHANGES OF ROLE FROM 2009 TO 2019



GLASS CEILING INDEX, TOP MANAGEMENT POSITIONS AND LEVEL I MANAGERS

	2017	2018	2019
GCI (EXECUTIVES)	1,40	1,21	1,23
GCI (LEVEL I: EXECUTIVES AND AREA MANAGERS)	1,12	1,04	0,99

The analysis of the characteristics and professional paths of the Technical-Administrative and Library Staff (PTAB) at Politecnico di Torino from a gender perspective investigates the breakdown, employment situation, absences, turnover and remuneration in order to provide evidence on the presence of horizontal and vertical segregation, gender differences in employment conditions, work-life balance and possible imbalances in the employment situation and career development.

The evidence shows a prevalence of women (61.2%) among Technical-Administrative and Library Staff (PTAB) at Politecnico di Torino. However, the breakdown by functional area shows a male prevalence in STEM professional area, highlighting horizontal segregation which, in this specific case, is influenced upstream by the choices of study paths and by gender stereotypes that tend to classify specific areas of study and professions as male or female.

The career gap shows a predominance of women in categories B, C and D while gender equality is achieved at higher levels, EP and executives. The reduction in the number of women in the transition from Category D to the subsequent categories requires a more detailed analysis to verify the causes.
More women than men are graduated, while men reveal lower educational levels.
While revealing a prevalence of permanent contracts for both genders, analysis of the breakdown by gender and type of contract shows a higher incidence of fixed-term contracts for women than for men. This may be due to varying phenomena - the prevalence of incoming women, more favourable conditions for women for early retirement supported by national policies - but vertical segregation cannot be ruled out.

The number of women in part-time employment is higher than that of men, and this could be attributable to the demand for part-time work by female staff following maternity or, more generally, to the greater weight of care-giving responsibilities for women.

Evidence relating to the distribution by gender and seniority shows that the proportion of women tends to decrease as seniority increases. Moreover, while in categories lower down the pay scale (B and C) women tend to have more seniority than men, in categories D, EP and executives, the seniority of women is lower than that of men. This phenomenon can be partly traced back to more favourable conditions for women for early retirement, but vertical segregation cannot be ruled out.

The average age by gender and category of PTAB staff shows that, while in the CEL and B categories (both categories which are being phased out) the average age of women is higher than that of men, in categories D, EP and Executives, the average age for women is lower, with the widest gender gap in the top position.

The analysis of the average days of absence and causes from a gender-based perspective reveals a gender gap in terms of maternity and parental leave to deal with a child's illness or leave to care for people with severe disabilities, revealing a greater burden of care-giving responsibilities on women.

The analysis of the gender distribution of position and responsibility allowances shows substantial gender equality in terms of position allowances, in line with the gender breakdown of EP and executive categories, while there is a gender imbalance when it comes to responsibility allowances, with a higher proportion of women than men for this type of allowance, in line with the data on gender breakdown in categories B, C and D.

The analysis of career advancement by gender shows that the male incidence increases in career advancement from categories lower down the pay scale (B to C) to higher categories (EP to executive). This highlights a possible phenomenon of vertical segregation. And it is confirmed by the GCI calculated, considering the top position as being that of Executive. However, the data relating to the GCI calculated, considering the top positions as being those of Executive and Area Manager, reveal an index close to the unit, highlighting a substantial gender equality. Further investigation will be needed to identify the causes of these gender dynamics in PTAB career progression.

LAURA'S STORY

My name is Laura and, despite living in a place full of light and next to a deep blue sea, ever since I was little my greatest wish was to travel and get to know different realities.

