



GENDER POLICY 2016-2020

Towards Gender Equality in the Faculty of Science

change perspective

Radboud University



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FOREWORD

The scientific evidence showing that diverse teams achieve better is strongly increasing. We are convinced that the same applies to the teams within our Faculty and that the diversity of our students and staff contributes to the quality of our academic community. Over the past decade the cultural diversity of our staff has increased significantly, and nowadays almost half of our scientific staff comes from outside the Netherlands. And to increase the diversity of our student population special initiatives are taking place. Regrettably the gender balance in our Faculty staff still lags behind. It is for this reason that we asked a committee to advise on strategies to improve the gender equality.

Herewith we would like to present the report from the committee on gender equality. As Faculty we fully support the recommendations made by the committee and we have made the financial adjustments to implement the different proposals. To ensure that the Faculty will stay focused on this highly important matter, we have installed a permanent Gender and Diversity Committee, chaired by Professor Annalisa Fasolino.

Furthermore, we would like to motivate our staff and students to actively participate in the activities and initiatives organized by the committee in order to stimulate gender equality in our Faculty.

On behalf of the Faculty Board

Professor Stan Gielen
Dean Faculty of Science

INTRODUCTION

This is the report of the Working Group Gender Policy, which was installed by the Board of the Faculty of Science of Radboud University in November 2014. The task of the working group was to propose actions to recruit and retain more women in the scientific staff of the Faculty.

The working group consisted of:

- Lejla Batina, Digital Security
- Herma Cuppen, Theoretical Chemistry
- Mirjam van Hout, Personnel Department
- Mike Jetten, Microbiology
- Sarian Kosten, Aquatic Ecology and Environmental Biology
- Renate Loll, Theoretical High Energy Physics
- Anouk Rijs, Molecular and Biophysics
- Cerien Streefland (secretary), Donders Centre for Neuroscience
- Frits Vaandrager (chair), Model Based System Development

Advice was given by Pleun van Arensbergen and Inge Bleijenbergh (Effective Gender Equality in Research and the Academia), Laura Berger (Gendering the Academia and Research: combating Career Instability and Asymmetries), and Nicole van Dam (Molecular Interaction Ecology).

The working group presented its report to the Faculty Board in May 2015. The Faculty Board and the Directors of the Research Institutes underline the recommendations of the working group and accepted the report as the Faculty's gender policy for the period 2016-2020.

Summary of recommendations

1. The Faculty Board commits in a clear and visible way to gender equality; as do institute directors, heads of departments etc. Gender equality is part of the strategic plan of the faculty and its institutes;
2. Finance and support an extension of the Mohrmann Fellowship program to attract talented women at the assistant and associate professor level;
3. Offer 50K for flexible use for each female tenure tracker and (assistant/associate) professor to safeguard her position and productivity during pregnancy leave;
4. Compose and publish an annual gender report (use the Institutional Report Card for Gender Equality);
5. Introduce structured “exit interviews” to keep track of the reasons why scientists (women and men) decide to leave our faculty;
6. Set targets for the percentage of female researchers for assistant, associate and full professor, and for newly appointed tenure trackers;
7. Install a gender committee and appoint a diversity coordinator;
8. Create opportunities to accommodate female guest professors or professors at special appointment;
9. Adopt rules towards an active recruitment of women scientists (at all levels);
10. Encourage participation of female staff members in the mentoring program of the university and facilitate intervision lunches for female PhD students within the faculty;
11. Develop explicit, clear and written policies for tenure and promotion, and proportionally adapt criteria in case of part-time employment and leave;
12. Ensure that a diversity training is part of the “academic leadership” and “professors” courses and encourage men to take the training as well.

1. THE FACTS

The percentage of women in the scientific staff of the Faculty is quite low, especially at the level of permanent positions. The following table presents the data for the last five years. The FTE numbers in the table are taken from the most recent annual report of the Faculty.

