



FP7-ICT-611140 CARRE

Project co-funded by the European Commission
under the Information and Communication Technologies
(ICT) 7th Framework Programme



D.1.4 Gender Aspects

E. Kaldoudi

October 2016

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Executive Summary

The CARRE consortium and management structure will be free from any type of social or other prejudice and will promote gender equality in all its decision-making processes as part of quality management, and following the 2000 EU Council Resolution. This deliverable presents the activities within the project to promote awareness on gender issues, and liaise with related bodies.

About CARRE

CARRE is a project, funded by the FP7 Programme of the European Commission, which will provide an innovative means for managing comorbidities (multiple co-occurring medical conditions), with an immediate focus on chronic cardiac and renal disease patients or persons with an increased risk of such conditions.

Sources of medical and other knowledge will be semantically linked with outputs from sensors to provide clinical information, personalised to the individual patient that can help to support the tracking of the progression and interactions of comorbid conditions. Visual analytics will be employed so that patients and clinicians will be able to visualise, understand and interact with this linked knowledge and take advantage of personalised empowerment services supported by a dedicated decision-support system.

The ultimate goal is to provide, via an integrative approach, a means by which patients with comorbidities are helped to take an active role in care processes, including self-care and shared decision-making, and medical professionals are supported in understanding and treating comorbidities.

Terms and Definitions

The following are definitions of terms, abbreviations and acronyms used in this document.

Term	Definition
EC	European Commission
EU	European Union
GA	General Assembly
IFMBE	International Federation of Medical and Biological Engineering
SHE Figures	European Commission, She Figures series reports on Gender in Research and Innovation, European Union, Publications Office of the European Union
WiMBE	Committee on Women in Medical and Biological Engineering of the International Federation of Medical and Biological Engineering
WP	Work Package

1. Introduction

There is a known lack of balance in gender representation in Science and Technology in Europe today, which is even more pronounced within the decision making ranks. This is reported in the SHE Figures documents, a series of 5 (up to now) EU reports published every 3 years since 2003.

Major findings of the most recent She Figures 2015 report¹ include the following.

Although slightly more women graduate from university in EU and even more women than men obtain the equivalent of an MSc degree, higher stages of academic career show a women leakage which becomes much more pronounced at the highest academic degree (Full Professor). This cross-like graph of gender (in)balance in academic career is shown in Figure 1. The situation is even more pronounced in the science and engineering fields where the graphing of the percentage of men and women in academia takes the infamous shape of the so called 'leaky pipeline' (Figure 2).

The encouraging fact is that EU is reaching a gender balance in PhD graduates. So, the latest EU SHE Figures document reports about 40-60% women of PhD graduates in all EU countries (2012), while women PhD graduates numbers generally increase at a faster rate than the number of men (2002-2012). Figure 3 and Figure 4 show the percentage of women PhD graduate in various EU countries in the fields of computing and engineering – the main area of CARRE project research. However, despite improvements since 2004, women remain under-represented in most narrow fields of science and engineering.

In terms of research output, between 2011 and 2013 only 31% of research publications had a woman as corresponding author. Finally, although the gender gap in the funding success rate is decreasing in EU-28, the success rate for men principal investigators and coordinators is still higher than that of women in 70% of the EU countries. Figure 5 shows the proportion of women team leaders in funded research projects at the application and grant approval stages.

Finally, on average only 28% of board members (including leaders) are women in 2014, and most institutions in the scientific landscape continue to be dominantly led and managed by men.

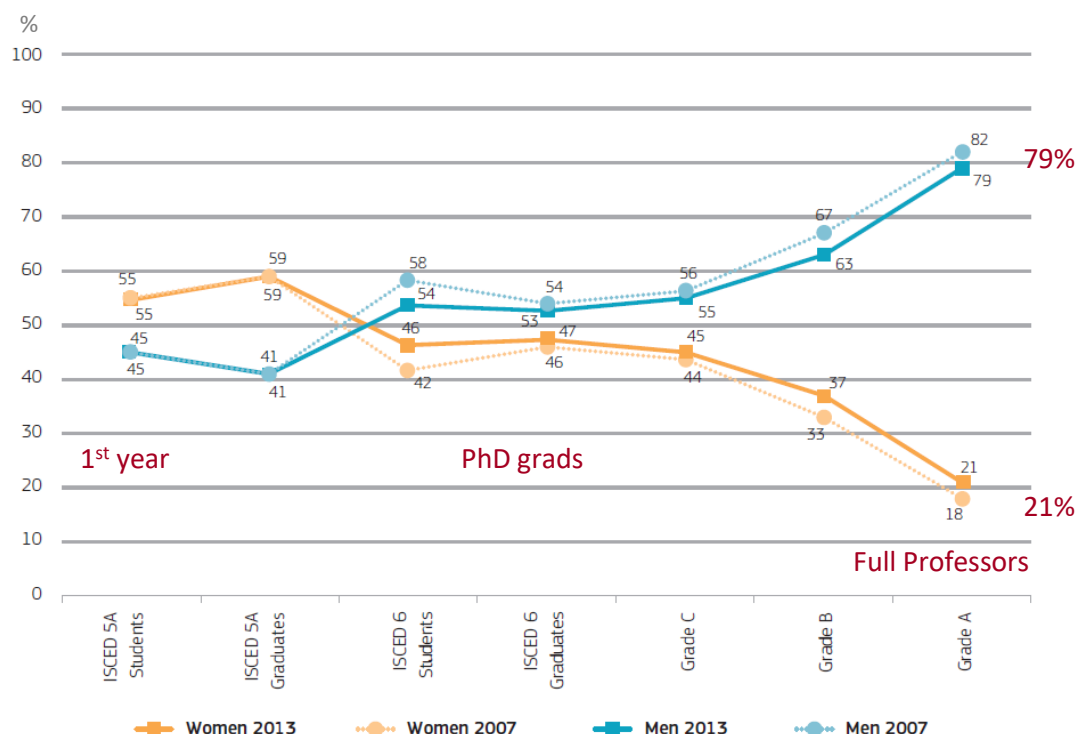


Figure 1. Gender (in)balance in academic career in European Union (EU SHE Figures 2015).

¹ European Commission, She Figures 2015: Gender in Research and Innovation, European Union, Publications Office of the European Union, Luxembourg, 2016 doi:10.2777/744106

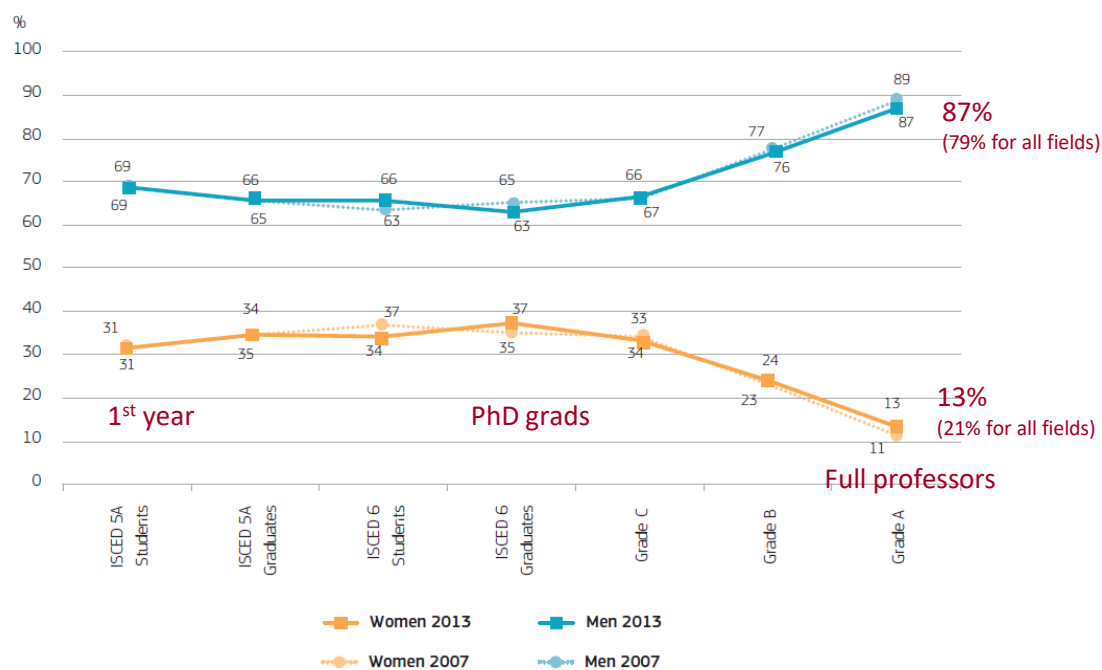


Figure 2. Gender (in)balance in academic career in science and engineering in European Union (EU SHE Figures 2015).

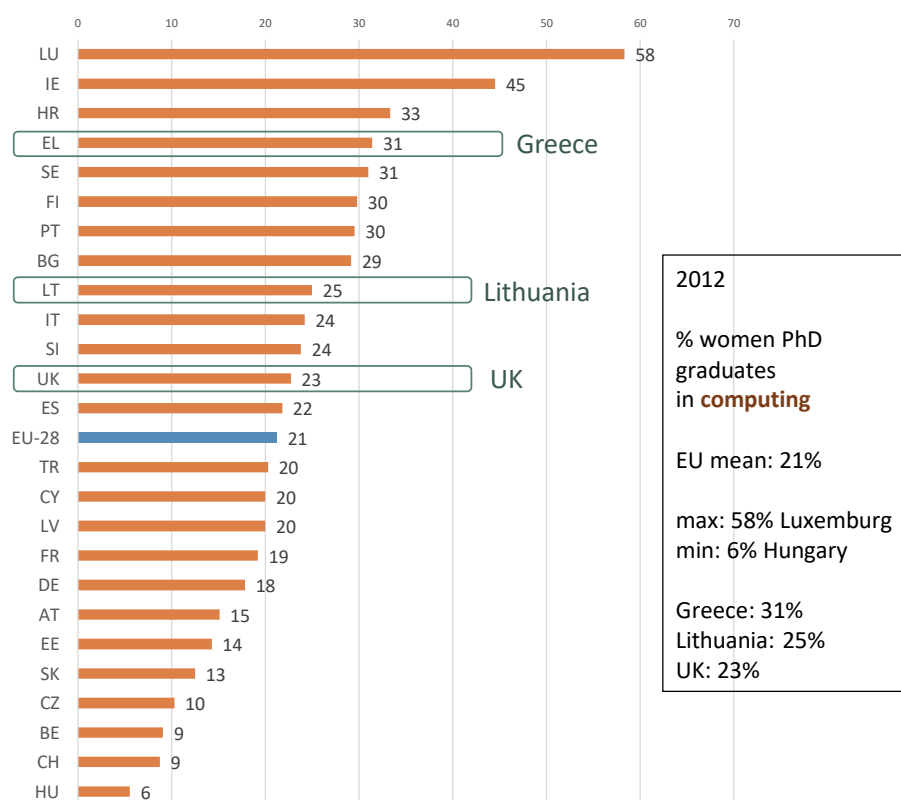


Figure 3. Percentage of women PhD graduates in computing in EU countries (EU SHE Figures 2015)