After graduating from university with a degree in Law and obtaining a scholarship, I left Sicily to study for a master's degree in communication and journalism at Luiss in Rome. I was absolutely terrified, but the desire for new experiences was stronger than the fear. During my first job interviews I saw how being a woman can be considered a disadvantage in certain environments. The questions "Are you engaged? Married? Are you thinking about having children?" not only made me feel as though I was being discriminated against but risked discouraging me too.
Thirty years later in Turin, a candidate told me that she had been asked the same questions. Despite being addressed to another woman, I felt that same feeling of embarrassment. In my case, determination always prevailed and, at the age of 24, I had my first work experience in Rome, in a really male dominated environment. During a rather tense meeting, where everyone apart from me was a man, one of the participants blurts out: "I don't feel like I'm free to express myself the way I want to in front of a woman, send her out". I was absolutely horrified but I managed to laugh it off. The tension eased off and I stayed. My career continued in Brussels, where I moved for an internship at the European Commission which turned into a four-year stay. Those years left me with the ability to adapt and taught me how to approach problem solving and innovation. At a certain point, I had to choose between my job and my family, and I didn't hesitate for a moment: I chose my family and came back to Italy to start my adventure in Turin, at the Politecnico. Initially, I felt more foreign here than I had when I was living abroad. Then I gradually began to fit in and felt like I was part of a community. Then I lost someone very dear to me, but the sense of belonging, along with the warmth of my colleagues, helped me not to give up and gave me a reason to carry on. In the years that followed, with a family and a little girl to raise, the fact that I was able to count on strong motivation was crucial. I see everything else as instrumental: building a network of relationships with other mums, juggling a whole series of missions, dance school shows and school meetings, carving out spaces for myself in the evening to read the endless e-mails. The flexibility of my working environment helped me organise things and gave me the peace of mind I needed. I find that, luckily, there has been a marked increase in sensitivity towards these aspects of life. Fewer and fewer meetings are scheduled for 6 p.m., and more and more initiatives are put in place to support us. Twelve years ago, I had the chance to benefit from the first experiments in working from home. Now smart working is a consolidated practice extended to everyone. There is still some bias and there are still some limitations, mostly of a cultural nature, that prevent women from contributing fully to organisations, but those, like me, who hold executive roles and enjoy the privilege of managing other people, work every day not only to reduce them but also to raise awareness of the importance of not wasting resources and talent, and not neglecting the legacy represented by women.

6 Actions in support of Equal Opportunities

With the progressive increase in awareness of gender inequality in universities, present, both here and at national and international level, exacerbated in the case of STEM disciplines by continuing horizontal segregation, the Politecnico has increased investments to overcome the problem. It has worked on strengthening support for the appropriate structures, particularly the Equality Committee (CUG) and the Councillor of Trust and paying more attention to the organisation of governance on these matters, innovating with respect to outdated models.
In accordance with art. 43 of the Equal Opportunities Code, the Politecnico has also promoted positive actions to achieve substantial gender equality.
This section is dedicated to presenting the main actions undertaken in the last three years to achieve the goal of equality.
In 2017, the SA approved a proposal to amend the Charter to align the gender balance of the Board of Directors with the law, which, at that time, required a minimum of 30% of members to be of the minority gender. The proposal envisaged the appointment of at least two members per gender from among the five elected by the staff. The amendment to the Charter was approved by referendum in 2019.
Also in 2017, the Rules governing selection of full and associate professors and the University Regulations for the recruitment of temporary researchers were amended, envisaging gender representation within the selection committees.
In 2018, the figure of the Vice Rector for Quality, Welfare and Equal Opportunities, responsible for coordinating quality policies with those of well-being and inclusion, was established, along with the Rector's Advisor for Gender Equality and Diversity, with the specific aim of assisting the Vice Rector on these issues. Some gender equality goals have also been included in the strategic plan "Polito 4 impact" for the six-year period from 2018 to 2024. One goal in particular concerns the increase in the number of female Engineering students (increasing the percentage of women enrolled in the first year of Engineering to over 35% on average within the next six years, achieving full gender equality in some of the degree courses offered). Another goal concerns the reduction of the gap observed in the careers of female teachers compared to their male colleagues (reducing the gender gap in the success rates of recruitment proceedings at various levels of teaching by 50%).
In the autumn of the same year, the work of several members of the teaching staff culminated in the launch of the discussion group and mailing list PoliWo (Politecnico for Women), which brings together teaching staff and researchers interested in gender equality and diversity on a two-monthly basis. The PoliWo proposals led to the initiative approved by the Governance Bodies dedicated to the increase in enrolments by women in Engineering, which in turn generated the WeAreHERe campaign. The action led to a record number of enrolments for the academic year 2019-2020, with a relative increase of over 5% compared to the previous year.
In November 2018, on the Day for the Elimination of Violence against Women, a first training video was made with the collaboration of the Councillor of Trust, Arianna Enrichens, entitled "What is sexual harassment", which was shown in the classroom and received over 3000 views on the university's YouTube channel. The initiative was repeated the following year with the production of a video on the subject of "Verbal violence online and on social media".
In 2019 the Gender Observatory was established by Rector's Decree. The Observatory is responsible for coordinating and supervising the gender-related aspects of the University's policies and particularly for monitoring the Gender Equality Report process. The International Workshop "Implementing gender Equality Plans" was organised at the Politecnico, in partnership with the Cesaer network. The Torino Declaration on Equality was approved and subsequently signed at the Cesaer General Assembly by the Rectors of the over 50 European technological and scientific universities belonging to the network. In the spring of that year, in collaboration with Turin University and the association of local companies "Donna professione STEM", the "STEM by Women" day was held at the Unione Industriale di Torino, where over four hundred STEM students from Turin's master's degree programmes met about twenty role models from local companies. The event is repeated every two years.
Also in 2019, in implementation of initiatives against unconscious bias in recruitment processes and in accordance with the principles of the European Researchers' Charter, the Personnel Department began sending all recruitment committees based at the University an invitation to view the video on "Recruitment bias in research Institutions" which is used by many evaluation panels in Europe.
In autumn 2019, "She hacks 2020", a day to meet new girls in engineering, was held to present the mentoring activity dedicated to them by scholarship students studying for master's degrees in engineering. The mentoring activity continued throughout 2020 and will be repeated in the years to come. The day was an opportunity to collect freshmen's impressions of the WeAreHERe initiative, trying out an innovative survey method called CAROL (unConventionAl suRvey methOdoLogy), to help with the collection and analysis of the ideas of minorities within educational settings using voice message text-mining techniques.
In spring 2020, due to the Covid-19 emergency, the initiatives planned to promote Engineering Degrees among secondary school students were replaced by a single interactive online event led by YouTuber and writer Sofia Viscardi, which was seen by over 30,000 users on different social media channels.
Also during the recent health emergency, in order to implement the CRUI's request to disseminate the emergency number against gender violence, 1522, the pictures of the government's campaign to promote the number 1522 were published on the University's website and the Councillor of Trust, in collaboration with the University bodies, held a series of informative lessons on the topic of gender violence, with particular reference to the current emergency situation.
The training, which took place online, was organised for small groups of participants in order to ensure more active participation, and was repeated for six sessions, given the high level of participation, by all staff.