	2010	2011	2012	2013	2014
Professor	12%	10%	9%	9%	8%
Associate professor	3%	3%	7%	7%	10%
Assistant professor	10%	12%	15%	18%	18%
Researcher	35%	34%	36%	34%	29%
Instructor	20%	18%	34%	23%	28%
PhD student	40%	36%	36%	35%	34%
Totaal	28%	27%	29%	29%	27%

As one can see, the percentage of woman among the scientific staff is more or less stable around 28%. Mainly due to an increase of the number of assistant professors, the percentage of women among the tenured staff (assistant professor and up) has increased from 9% in 2010 to 13% in 2014. However, the distribution of women across the Faculty is uneven and there are research groups and even entire subject areas, like mathematics, which do not have a single female tenured staff member. All numbers are worrying, but especially worrying is that the percentage of professors has actually decreased from 12% in 2010 to a mere 8% in 2014.

According to the *She Figures 2012 report*, the percentage of female professors in 2010 in the Netherlands was 13%, compared to 20% for the whole EU. Within the Natural Sciences the percentage of female professors in 2010 in the Netherlands was 8.5%, compared to 13.7% for the whole EU. According to the Dutch Network of Female Professors (LNVH), the percentage of female professors within the Natural Sciences in the Netherlands was almost 10% in 2012-2013. Within the Netherlands, Radboud University is leading with 21.8% female professors in 2011/2012. We conclude that our Faculty has a poor performance at the local, national and European level with regard to the number of female professors.

Within the Faculty, tenured women still form a small minority of more or less isolated individuals in an organization that is strongly male-dominated, and are not visible as a group. Female scientists in roles of leadership are far from having a critical mass anywhere in the Faculty.

2. DO WE HAVE A PROBLEM?

Science faculties like to see themselves as a meritocracy in which promotions are based entirely on the performance of the employee. However, there is a growing body of *evidence* that documents the role of gender bias in driving women out of science careers. For instance:

- *A classic 1999 study* showed that in some of the science departments of MIT there were differences in salary, resources, awards, and allocated space between men and women with similar accomplishments. (A *follow-up study* in 2011 showed distinct progress.)
- *A 2009 study* of recommendation letters showed that women were described as more communal and less agentic than men, and that communal characteristics have a negative relationship with hiring decisions in academia that are based on letters of recommendation.
- *A 2011 study* surveys evidence that the very fact of being a mother is perceived as a disqualification (“motherhood penalty”), whereas fatherhood enhances the perception of positive interpersonal qualities (“fatherhood bonus”).
- *A 2012 randomized, double-blind study* found that both male and female faculty rated male applicants as significantly more competent and hireable than women with identical application materials.
- *A 2014 study* found that both men and women were twice as likely to hire a man for a job that required math than a woman, although they performed equally well in an arithmetic test.
- *A 2014 study* exposed gender bias in student ratings of teaching through an experiment in which assistant instructors in an online class each operated under two different gender identities.
- *A 2015 study* supports the hypothesis that, across the academic spectrum, women are underrepresented in fields whose practitioners believe that raw, innate talent is the main requirement for success, because women are stereotyped as not possessing such talents.

There is no reason to believe that these biases (or *forces*, as astrophysicist Neil deGrasse Tyson calls them) are not at work within our Faculty. Like everybody else we are susceptible to gender stereotypes, and this provides at least part of the explanation of the low percentage of tenured women. This has been confirmed by the results of the gender awareness training in three research institutes (DI, ICIS and IMAPP).

But diversity is not just about being fair. A recent *review article* in the Communications of the ACM surveys evidence that teams and organizations whose members are heterogeneous in meaningful ways have a higher potential for innovation than teams whose members are homogeneous. For instance, the number of women in a group has been

linked to effectiveness in solving difficult problems. Since 2007, McKinsey's *Women Matter* research has explored the performance benefits that companies gain from (gender) diversity.

Women represent half the talent pool, and in order to realize the ambitions of our Faculty we need to attract more female talents. Both for the health of our organization and in order to remain competitive and further improve the quality of our research, it is vital to improve the gender balance and diversity of our Faculty.