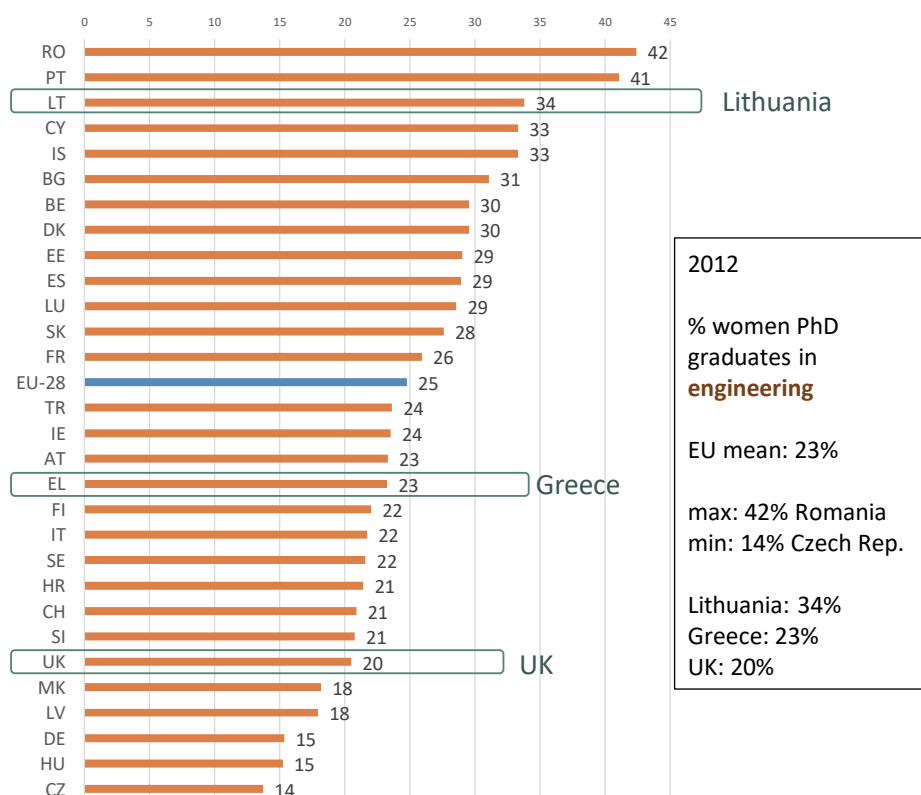


Figure 4. Percentage of women PhD graduates in engineering in EU countries (EU SHE Figures 2015)

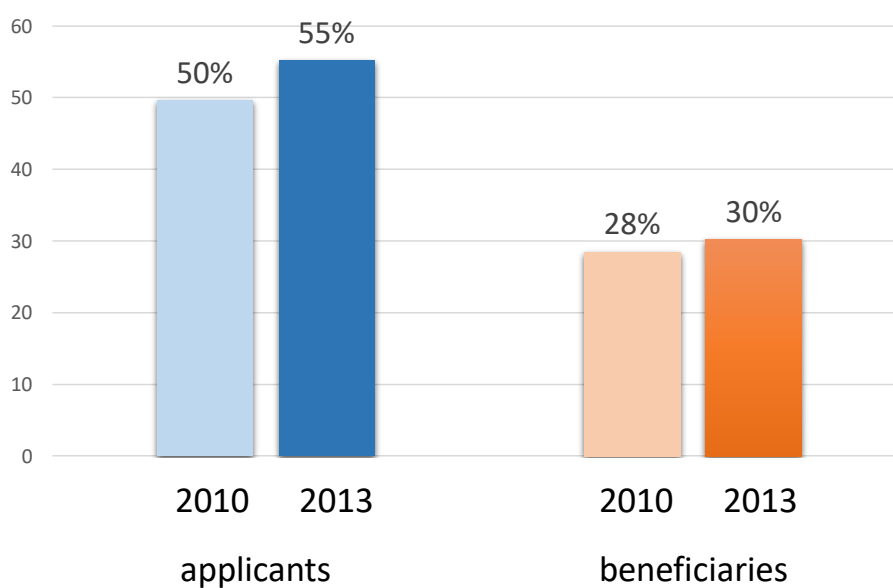


Figure 5. Proportion of women team leaders in EU research funded projects at the stage of application and grant approval, for years 2010 and 2013 (EU SHE Figures 2015).

2. Gender balance within the CARRE team

The CARRE consortium declared to be free from any type of social or other prejudice and to promote gender equality in all its decision-making processes as part of quality management, and following the 2000 EU Council Resolution.

At the negotiation stage, CARRE had a 1/3 female representation in Beneficiaries Team Leaders and General Assembly, the higher decision making body (2 Beneficiary Team Leaders/GA representatives out of 6 are women), while the Coordinator and Project Manager are both women (100% women representation at the highest management and coordination level), ensuring that there is a good gender balance in the highest decision making level. Also, there was a 50% representation of both genders in WP leaders (4 females, 4 males) while there is a 55% representation of women in Task leadership (18 female Task leaders and 15 male Task leaders). Finally, there is a 1/3 female representation in partners' Key Person Teams.

Overall, during the entire project duration gender balance in project decision making bodies and coordination posts, as well as in the project research team is shown in Table 1 and summarized in Figure 6.

Table 1. Gender representation in CARRE project decision making and coordination bodies and research team.

	DUTH		OU		BED		VULSK		KTU		PIAP		Total	
	F	M	F	M	F	M	F	M	F	M	F	M	F	M
Team leaders	1	0	0	1	1	0	0	1		1	0	1	2	4
WP leaders	3	0	0	1	1	0	0	1		1	0	1	4	4
Task leaders	10	2	0	3	6	0	2	4	0	2	0	4	18	15
Team members	6	13	2	5	3	5	18	8	2	9	5	19	36	59
Person Months	47.0	51.8	2.0	49.5	41.0	38.6	36.9	15.0	7.3	77.4	26	48	160	280

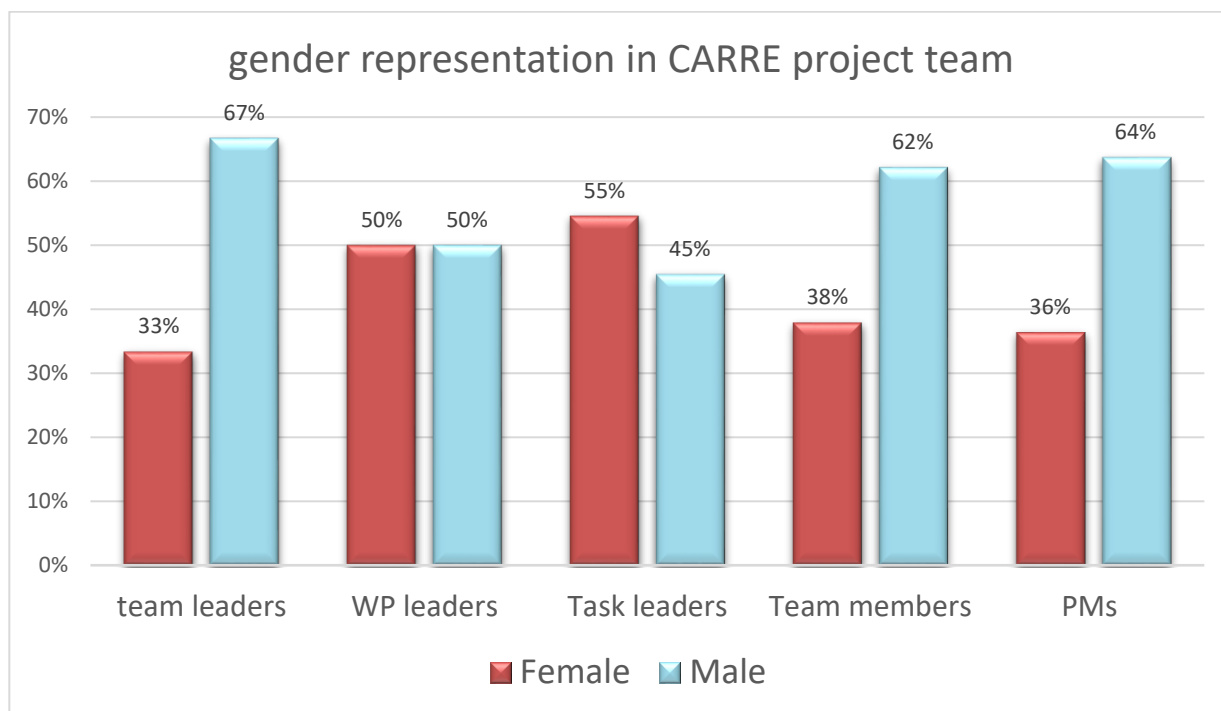


Figure 6. Gender representation in CARRE project decision making bodies and research team.

3. Gender (in)balance awareness activities

The project initiated clustering with the Committee on Women in Medical and Biological Engineering (WiMBE), of the International Federation of Medical and Biological Engineering (IFMBE). In particular the Project Coordinator participated in the WiMBE regular virtual meeting on 29 Nov 2013 and presented the planned work for promoting gender balance within the project. This was well received and the WiMBE President asked for a written summary of the project and how this addresses gender balance which was sent on 12 Feb 2014 and was included in the minutes of the WiMBE meeting. This document was also published as a CARRE Newsletter article on the CARRE website. Additionally, presentations on gender balance in sciences were held within each one of the three consortium meetings and were followed by lively discussions on gender balance and how to promote this.

The Project Coordinator participated in the WiMBE regular meeting during the World Congress 2015: 24th World Congress on Medical Physics and Biomedical Engineering, Toronto, Canada, June 7-12, 2015 and presented the planned work for promoting gender balance within the project. The Project Coordinator was elected co-chair of the WiMBE committee.