Conclusive Notes

7

The Politecnico di Torino 2020 Gender Equality Report offers a detailed analysis of the breakdown, characteristics and careers of the student community, the teaching and research staff (including research fellows) and the technical-administrative and library staff. The analysis highlights the presence of gender differences at all levels: a limited female presence in the student community and among teaching and research staff; female prevalence for PTAB; the presence of vertical segregation, albeit with different weights; the presence of horizontal segregation; female performance sometimes similar to and often better than that of men; greater weight for women in terms of care-giving. The detection of these phenomena contributes to the identification of persistent critical issues, possible areas of intervention and actions to be promoted in order to achieve gender equality at Politecnico di Torino. In recent years, the University has promoted several positive initiatives with a view to achieving gender equality, with the help of all the pertinent bodies. Looking at the trends of the main indicators analysed in this Gender Equality Report, the positive effects found can probably also be attributed to these actions. However, progress towards gender equality has been rather slow up to now, and more focused positive actions are needed to strengthen the trend. This Gender Equality Report highlights several specific critical issues on which it is possible to intervene as a University. For example, a gender-neutral recalibration of the Entry Test (TIL) should allow access to Engineering Degree Courses in line with the gender distribution of high school graduation marks, with the consequent entry of a more female students. Similarly, a more targeted regulation of the formation of recruitment commissions should allow a gender-neutral composition, which literature suggests should favour more gender balanced access to top-level careers. It is also possible to work on internal regulations in order to adequately recognise the quality of the scientific productivity or of the national and international institutional research funds received during recruitment, with regard to both of which females staff members have better performance rates. The detailed analysis of the most appropriate points of intervention will be the subject of the forthcoming Gender Equality Plan, which will be based on the evidence in this Gender Equality Report and will propose strategies and solutions to support gender equality, also taking into account the best practices already developed on these issues at national and international level.

Please see the complete document for a more detailed description of the legislative and University context, and for data supplementation, in-depth analysis, the glossary and bibliography.

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