At this moment, given their severe underrepresentation among the permanent staff of our Faculty, it is a genuine concern that female researchers may experience isolation and a lack of appreciation. Indications for this have been given by participants in the gender awareness training. Moreover, the status quo at the permanent position level and the shortage of female role models are hardly encouraging for female students and postdocs who still have to embark on a career as independent scientists. There is little to counteract their frequently held view that the working conditions for researchers are unattractive and a university career is neither desirable nor attainable.

Despite the fact that we cannot control stereotypes about women prevailing in the world outside the university, we are still responsible for the perspective we present to our own students and budding scientists, and for creating an optimal working environment for all researchers, including women. If we do not take action, we will continue to lose talented women at all levels.

3. RECOMMENDATIONS

Numerous employers have experimented with approaches in promoting diversity and there is an extensive literature on “best practices”. Whereas there has been a great deal of research on the sources of inequality, there has been less work on the efficacy of different programs for counteracting them. As working group we decided to follow, as much as possible, an “evidence based approach” in which we propose actions that have been:

- previously applied at (other) universities/departments that have been very successful in getting more women to the top, such as the *University of Tromsø* and the *Chemistry Department from the University of York*, and/or
- listed as “best practice” by for instance the *American Physical Society*, the *Initiative on Women in Science and Engineering (IWISE) Working Group*, the *Royal Society of Chemistry*, and other Dutch universities, and/or
- recommended based on research, such as in the work of *Kalev et al*, *Williams, Balafoutis & Sutter*, and *McKinsey*.

3.1 Know the Facts

The first step towards gender equality is to have a robust, fact based understanding of the situation, see e.g. *Rice (2011)*, *McKinsey (2012)*, *Nelson (2014)* and *Williams (2014)*. The working group was surprised to find that the Annual Report of the Faculty does not even list what proportion of the scientific staff (assistant, associate, full professor) is female, although this can be calculated from the FTE numbers that are listed. There is a lot of basic information about gender equality that currently is not available for our Faculty. *IWISE (2015)* proposes a set of quantifiable criteria which (see table reproduced below), when taken and analyzed together, will form an Institutional Report Card for Gender Equality, which can be used to evaluate progress on an annual basis.

Table 1. Proposed Phase 1 Institutional Report Card for Gender Equality

The proposed Report Card would ask the NYSCF applicant's department chair to answer the following questions:

- What proportion of your department's undergraduates is female?
- What proportion of your department's postgraduate students is female?
- What proportion of your department's faculty (assistant, associate, full professor) is female?
- In the last five years, what proportion of your department's tenured faculty members that were recruited from outside your institution was female?
- In the last five years, what proportion of your department's first time tenure track faculty members that were recruited from outside your institution was female?
- What is your institutional policy regarding paid family leave and pausing the tenure clock? Is there additional support available on top of the recruitment account to fund this?
- What is your institutional policy regarding female representation on internal committees? What is the current percentage of female representation on appointments, promotions, finance, award, and strategy committees?
- In the past 12 months, what proportion of the speakers on your department's external seminar program was female?

We recommend that the Faculty composes (and publishes!) a similar Institutional Report Card on an annual basis. According to *Paul Walton* from York's chemistry department, the 'drop-off' rate of women in higher academic posts and the *pay gap* (e.g. the percentage difference between mean salaries for male and female professorial staff) were two useful indices of fairness (or lack of it). We recommend to include these in the Institutional Report Card as well.

In collecting data the Faculty should try to go beyond classic 'body counts', but also explore systematically why women didn't get hired, why they didn't get promoted, or why they left sooner than we wanted. A first effort to examine application procedures of postdocs and assistant professors (of IMAPP in particular) is made within the European Union founded GARCIA project. *Williams (2014)* suggests some metrics to capture these aspects. As a first step, we recommend that the Faculty introduces structured 'exit interviews' to keep track of the reasons why women decide to leave, and whether gender or climate issues played a role. Male scientists leaving should be interviewed as well, if only as control group (maybe they have similar reasons to leave).