Publications on CARRE gender aspects and balance in international press and international events include:

1. E. Kaldoudi, **Gender Balance in EU and a Case Report of an EU Funded Project**, Invited Talk, Special Session on Women in Medical and Biological Engineering, MEDICON 2016, Paphos, Cyprus, 2 April 2016
2. E. Kaldoudi, **Gender Balance in CARRE**, Let's CAR(R)E Together, CARRE project Newsletter, 3 Dec 2013, <https://www.carre-project.eu/gender-balance-in-carre/>
3. E. Kaldoudi, **Gender Balance in CARRE Project – Final Report**, Let's CAR(R)E Together, CARRE project Newsletter, 21 Oct 2016 <https://www.carre-project.eu/gender-balance-in-carre-project/>

Also, the consortium devoted a small (albeit crucial, we believe) part of each Project Meeting for discussing gender issues. Each session on gender balance awareness was triggered by a presentation followed by comments and lively discussions. Presentations are attached in the Annex and included the following:

1. E. Kaldoudi, **CARRE Gender Issue Awareness**, CARRE Project Consortium Meeting #01, Alexandroupoli, Greece, Nov 2014
2. E. Semertzidou, E. Kaldoudi, **Gender Inequality in Research & Academia**, CARRE Project Consortium Meeting #02, Warsaw, Poland, Apr 2014
3. E. Semertzidou, **Gender Inequality in Research**, CARRE Project Consortium Meeting #03, Luton, UK, Sep 2014
4. E. Kaldoudi, **UN Women: Progress of the World's Women 2015-2016**, CARRE Project Consortium Meeting #03, Vilnius, Lithuania, May 2015
5. E. Kaldoudi, **Nature Specials: Women in Science**, CARRE Project Consortium Meeting #05, Kaunas, Lithuania, Sep 2015
6. E. Kaldoudi, **Gender Balance in EU – SHE Figures 2015**, CARRE Project Consortium Meeting #07, Milton Keynes, May 2016

Annex 1

Presentations/publications on Gender Balance

This ANNEX includes reproductions of the following publications and presentation on gender balance as produced during the CARRE project and as part of T.1.4: CARRE Gender Aspects:

1. E. Kaldoudi, **Gender Balance in CARRE**, Let's CAR(R)E Together, CARRE project Newsletter, 3 Dec 2013, <https://www.carre-project.eu/gender-balance-in-carre/>
2. E. Kaldoudi, **Gender Balance in CARRE Project – Final Report**, Let's CAR(R)E Together, CARRE project Newsletter, 21 Oct 2016 <https://www.carre-project.eu/gender-balance-in-carre-project/>
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CARRE project aims to innovate also in a different way. A small, albeit crucial, part of the work plan is dedicated to gender balance awareness.

During Grant Negotiation with the European Commission, the project was given the chance to discuss Gender Aspects within the Technical Work Annex of the Contract. This spawned an interesting discussion within the consortium. Based on the FP7 Negotiation Guidance Notes, the consortium decided to include a specific Task titled Promoting Gender Balance corresponding to 2.5 person-months effort (out of 329 person-months for the entire project). Specific goals of this Task are:

to ensure a good representation of both genders in all decision making bodies of the project;

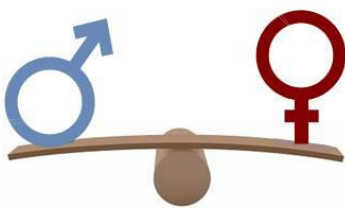
devote a part of Project Consortium meetings for gender aspects discussion and awareness; and

liaise with the Committee on Women in Medical and Biological Engineering (WiMBE) of the International Federation of Medical and Biological Engineering (IFMBE) on promoting gender balance and improving working climate for both genders in the project.

As a first outcome, gender representation in the decision making bodies of the CARRE project is as follows:

- 100% female representation in coordination (Project Coordinator and Project Manager);
- 1/3 female representation in the Team Leaders and in General Assembly;
- 50% female representation in Work Package Leaders
- 54% female representation in Task Leaders; and
- 37% female representation in Team members.

Although CARRE may only be a case report of gender balance in a bioengineering research project, one can only expect that more such examples will soon come. Indeed, Horizon 2020 (the new European Union Framework Programme for Research and Innovation, 2014-2020) places emphasis on gender dimension in research projects. In specific, Article 15 of the Proposal for a Regulation of the European Parliament and Council establishing Horizon 2020 is devoted to Gender Equality as promoted in research and innovation content. Horizon 2020 is set to integrate the gender dimension into the content of projects, the Framework's interim evaluation shall also take into consideration gender balance (see http://ec.europa.eu/research/horizon2020/index_en.cfm?pg=h2020-documents).



E. Kaldoudi, **Gender Balance in CARRE Project – Final Report**, Let's CAR(R)E Together, CARRE project Newsletter, 21 Oct 2016 <https://www.carre-project.eu/gender-balance-in-carre-project/>

There is a known lack of balance in gender representation in Science and Technology in Europe today, which is even more pronounced within the decision making ranks. This is reported in the SHE Figures documents, a series of 5 (up to now) EU reports published every 3 years since 2003.

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Although slightly more women graduate from university in EU and even more women than men obtain the equivalent of an MSc degree, higher stages of academic career show a women leakage which becomes much more pronounced at the highest academic degree (Full Professor). The situation is even more pronounced in the science and engineering fields where the graphing of the percentage of men and women in academia takes the infamous shape of the so called 'leaky pipeline'.

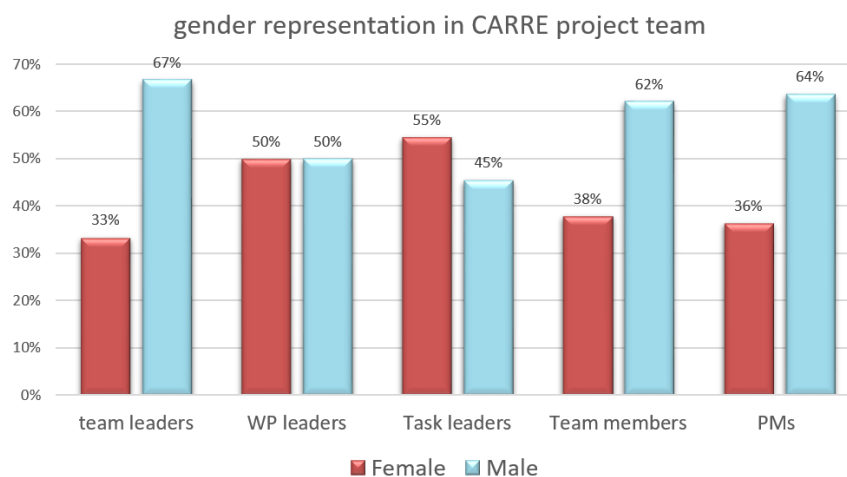
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In terms of research output, between 2011 and 2013 only 31% of research publications had a woman as corresponding author. Finally, although the gender gap in the funding success rate is decreasing in EU-28, the success rate for men principal investigators and coordinators is still higher than that of women in 70% of the EU countries. Finally, on average only 28% of board members (including leaders) are women in 2014, and most institutions in the scientific landscape continue to be dominantly led and managed by men.

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Overall, during the entire project duration gender balance in project decision making bodies and coordination posts, as well as in the project research team is shown in the figure.



E. Kaldoudi, **Gender Balance in EU and a Case Report of an EU Funded Project**, Invited Talk, Special Session on Women in Medical and Biological Engineering, MEDICON 2016, Paphos, Cyprus, 2 April 2016



Gender Balance in EU and a Case Report of an EU Funded Project

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Associate Professor, DUTH, Greece

SHE Figures - EU

Gender in Research and Innovation: statistics and indicators

- a series of reports published every 3 years by EU
 - ↳ since 2003
 - ↳ 5 reports so far
- currently: SHE Figures 2015
 - ↳ published in March 2016
 - ↳ https://ec.europa.eu/research/swafs/pdf/pub_gender_equality/she_figures_2015-leaflet-web.pdf (doi:10.2777/744106)



WiMBE Session, MEDICON, April 2016

E. Kaldoudi



SHE FIGURES 2015 | Gender in Research and Innovation

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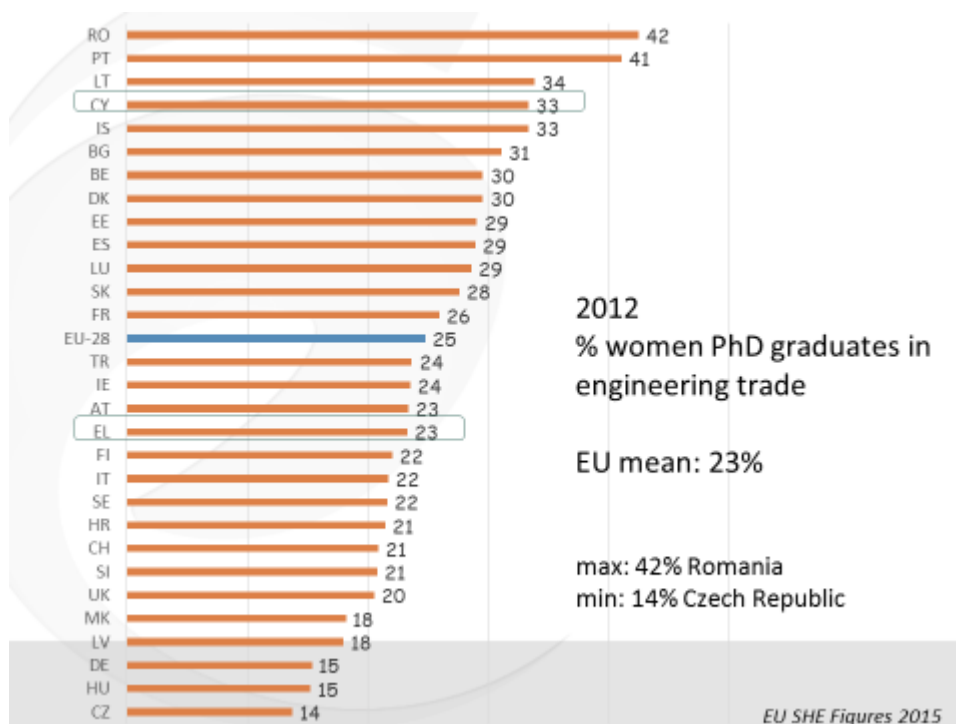
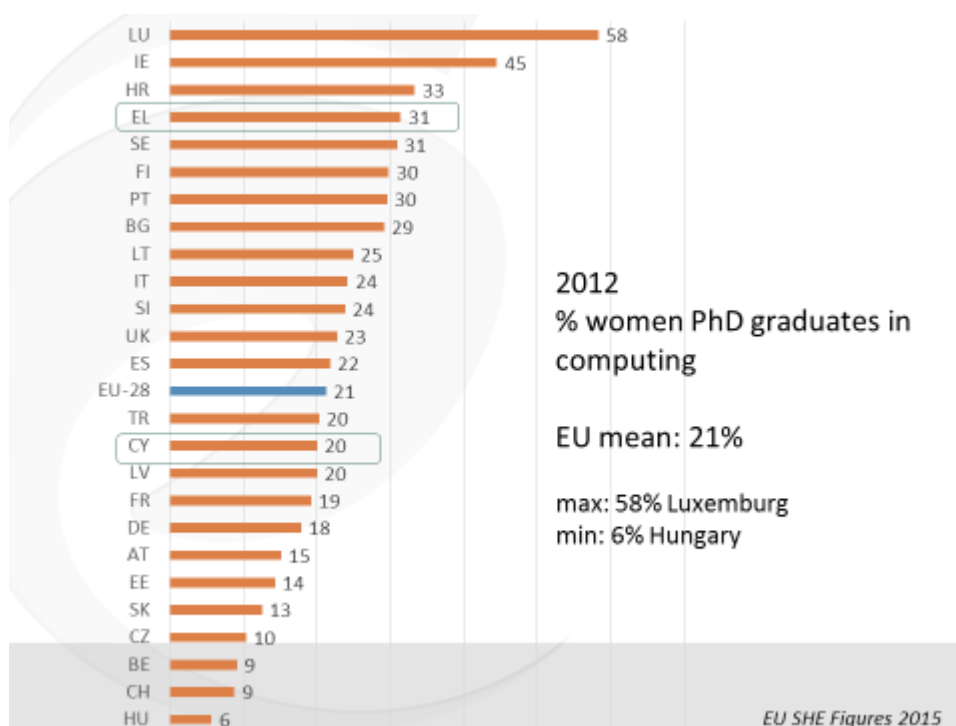
WiMBE Session, MEDICON, April 2016