3.2 Get Leadership on Board

Many studies emphasize that it is crucial that leadership at the highest level embraces the importance of gender diversity, see e.g. *Rice (2011)*, *APS* and *McKinsey (2012)*. Leaders should make their commitment more visible, recognize that it is a problem of the entire community, both male and females, make a compelling “business case” for gender diversity, and lead by example. Gender diversity occurs prominently in the Strategic Plan of the University, which is good, but it should also be addressed in the new Strategic Plan of the Faculty of Science, and in the annual plans of the different research institutes. Gender diversity objectives should regularly be on the agenda of meetings, and leaders should annually report the progress made. The gender awareness training that is part of the EU 7th framework project EGERA is directed at involving academic leaders in the Faculty (department heads, faculty board members, HR officers, female staff) in analyzing and understanding dynamic processes regarding gender and diversity in their institution.

“Addressing biases about women in science is a marathon, not a sprint” according to *Paul Walton*. Gender diversity is about changing the culture of an organization. This is difficult and it may take at least 10 years to reach certain objectives. A combination is required of larger initiatives to generate momentum and visibility such as a fellowship program for women, and small, organization specific bias interrupters such as adjusting the vocabulary of job advertisements. “Throw some spaghetti at the wall and see what sticks. Experiment, measure success, and keep trying.” says *Joan Williams*.

3.3 Set Concrete Goals

Several authors stress the importance of articulating explicit goals, see e.g. *Rice (2011)*, *McKinsey (2012)*, and *Williams (2014)*. The Strategic Plan of Radboud University states the objective that in 2020 for all positions at least 25% is man and at least 25% is woman. Given that currently only 8% of the professor FTE's in our Faculty is female, it is very challenging to reach this target. Based on the idea that it should be possible that 25% of the newly appointed professors is female, the Faculty Board has therefore stated as objective that in 2020 at least 15% of the professors is female. Similarly, the Faculty Board should also set targets for other job categories, for instance that in 2020 also 20% of the associate professors, 30% of the assistant professors, and at least 35% of the newly appointed tenure trackers is female.

3.4 Appoint a Diversity Coordinator and Committee

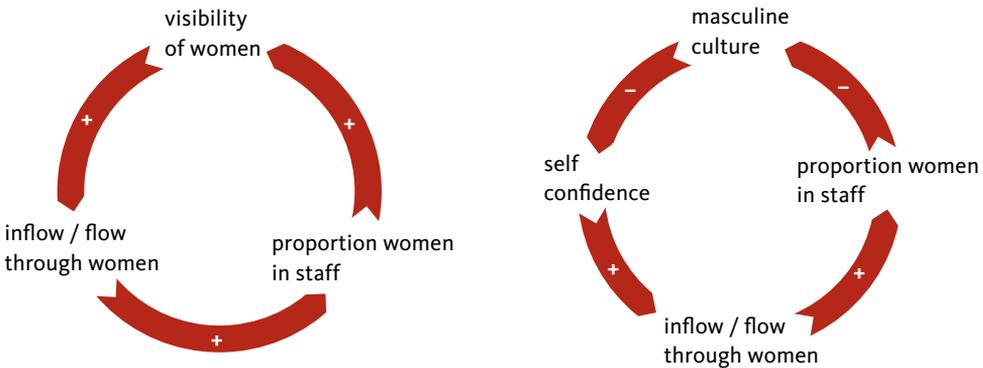
Following expert advice, see e.g. *Kalev et al (2006)*, we recommend to appoint a diversity committee, chaired by a diversity coordinator. The coordinator should be a scientist assisted by supporting staff. The committee should be given a clear role in the decision making and allocation of money to ensure that it is not viewed as just another commit-

tee. The committee, which should comprise people from different research institutes and job categories, should be charged with:

- overseeing diversity initiatives within the Faculty and its partner organizations,
- coordination of initiatives within the Faculty and liaising with the central board initiatives
- communication about these initiatives to the staff,
- communication about grant/career options such as Aspasia combined with encouragement and support to submit proposals,
- brainstorming to identify remedies, and
- monitoring progress.