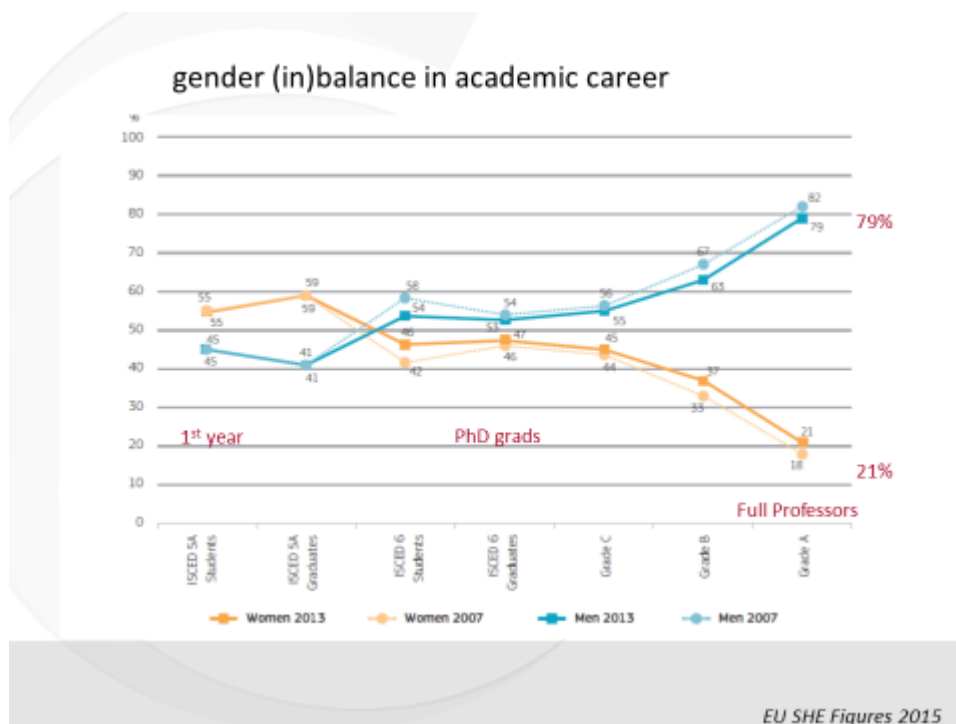
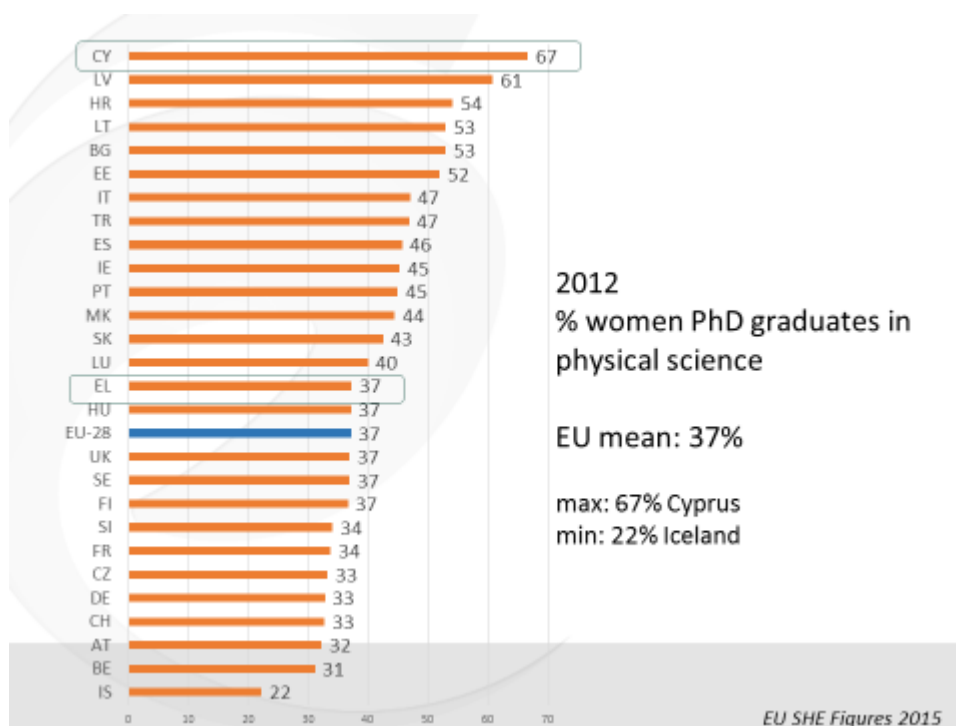
E. Kaldoudi

gender balance in PhD graduates

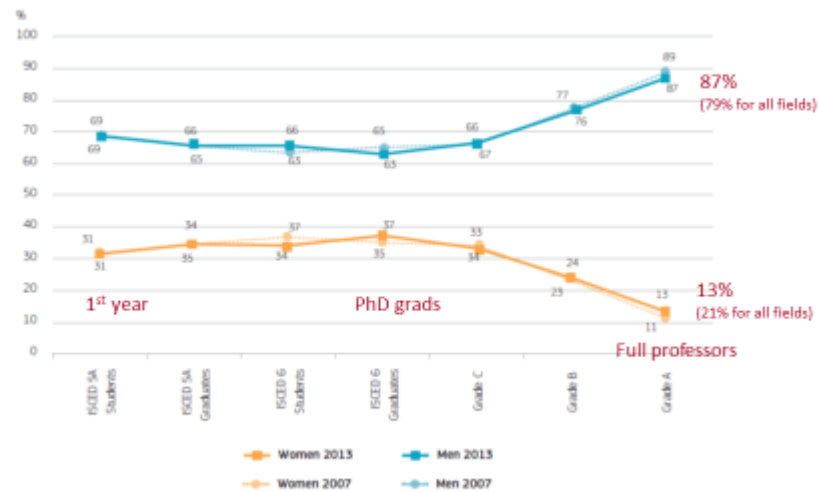
EU has reached a gender balance in PhD graduates

- 40-60% women of PhD graduates in all EU countries (2012)
- women PhD graduates numbers generally increase at a faster rate than the number of men (2002-2012)
- despite improvements since 2004, women remain under-represented in most narrow fields of science and engineering





gender (in)balance in academic career in science and engineering



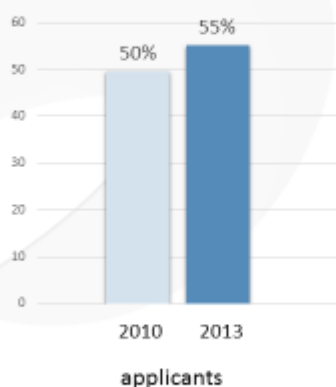
EU SHE Figures 2015

research output

- 28% women in board members (including leaders) in 2014
- 31% of publications had a woman corresponding author between 2011 and 2013
- the gender gap in the funding success rate
 - ↳ decreasing at the EU-28 level
 - ↳ success rate for men is still higher than that for women in 70 % of countries

EU SHE Figures 2015

proportion of women team leaders in research funded projects



EU SHE Figures 2015



WiMBE Session, MEDICON, April 2016

E. Kaldoudi

Priority order for proposals with the same score

- (i) Proposals that address topics not otherwise covered by more highly-ranked proposals, will be considered to have the highest priority.
- (ii) These proposals will themselves be prioritised according to the scores they have been awarded for the criterion *excellence*. When these scores are equal, priority will be based on scores for the criterion *impact*. In the case of Innovation actions, and the SME instrument (phases 1 and 2), this prioritisation will be done first on the basis of the score for *impact*, and then on that for *excellence*.

If necessary, any further prioritisation will be based on the following factors, in order: size of budget allocated to SMEs; gender balance among the personnel named in the proposal who will be primarily responsible for carrying out the research and/or innovation activities.

If necessary, any further prioritisation will be based on the following factors, in order: size of budget allocated to SMEs; gender balance among the personnel named in the proposal who will be primarily responsible for carrying out the research and/or innovation activities.



WiMBE Session, MEDICON, April 2016

E. Kaldoudi



FP7-ICT-2013-611140
 consortium: 6 partners from 4 EU countries
 coordinator: Eleni Kaldoudi (DUTH)
 duration: Nov 2013 – Oct 2016
 budget: 3,210,470€
<http://carre-project.eu/>

CARRE

Cardiorenal
 comorbidity management
 via **empowerment** and
 shared informed decision


 Democritus Univ. of Thrace
 DUTH, GR


 The Open
 University, UK


 Univ. of Bedfordshire, UK


 Vilnius Univ. Hospital, LT


 Kaunas Univ., LT


 Industrial Research Institute
 for Automation & Measurements, PL


WiMBE Session, MEDICON, April 2016 E. Kaldoudi

what? CARRE

EU FP7-ICT-2013-611140
 3.2M, 2013-2016
 DUTH, OU, BED, VULSK, KTU, PIAP


why? cardiorenal disease
 chronic, common, dangerous,
 expensive, with many causing
 factors and complex progression

how?