3.5 Affirmative action: Mohrmann Fellowships

Looking at the employment percentages of women in recent years, it is clear that the status quo is highly unlikely to change just by itself, because of the self-reinforcing processes present. The mechanisms at work here are illustrated by the following causal loop diagrams, which were constructed by participants of gender awareness trainings organized by the EGERA project at Radboud University:



One way to kick-start a dynamical process where female scientists become more numerous, more visible, and with a larger role in shaping the Faculty culture is to hire additional female staff into higher positions and to adopt special measures to achieve this aim, in line with the declared policy of the Faculty Board and the University.

The question is then what measures should be implemented and how, in order to have a significant impact in the relatively short term, say, over the next 5-10 years, and what resources will realistically be required. The most obvious measure to adopt is the creation of a fellowship program targeted specifically at recruiting women, primarily

since it has already documented to be an effective course of action elsewhere for increasing the number of female researchers. Our Faculty is not in a unique position regarding the underrepresentation of women, and several other Dutch universities already have instituted tenure-track programs targeting females (Groningen, UvA, Delft). There is also scientific evidence that this type of affirmative action can be very effective, see e.g. *Rice (2011)*, *Balafoutas & Sutter (2012)*, and *Villeva (2012)*.

It is fortunate that we can profit from the experience already made elsewhere to optimize the setting up of such a program; we need not (and should not) try to reinvent the wheel. One of us (CS) was closely involved with the Rosalind Franklin Fellowship Program in Groningen, and has acquired valuable expertise. Inge Bleijenbergh has advised Delft on their Technology Fellowship, based on research she performed there with two colleagues. Obviously, we will always find ourselves in competition with other institutions, both nationally and internationally, for the best female researchers. Taking up this challenge and offering attractive working conditions for women scientists must not only be the aim of our Faculty, but has to be part and parcel of the RU's ambition to increase its visibility as a top international research university. Needless to say, the more additional support we can get from the University Board for such a recruitment program, the more impact and visibility we can create.

Implementation: There are a number of important points that must be considered, and some pitfalls that must be avoided in order for a fellowship program to be implemented successfully. (They are taken into account by existing programs in one way or other.)

- a. Most importantly, for the program to be seen as a gain by the existing faculty and for the fellows to be integrated into the existing organization, it is absolutely necessary that their selection is seen as competitive at a high level and that the proven scientific excellence of a candidate is the overriding selection criterion. Any assessment criteria must be commensurate with what is required from "regular" staff at the same level (assistant, associate, full professor). The communication should emphasize that this program supports improving quality and has high quality standards.
- b. To have a credible competition that results in a shortlist of candidates whose scientific credentials are outstanding, the pool of applicants must be as big as possible. Since there are typically many fewer females than males in any given subject area, it follows that the fellowship must be advertised broadly (i.e. over all fields represented at the Faculty) and if possible with some flexibility with respect to the seniority of the applicant. For example, if the typical appointment is for tenure track at the assistant professor level, a candidate with significantly higher qualification could be considered either for a shortened tenure track or for a position at associate professor or professorial level.

- c. It is important that the fellows are not left to themselves after their appointment, but that everything is done to integrate them into the local scientific infrastructure. The group or department where they will be placed should be closely involved from before the fellow starts her work there. This can be achieved by having an internal selection and nomination process for candidates in individual departments (Delft) or by some other, less formal involvement of the relevant local scientists. In addition, mentoring and career advice should be offered on a regular basis.
- d. If such a fellowship scheme is to have any of its desired impact and if it is to generate interest and visibility at an international scale to attract a sufficiently large number of suitable applicants, it must have a critical mass in terms of the number of positions available in any one application round (three positions being the minimum), and it must be sustained over time. To be competitive, it must come with perks regarding flexible and supportive employment conditions (including, for example, a lighter teaching load), and extra resources to help fellows set up their own research group (for example, start-up funds or a PhD position).

The Board of Radboud University is planning a Mohrmann fellowship program for full professors. We recommend that the Faculty finances and supports an extension of this program to attract excellent women at the assistant and associate professor level. The costs of a program that offers positions for excellent women can be found below. The idea would be not only to attract female talent but to incorporate them in the staff as well by offering tenure after a 6 year period, after passing their final tenure evaluation.

Example costs and income

Assuming: 1) a structural income of 500K per year allocated by the faculty; b) offering 2 positions every other year;

- Yearly income 500K
- Salary costs candidate 80K per year
- PhD for each candidate costs 40K per year
- Tenure track period 6 years (might be shorter depending on the CV of the candidate)

When the program starts in 2016 with 2 candidates, the costs will increase from 260K in year one to 480K in year 4. From 2020 on running the program every other year with 2 candidates is not possible anymore with a structural 500K allocation from the faculty.

	2016	2017	2018	2019	2020	2021	2022
income	500	500	500	500	500	500	500
Salary candidate	160	160	320	320	480	480	480
PhD	80	80	160	160	160	160	160
tot	240	240	480	480	640	640	640
result	260	260	20	20	-140	-140	-140

Some data and references on existing fellowship programs in the Netherlands:

Rosalind Franklin Fellowship, Groningen U.: five rounds since 2003, 40 fellows across all subjects, 15 of which in the Faculty of Mathematics and Natural Sciences, tenure track positions starting at the assistant professor level, for up to 6 years, with final evaluation for tenured associate professor position

MacGillavry Fellowship, UvA, Faculty of Natural Sciences, Mathematics and Informatics: two rounds of hiring (2010, 2013) with a total of 9 fellows hired, tenure track positions starting at assistant professor level, for up to 6 years, with final evaluation for tenured associate professor position

Delft Technology Fellowship, TU Delft, across all subjects, two rounds have been completed since 2011, resulting in the appointment of 2 full professors, 2 associate professors, 5 assistant professors; hiring at all levels with an initial 5 year appointment. A third round is currently on the way.

Joliot-Curie Fellowship, Radboud University, Faculty of Science, across physics and chemistry paid from the national Sectorplan Physics and Chemistry. One round has been completed since 2011. These fellowships were broadly advertised and a dedicated selection committee led by Professor Sylvia Speller was established. After the first round of interviews two physics tenure trackers were appointed and no candidate for chemistry was found. After active scouting by the organic chemistry professors also a female tenure tracker in chemistry was appointed. Thus the first round of the Joliot-Curie Fellowships resulted in the appointment of 3 female tenure trackers.

3.6 Guest Professors

We recommend to create opportunities such as those of the Hamburg *CUI programme* to accommodate female guest professors (young star/senior) or professors at special appointment. This may be implemented either directly within the context the *Radboud Excellence Initiative*, or by encouraging staff members to submit proposals to e.g. the *KNAW Visiting Professors Programme*.

3.7 Recruitment

- Actively recruit female candidates for personal professorships and set a target for the percentage of named professors that should be women.
- Actively recruit women (also on shortlist), making sure that each committee member has 25% or more women on her/his shortlist.
- At least 2 women should be part of each selection committee. If, due to rules like this, female staff members spend a disproportionate amount of time on committees they should be compensated, for instance through a reduction of teaching load.
- Committee members need to be aware of the relevant literature on gender equality. Therefore selected documentation should be handed out to all committee members together with the appointment letter, e.g. the *booklet* of Van den Brink.

Below a summary of recommendations on gender-neutral advertisement texts.

1. Explain the job requirements

- Formulate less compelling (not 'you should have')
- Reconsider (formulation) qualifications ('initiating' instead of 'assertiveness')
- Focus on the 4 most essential requirements and do not specify too much

2. Describe the work environment

- Mention atmosphere and culture
- Mention the societal relevance / impact of the job / research
- Emphasize the collaboration and partnerships within and outside the Institute

3. Highlight opportunities to combine work and private life

- Flexible working hours and the possibility to work from home
- Child care possibilities

4. Highlight the commitment to gender policy

- Use facts and figures
- Mention names of leading women in the institute
- Mention presence of a gender committee and coordinator
- Mention specific programs for women

5. Write gender-neutral

(plural often offers a solution)

Rather not: The candidate can register his complaints at (..)