<http://carre-project.eu>

for the patient




visual.carre-project.eu

for the medical expert



entry.carre-project.eu

for the ICT expert



www.carre-project.eu

women: 5 out 15 $\approx 33\%$



<http://carre-project.eu>



CARRE team in Luton project meeting, May 2015

gender balance in CARRE

- WP leaders: 50% representation of both genders
- Task leaders: 55% women
- Team Leaders and GA: 1/3 women
- Key team members: 37% women
- Reviewers: 2/3 women



dedicated task on gender balance

part of management activities, with the aim to:

- ensure a gender balanced representation across the project
- collect and report to EU data on women's participation in all project committees, working groups, research and dissemination activities
- devote a small part of each Project Meeting for discussing gender issues
- liaise with IFMBE WIMBE and other related committees



WiMBE Session, MEDICON, April 2016

E. Kaldoudi

Gender issues discussions in the project

Alexandroupolis, Nov 2013:

Gender balance in EU research era: the 2009 SHE figures

Warsaw, Apr 2014:

Gender balance in EU FP7 projects – funded research work on gender balance

Vilnius, Sep 2014:

Gender balance in EU research era: the 2012 SHE figures

Luton, May 2015:

UN Women Entity for Gender Equality and the Empowerment of Women, 2015

Kaunas, Sep 2015:

Nature Specials: Women in Science

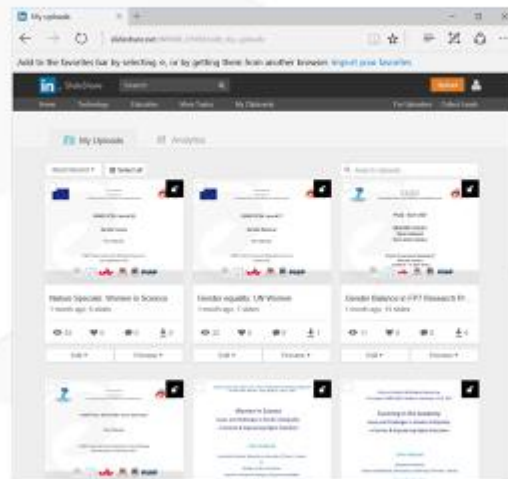


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acknowledgment

work partly funded under project CARRE

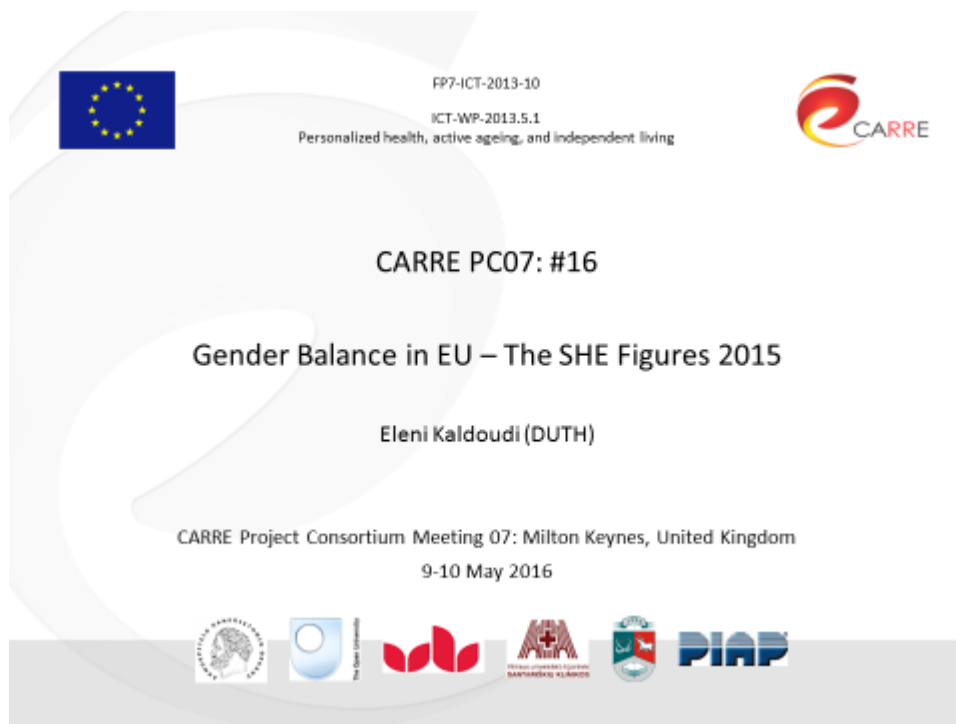
co-funded by the
European Commission under the
Information and Communication Technologies (ICT)
7th Framework Programme
Contract No. FP7-ICT-2013-611140

CARRE: Personalized patient empowerment
and shared decision support
for cardiorenal disease and comorbidities


<http://www.carre-project.eu/>



E. Kaldoudi, **Gender Balance in EU – SHE Figures 2015**, CARRE Project Consortium Meeting #07, Milton Keynes, May 2016



FP7-ICT-2013-10
ICT-WP-2013.5.1
Personalized health, active ageing, and independent living




CARRE PC07: #16

Gender Balance in EU – The SHE Figures 2015

Eleni Kaldoudi (DUTH)

CARRE Project Consortium Meeting 07: Milton Keynes, United Kingdom
9-10 May 2016





SHE Figures - EU

Gender in Research and Innovation: statistics and indicators

- a series of reports published every 3 years by EU
 - ↳ since 2003
 - ↳ 5 reports so far
- currently: SHE Figures 2015
 - ↳ published in March 2016
 - ↳ https://ec.europa.eu/research/swafs/pdf/pub_gender_equality/she_figures_2015-leaflet-web.pdf (doi:10.2777/744106)

 PC07 meeting, Milton Keynes, United Kingdom, May 2016 #16: Gender Issues: 2



SHE FIGURES 2015

SHE FIGURES 2015 | Gender in Research and Innovation

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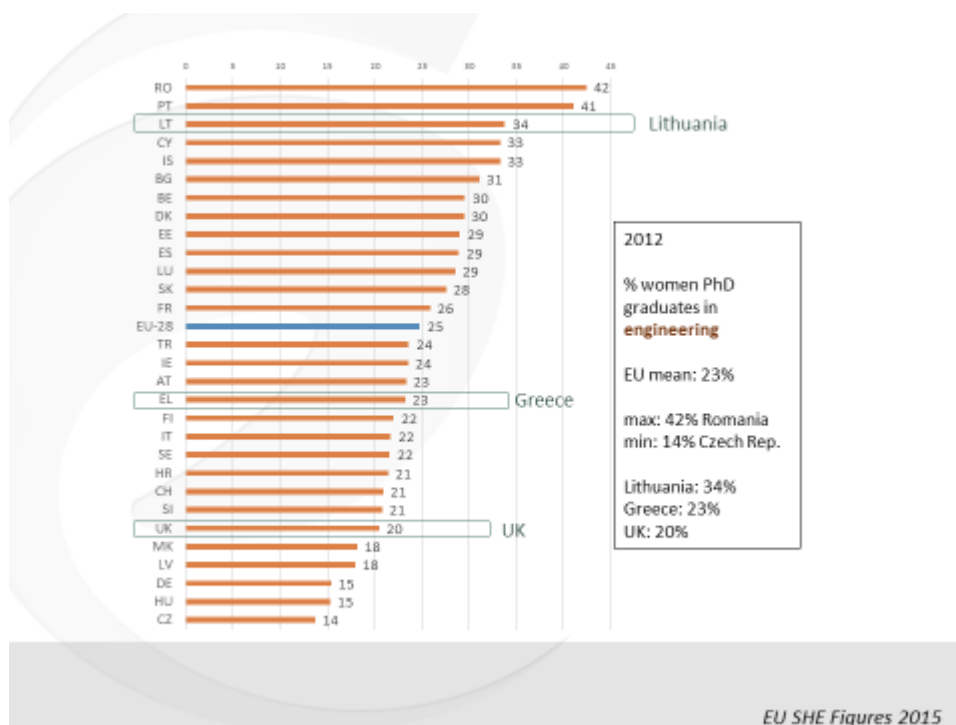
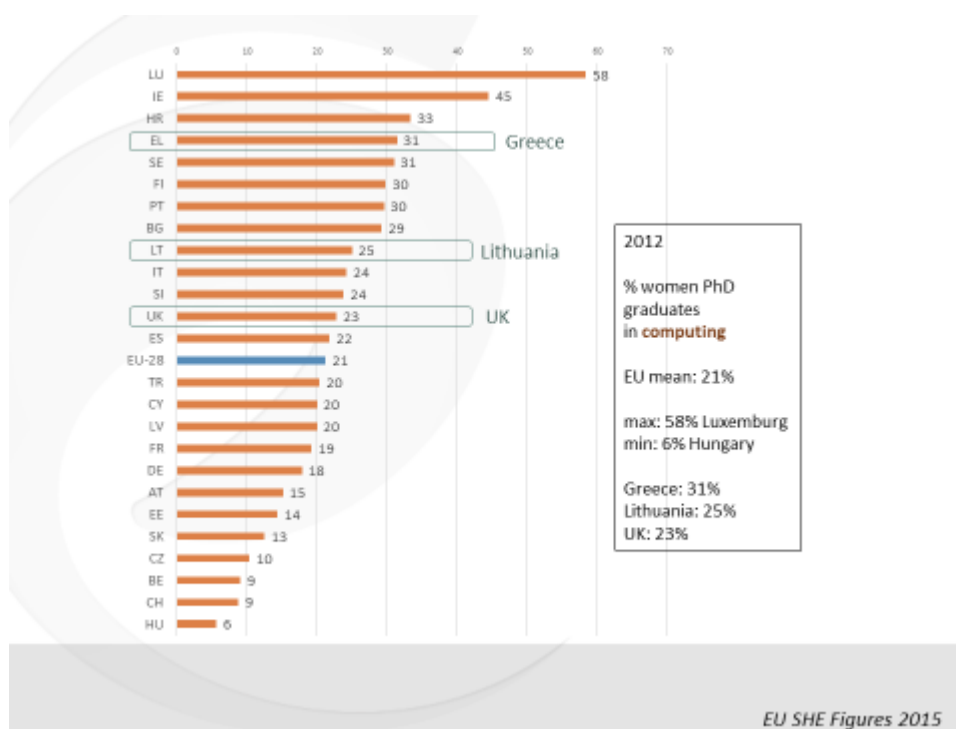
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 PC07 meeting, Milton Keynes, United Kingdom, May 2016 #16: Gender Issues: 3

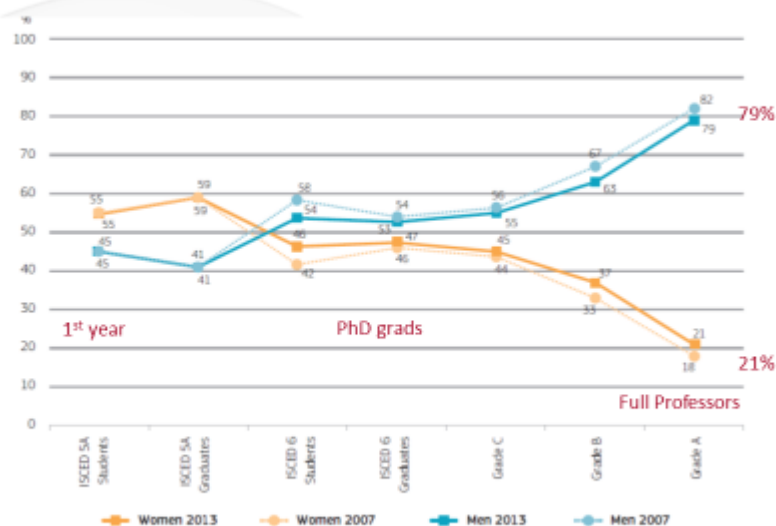
gender balance in PhD graduates

EU has reached a gender balance in PhD graduates

- 40-60% women of PhD graduates in all EU countries (2012)
- women PhD graduates numbers generally increase at a faster rate than the number of men (2002-2012)
- despite improvements since 2004, women remain under-represented in most narrow fields of science and engineering

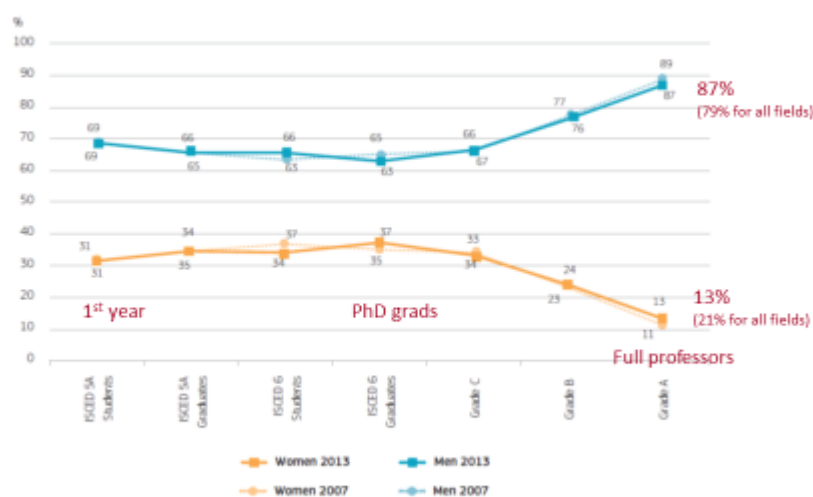


gender (in)balance in academic career



EU SHE Figures 2015

gender (in)balance in academic career in science and engineering



EU SHE Figures 2015

research output

- 28% women in **board members** (including leaders) in 2014
- 31% of **publications** had a woman corresponding author between 2011 and 2013
- the gender gap in the **funding success rate**
 - ↳ decreasing at the EU-28 level
 - ↳ success rate for men is still higher than that for women in 70 % of countries

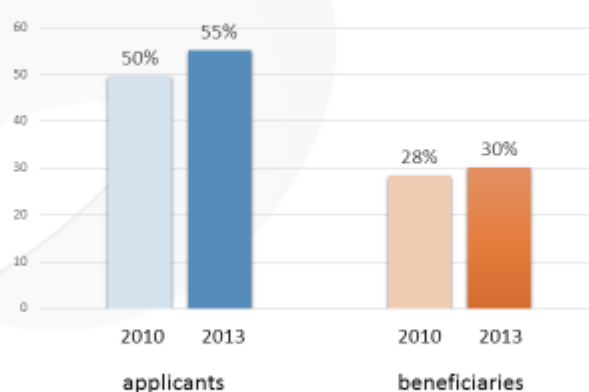
EU SHE Figures 2015



PC07 meeting, Milton Keynes, United Kingdom, May 2016

#16: Gender Issues: 9

proportion of women team leaders in research funded projects



EU SHE Figures 2015



PC07 meeting, Milton Keynes, United Kingdom, May 2016

#16: Gender Issues: 10

Priority order for proposals with the same score

(i) Proposals that address topics not otherwise covered by more highly-ranked proposals, will be considered to have the highest priority.

(ii) These proposals will themselves be prioritised according to the scores they have been awarded for the criterion *excellence*. When these scores are equal, priority will be based on scores for the criterion *impact*. In the case of Innovation actions, and the SME instrument (phases 1 and 2), this prioritisation will be done first on the basis of the score for *impact*, and then on that for *excellence*.

If necessary, any further prioritisation will be based on the following factors, in order: size of budget allocated to SMEs; gender balance among the personnel named in the proposal who will be primarily responsible for carrying out the research and/or innovation activities.

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H2020 guidelines

E. Kaldoudi, **Nature Specials: Women in Science**, CARRE Project Consortium Meeting #05, Kaunas, Lithuania, Sep 2015



FP7-ICT-2013-10
ICT-WP-2013.5.1
Personalized health, active ageing, and independent living

CARRE

CARRE PC05: Item #18

Gender Issues

Eleni Kaldoudi

CARRE Project Consortium Meeting 05: Kaunas, LT
24-25 September 2015

Logos of participating organizations: European Union, FP7-ICT-2013-10, ICT-WP-2013.5.1, CARRE, and various partner logos including PIAP.



Nature (IF>42)

Nature Specials: Women in Science

<http://www.nature.com/news/specials/women/index.html>

Nature Specials: Women in Science

- **Science for all:** Many women are deterred from pursuing a career in science at the highest levels. Much more must be done to address the reasons behind this potential waste of human talent.
- **Mind the gender gap:** Despite improvements, female scientists continue to face discrimination, unequal pay and funding disparities
- **Most of us are biased:** Let's move beyond denial, own up to our prejudices against women and retrain our brains to overcome them, says Jennifer Raymond.
- **Scientists of the world speak up for equality:** Eight experts give their prescriptions for measures that will help to close the gender gap in nations from China to Sweden.



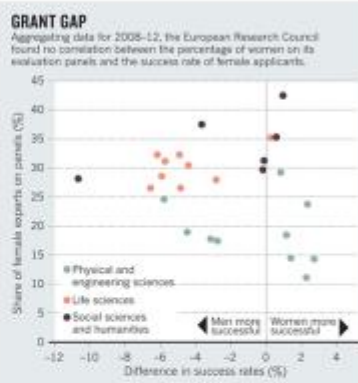
PC05 meeting, Kaunas, LT, September 2015

Item #18, slide 3

European Research Council

women: 19% of the 3,500 grantees
25% of the 35,000 applicants
29% of early-career applicants
15% of advanced career applicants

EC committed to reach 40% female participation
in H2020 advisory structures



Source: I. Vernos, Research management: Quotas are questionable, Nature, vol. 495, p.39, 7 March 2013 <http://www.nature.com/nature/journal/v495/n7439/full/495039a.html>



PC05 meeting, Kaunas, LT, September 2015

Item #18, slide 4

European Association of Science Editors



Gender Policy Committee

<http://www.ease.org.uk/about-us/organisation-and-administration/gender-policy-committee>

Guidelines on Sex and Gender Equity in Research

E. Kaldoudi, **UN Women: Progress of the World's Women 2015-2016**, CARRE Project Consortium Meeting #04, Luton, UK, May 2015



FP7-ICT-2013-10
ICT-WP-2013.5.1
Personalized health, active ageing, and independent living





CARRE PC04: Item #17

Gender Balance

Eleni Kaldoudi

CARRE Project Consortium Meeting 04: Luton, UK
5-6 May 2015





<http://progress.unwomen.org>

PROGRESS OF THE WORLD'S WOMEN 2015-2016:
Transforming economies, realizing rights

UN Women:
United Nations Entity for Gender Equality and the Empowerment of Women, 2015

economic and social dimensions of gender equality, including the right of all women to a good job, with fair pay and safe working conditions, to an adequate pension in older age, to health care and to safe water, without discrimination based on factors such as socio-economic status, geographic location and race or ethnicity



PC04 meeting, Luton, UK, May 2015

Item #17, slide 2

women's rights

centrality of women's human rights

as both the 'end' and an effective 'means' of development



PC04 meeting, Luton, UK, May 2015

Item #17, slide 3

making social policy work for

investing in more and better services—including health and childcare services, and water and sanitation—is crucial to address women's needs head-on and to boost their income security in the long term



PC04 meeting, Luton, UK, May 2015

Item #17, slide 4

transforming work for women's rights

measures are needed to challenge the persistent devaluation of 'women's work' that drives occupational segregation and gender pay gaps



PC04 meeting, Luton, UK, May 2015

Item #17, slide 5

'like a girl'

<https://www.youtube.com/watch?v=XjJQBjWYDTs>

"Rewrite the rules" battle by Always.com



PC04 meeting, Luton, UK, May 2015

Item #17, slide 6

E. Semertzidou, **Gender Inequality in Research**, CARRE Project Consortium Meeting #03,
Luton, UK, Sep 2014



FP7-ICT-2013-10
ICT-WP-2013.5.1
Personalized health, active ageing, and independent living



CARRE PC03: 28

Gender Issues

Eleni Semertzidou (DUTH)

CARRE Project Consortium Meeting 03: Vilnius, Lithuania
22-23 September 2014



Gender inequality in research

- Detailed statistics are released by the EC in **She Figures 2012**
- women in scientific research remain a minority
- proportion women researchers in EU-27
 - ↳ 40% women in Higher Education
 - ↳ 40% women in Government Sector
 - ↳ 19% women in Business Enterprise Sector
- progressive studies over the years show that there is a move towards a more gender-balanced research population

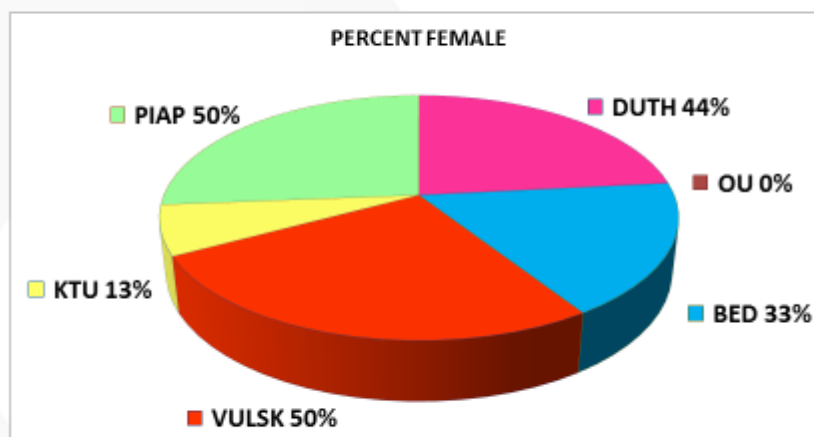
Gender Balance in CARRE on M01

- **Coordinator and Project Manager** are both women
- **WP leaders:** 50% representation of both genders
- **Task leaders:** 55% representation of women
- **Team Leaders and GA:** 1/3 female representation
- **Key team members:** 1/3 female representation