Alternative: Candidates can register complaints (..)

6. Be personal

- Use personal pronouns (you, us)

Rather not: The candidate is part of (..)

Alternative: You are part of (..)

7. Build a relationship with the reader

- Use dialogue forms

Example: Curious about our benefits? See the terms of Radboud University.

8. Write active

Example: We strive (..) We seek (..)

9. Translate Unique Selling Points in User Benefits

The Institute encourages employees to develop constantly

The Institute is known for its unique cordial atmosphere

Radboud University has a number of regulations that makes it possible for employees to create a good work-life balance.

3.8 The Maternity Wall

Women give birth to children and this puts them at a disadvantage relative to men at a crucial phase in their scientific career. “If you have to be absent for a period of time, you cannot compete for resources like lab space, students and being on a research committee” *Paul Walton* explains. Women within our Faculty consistently indicate that it is also quite difficult to “catch up” when they return from pregnancy leave.

Walton’s Chemistry Department of the University of York has adopted a very successful policy in which women, when they go for a pregnancy leave, get a substantial amount of money which they may use to safeguard their productivity and talent. They may use this money, for instance, to reduce their teaching load in the first year after pregnancy leave, to hire a postdoc to continue writing research proposals or doing research during their absence, or to revitalize their scientific network after their pregnancy leave. Other helpful measures include extra help for childcare to enable conference visits, for example, travel support for an accompanying babysitter or relative.

We recommend to put a similar policy in place within our Faculty, and offer 50K to each female tenure tracker and (assistant/associate) professor when she has a pregnancy leave and allow the money to be used in a flexible way. (Currently, each year around 4 women in these function categories have a pregnancy leave within the Faculty.)

This initiative should be complemented by gender neutral support programs and facilities to help reconcile work and family life (e.g. childcare, spouse relocation) (see also *McKinsey*).

3.9 Mentoring

According to *Kalev et al (2006)*, “programs that address social isolation among women and minorities (networking and mentoring programs) are followed by modest changes.” But even though it may not be a miracle drug, we think that it is quite important to have good mentoring programs in place. This is also explicitly recommended by the *American Physical Society* as a “best practice”.

The mentoring programs we envision within Radboud University and the Faculty of Science specifically should target mainly two groups: female PhD students and scientific staff (tenure trackers, assistant, associate, full professors). Female junior postdocs can participate in the first, more senior postdocs will most probably benefit more from the last. In general, the P&O annual evaluation forms should be adjusted to include aspects such as work-life balance, leadership, personal development (courses, training, etc.), visibility (conferences to visit), and career prospects (academic, industrial, policy, etc.). These can be used for all scientific staff.

Mentoring for PhD students

The Royal Chemical Society examined the experiences of students studying for their PhDs in chemistry and the relationship this has to PhD students' intentions to continue with an academic career. Their *report* shows that female students as compared to their male colleagues are more likely to encounter significant supervision issues. They more often find themselves isolated within their research group because of 'masculine' competitive culture within this group. Furthermore, they developed concerns about poor (though normal) scientific success rates and what this may indicate to others about their skills and competence. As a result, female students are less likely to seek help when needed. Because of their negative experience, female students were less likely to pursue an academic career. The research further shows that female students have the impression that the competition for a permanent academic post is too fierce for them to compete successfully and that the sacrifices they need to make cannot be reconciled with other aspects of their life, particularly relationships and family.

Discussions with female students within the Faculty seem to support these findings. We therefore suggest two plans of action:

Intervention lunches for female PhD students within each institute

These informal meetings will increase the network of the female students, allow them to hear about examples of successful female scientists who managed to balance work and family-life, and to exchange experiences.