Item 28
PC03 meeting, Vilnius, Lithuania, Sep 2014

Gender Balance in CARRE Today



Item 28
PC03 meeting, Vilnius, Lithuania, Sep 2014

Gender Balance in CARRE Today

PARTNERS	GENDER TOTAL	PERCENT MALE	PERCENT FEMALE
DUTH	9	56%	44%
OU	3	100%	0%
BED	6	67%	33%
VULSK	8	50%	50%
KTU	8	88%	13%
PIAP	8	50%	50%
TOTAL	42	64%	36%



Item 28
PC03 meeting, Vilnius, Lithuania, Sep 2014

<http://www.mothersblog.gr/o-kosmos-toy-paidioy/item/16275-sti-thesi-ton-paidion-mas-emeis-tha-antexame-tous-kanones-pou-tous-vazoume-vinteo>



Item 28
PC03 meeting, Vilnius, Lithuania, Sep 2014

E. Semertzidou, E. Kaldoudi, **Gender Inequality in Research & Academia**, CARRE Project Consortium Meeting #02, Warsaw, Poland, Apr 2014



SEVENTH FRAMEWORK PROGRAMME

FP7-ICT-2013-10
ICT-WP-2013.5.1
Personalized health, active ageing, and independent living

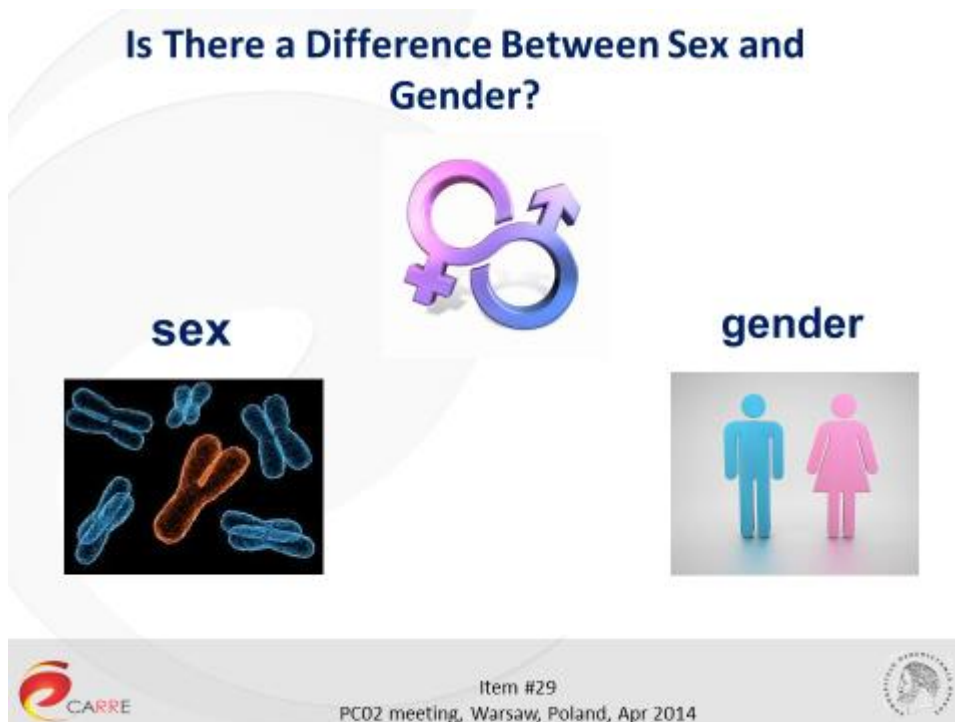
CARRE

PC02 Item #29

GENDER ISSUES
Eleni Kaldoudi
Eleni Semertzidou

Project Consortium Meeting 02
Warsaw, Poland
31 March – 1 April 2014

EUROPEAN COMMISSION
The Open University
PIAP



Is There a Difference Between Sex and Gender?

sex

gender

CARRE

Item #29
PC02 meeting, Warsaw, Poland, Apr 2014

Gender inequality in research

Detailed statistics are released by the EC in **She Figures 2012**.

- ✓ women in scientific research remain a minority
- ✓ proportion women researchers in EU-27
 - 40% women in Higher Education
 - 40% women in Government Sector
 - 19% women in Business Enterprise Sector
- ✓ progressive studies over the years show that there is a move towards a more gender-balanced research population

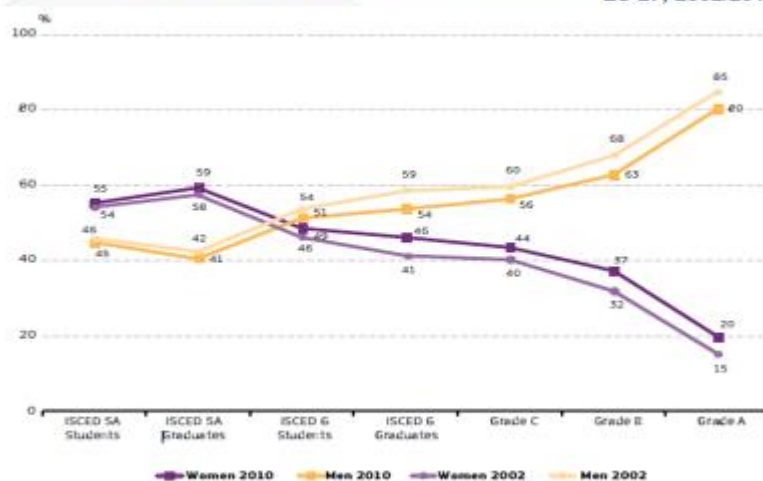


Item #29
PC02 meeting, Warsaw, Poland, Apr 2014



women/men in academia

EU-27, 2002/2010



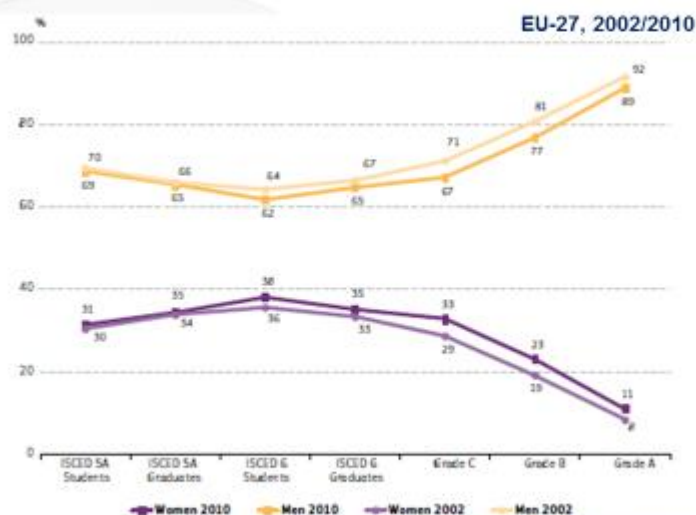
source: *She Figures 2012*, EU Commission, p. 88



Item #29
PC02 meeting, Warsaw, Poland, Apr 2014



The “leaky pipeline” women/men in science & engineering academia



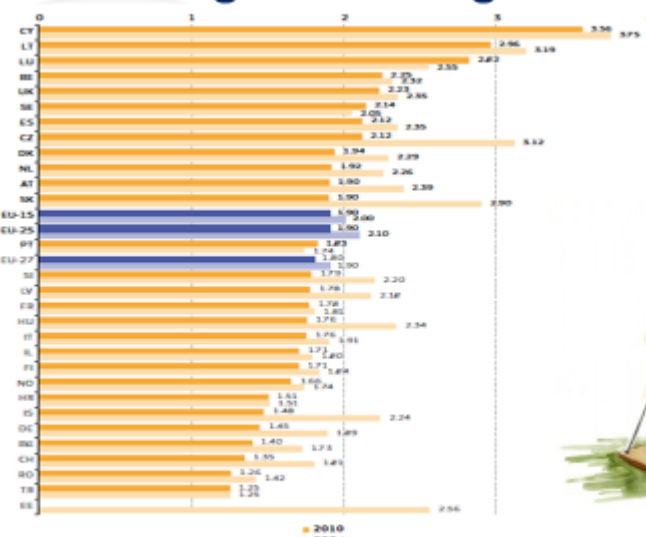
source: *She Figures 2012, EU Commission, p. 89*

Item #29

PC02 meeting, Warsaw, Poland, Apr 2014



The “glace ceiling”



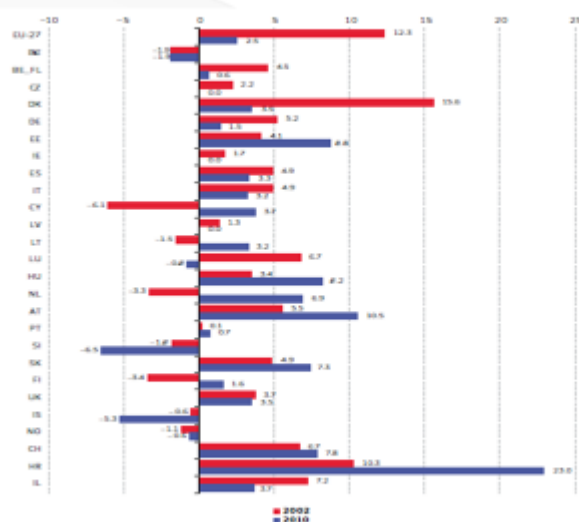
source: *She Figures 2012, EU Commission, p. 96*

Item #29

PC02 meeting, Warsaw, Poland, Apr 2014



women/men research funding



source: She Figures 2012, EU Commission, p. 119

Item #29

PC02 meeting, Warsaw, Poland, Apr 2014



GENDER IN FP7

Legal base for Gender in FP7:

FP7: “The integration of the gender dimension and gender equality will be addressed in all areas of research”

Decision No 1982/2006/EC of the European Parliament and of the Council of 18 December 2006 concerning the Seventh Framework Programme of the European Community for research, technological development and demonstration activities (2007-2013)



Item #29

PC02 meeting, Warsaw, Poland, Apr 2014



Gender in FP7

- ✓ Target of **40% female participation**.
- ✓ **Option** for project holders to **promote gender equality** and to **address gender aspects** in a specific work package or task within a work package.
- ✓ **Specific project calls** under Science in Society to promote **structural change** in favour of gender equality in research and the academia, both in terms of **women's**.