- At least four times per year with the attendance of female staff members who can act as role models.
- Lunches (paid by the gender committee) can be organized by a few students who come up with specific themes to discuss.
- Once a year also male students should be allowed to attend to create awareness.

PhD student coordinator within each institute

Within each institute there should be at least one visible person for PhD students (both female and male) to go when facing supervision problems.

- Each student should get an invitation for an optional meeting with this person at least once a year.
- This person should not be the confidential counselor, since this term is too charged which will make the person not accessible enough.

Mentoring for Scientific Staff

At the central level, the University offers a mentoring program for female academic and support staff. This gives the possibility for attendees to choose a mentor outside their own faculty, which can be beneficial depending on the specific questions of the mentee.

We therefore do not think it necessary for the Faculty of Science to start their own program. For the central program we have the following recommendations:

- From experience we know that in previous years not every female staff member was aware of this program. Recently communication has improved and candidates are now invited directly by P&O. This is good. Signing up for the course will then proceed via an intake form where candidates have to outline specific goals for the mentoring program. This form will need to be signed either by the head of the group or by the director of the institute.
- It is important that the capacity of the program be sufficiently high so that every woman who wants to participate in the program can do so. If necessary, the program could for instance be offered more frequently when the demand is high (every year instead of every two years).
- Mentors can be men and women, but should be ‘fair minded’ and should be open to considering the mentoring process a way to learn about organizational processes regarding gender and diversity themselves. In that way the mentors can serve as change agents.

3.10 Diversity Training

Within the literature there is no consensus on the effectiveness of diversity training programs. According to *Kalev et al (2006)*, “programs that target managerial stereotyping through education and feedback (diversity training and diversity evaluation) are not followed by increases in diversity”, but the paper also notes that training programs become more effective when embedded in structures that establish responsibility (such as affirmative action plans and diversity committees). *IWISE*, however, recommends that academic institutions should make gender awareness training a standard component of their postdoctoral orientation. *Williams (2014)* also advocates the use of training as a “bias interrupter”.

As working group we think that it is important that all staff members are aware of gender bias mechanisms. We therefore have the following recommendations:

- A diversity training should be part of the “academic leadership” and “professors” courses. A pilot on Group Model Building as a module for academic leadership will start soon. We recommend this to run with a gender theme. We also strongly support the plan to include a cultural diversity module .
- Men should be explicitly invited to some of these trainings.

3.11 Rules for Tenure and Promotion

Following the American Physical Society (*APS*), we recommend to develop explicit, clear and written policies for tenure and promotion, and make them available to all faculty. Tenure criteria should be adapted proportionally in case of part-time employment and

leave periods (including maternity leave and parental leave). Moreover, we recommend to systematically monitor the applied criteria within the selection procedures of newly appointed tenured staff or in promotion procedures; and to make the selection and promotion procedures as transparent as possible. In this respect, the GARCIA project is currently conducting a study on the applied criteria and the selection and promotion procedures of assistant professors within IMAPP.

Below a summary of recommendations on creating gender-neutral criteria.

Recommendations to create gender neutral (assistant/associate) professor criteria

1. Include a 'parenting and care clause'

If a candidate is taking or has taken parental, maternity or care leave, or If a candidate combines a part-time research appointment with care responsibilities, then the minimum number of peer-reviewed published papers and the minimum amount of external grants will be adjusted in proportion.

2. Include 'feminine' criteria

Create balance between typically 'masculine' and 'feminine' criteria:

Mentor, Stimulator, Controller & Coordinator are leadership roles attributed primarily to women; whereas Innovator, Mediator, Producer and Director are leadership roles rather attributed to men.

Criteria that are more beneficial to the organization as a whole should be made more quantifiable and accounted for.

3. Find a balance between knowledge/achievements, skills and attitude.

Do not only mention prior achievements (output, grants) but include skills and attitude as well.

Communication skills, supervision skills, organizational skills, etc.

4. Write gender neutral

Not 'he has..' but 'candidates have....'

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