Item #29
PC02 meeting, Warsaw, Poland, Apr 2014

Source: Maxime Forest



EGERA

Effective Gender Equality in Research and the Academia:

- ✓ 3,3€ million, 4 years long project funded at 70% by the EC.
- ✓ 8 partner institutions in 7 EU member states + Turkey.
- ✓ Human/social sciences, STEMs, Earth sciences represented
- ✓ Gender equality action plans and gender training schemes implemented in each partner institution



Source:
<https://www.uantwerp.be/en/rg/ced/projects/>
Item #29
PC02 meeting, Warsaw, Poland, Apr 2014



SAPGERIC

Structural Change Promoting Gender Equality in Research Organizations

- ✓ 0,5 € million, 1 year long project funded at 65% by the EC.
- ✓ Science in Society, SiS
- ✓ Promoting gender equality in research institutions and enhance the effective dialogue and knowledge sharing between academia



Source:
http://cordis.europa.eu/projects/rcn/96891_en.html
Item #29
PC02 meeting, Warsaw, Poland, Apr 2014



GENIS LAB

The Gender in Science and Technology LAB

- ✓ 2,4€ million, 3 years long project funded at 70% by the EC.
- ✓ 9 partner institutions in 6 EU member states.
- ✓ Science in Society, SiS
- ✓ Aims to implement structural changes in order to overcome the factors that limit the participation of women in research.



Source:
http://cordis.europa.eu/projects/rcn/96891_en.html
Item #29
PC02 meeting, Warsaw, Poland, Apr 2014



Gender Balance in CARRE on November

- **Coordinator and Project Manager** are both women
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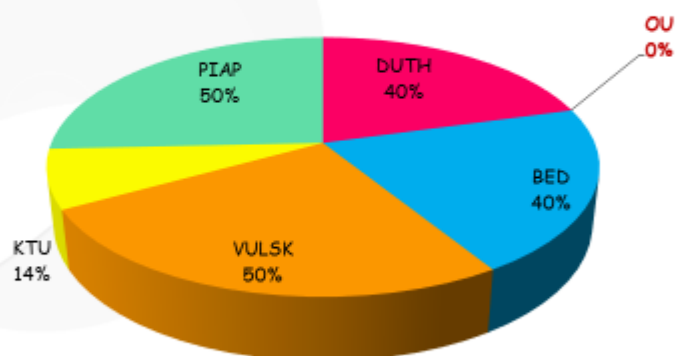


Item #29
PC02 meeting, Warsaw, Poland, Apr 2014



Gender Balance in CARRE Today

PERCENT FEMALE



Item #29
PC02 meeting, Warsaw, Poland, Apr 2014



Gender Balance in CARRE Today

PARTNERS	GENDER TOTAL	PERCENT MALE	PERCENT FEMALE
DUTH	10	60%	40%
OU	3	100%	0%
BED	5	60%	40%
VULSK	8	50%	50%
KTU	7	86%	14%
PIAP	8	50%	50%
TOTAL	41	63%	37%



Item #29
PC02 meeting, Warsaw, Poland, Apr 2014



"You educate a man; you educate a man. You educate a woman; you educate a generation."

Brigham Young



<http://www.goodreads.com/quotes/tag/women?page=1>
Item #29
PC02 meeting, Warsaw, Poland, Apr 2014



E. Kaldoudi, **CARRE Gender Issue Awareness**, CARRE Project Consortium Meeting #01, Alexandroupoli, Greece, Nov 2014



FP7-ICT-2013-10
ICT-WP-2013.5.1
Personalized health, active ageing, and independent living

CARRE PC01: #29 Gender Issues Awareness

Eleni Kaldoudi

CARRE Project Consortium Meeting 01: Kick-off Meeting
Alexandroupoli, 14-15 November 2013



She figures 2009 (looks up to 2006)

- women in scientific research remain a minority
- 30% women of all researchers in EU (2006)
- proportion women researchers in EU-27 (2006)
 - ↳ 37% women in Higher Education
 - ↳ 39% women in Government Sector
 - ↳ 19% women in Business Enterprise Sector
- progressive studies over the years show that there is a move towards a more gender-balanced research population

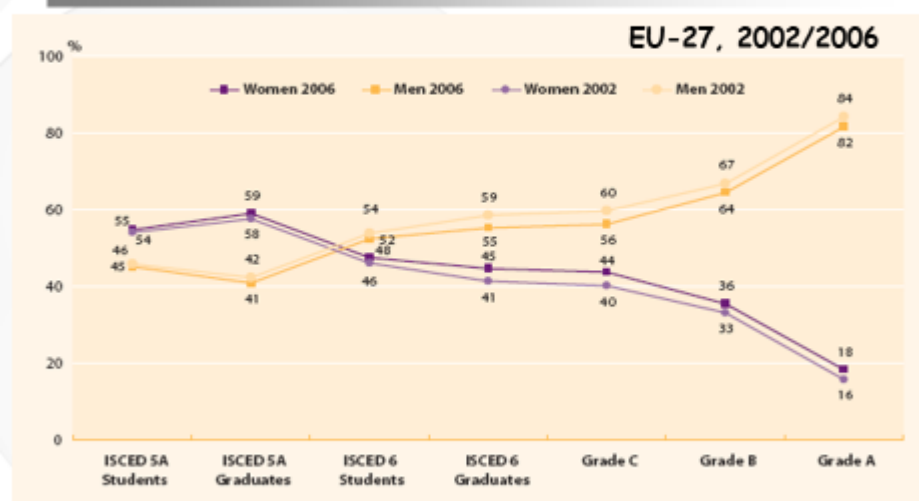
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Kick-off Meeting, 14-15 Nov 2013, #29: Gender Issues Awareness

women/men in academia

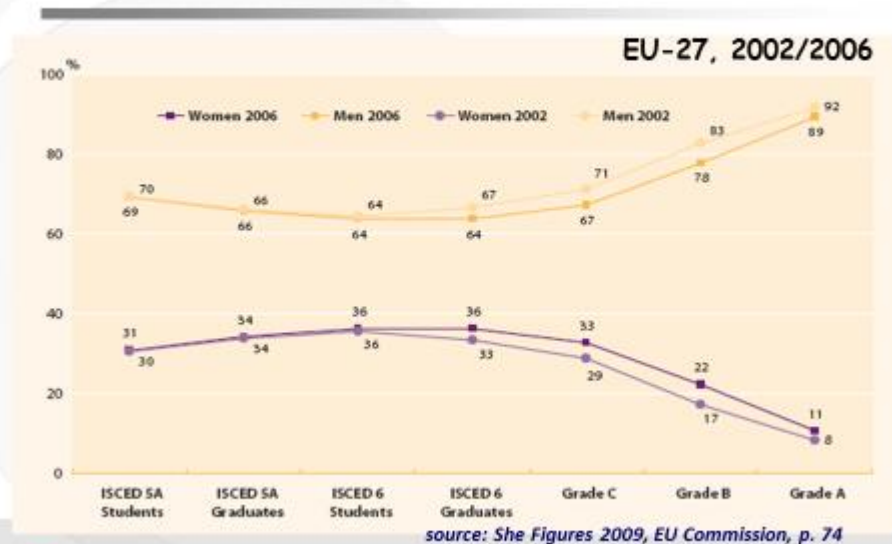


source: *She Figures 2009, EU Commission, p. 73*



Kick-off Meeting, 14-15 Nov 2013, #29: Gender Issues Awareness

women/men in science & engineering academia



Kick-off Meeting, 14-15 Nov 2013, #29: Gender Issues Awareness

numbers are not always that clear ...

- numbers show that universities contain gendered hierarchies of power
 - ↳ most men with power and most women without
- however, literature reports
 - a growing view among academic policy makers & academics that gender discrimination is not an issue in higher education !

Source: P. Cotterill, G. Letherby, Editorial, *Women in higher education: Issues and challenges*, *Women's Studies International Forum*, vol.28, 109-113, 2005



Kick-off Meeting, 14-15 Nov 2013, #29: Gender Issues Awareness

senior women academics say...

qualitative study amongst UK university senior women academics

- older women were more sensitive to the subtle homosocial culture, attitudes and norms in the university
- younger women relied more on a meritocratic approach to their careers, seemingly less aware of the institutional gendered power relations
- neither group showed signs of **collective working** or **networking** in the interests of themselves or women in general

Source: S. Ledwith, S. Manfredi, *Balancing Gender in Higher Education A Study of the Experience of Senior Women in a 'New' UK University*, *The European Journal of Women's Studies*, vol. 7, 7-33, 2000



Kick-off Meeting, 14-15 Nov 2013, #29: Gender Issues Awareness

design for women vs. women mentoring

Nebraska University 1999-2003, Project Muse

⇒ Empowering Women for Life-Long Success through Computer Expertise

- initially, with the aim to empower women undergraduates by teaching them technology in single-sex environments
- findings:
 - ⇒ empowerment came from **peer-tutoring** and informal workshops
 - ⇒ impact came from a computer-lab, where students would become experts and teach peers
 - ⇒ the lab became a place for **socializing**

Source: L. Fuller, E.R. Meiners, *Project Muse: Today's Research, Tomorrow's Inspiration*, *Frontiers, A Journal of Women Studies*, vol. 26(1), 168-180, 2005



Kick-off Meeting, 14-15 Nov 2013, #29: Gender Issues Awareness

men's patriarchal support system

UK University qualitative research + literature evidence

- men interviewed revealed,
(but not necessarily openly acknowledged) that
 - ✚ the help, support and encouragement of significant men were crucial elements of their own career progress
- in contrast, within this research group
 - ✚ no woman experienced such opportunity
(but some reverse cases were reported)

Source: B. Bagilhole, J. Goode, *The Contradiction of the Myth of Individual Merit, and the Reality of a Patriarchal Support System in Academic Careers : A Feminist Investigation*. *European Journal of Women's Studies*, vol. 8, 161, 2001



Kick-off Meeting, 14-15 Nov 2013, #29: Gender Issues Awareness

men's patriarchal support system

findings:

1. "the skills needed for a successful academic career can be exposed as part of a **socialization process** that some men and virtually no women are allowed to participate in"
2. women presume that
someone is going to speak on their behalf,
their good work will be recognized and rewarded
(they believe in true merit, not self-advertisement)

Source: B. Bagilhole, J. Goode, *The Contradiction of the Myth of Individual Merit, and the Reality of a Patriarchal Support System in Academic Careers: A Feminist Investigation*. *European Journal of Women's Studies*, vol. 8, 161, 2001



Kick-off Meeting, 14-15 Nov 2013, #29: Gender Issues Awareness

men's patriarchal support system

findings:

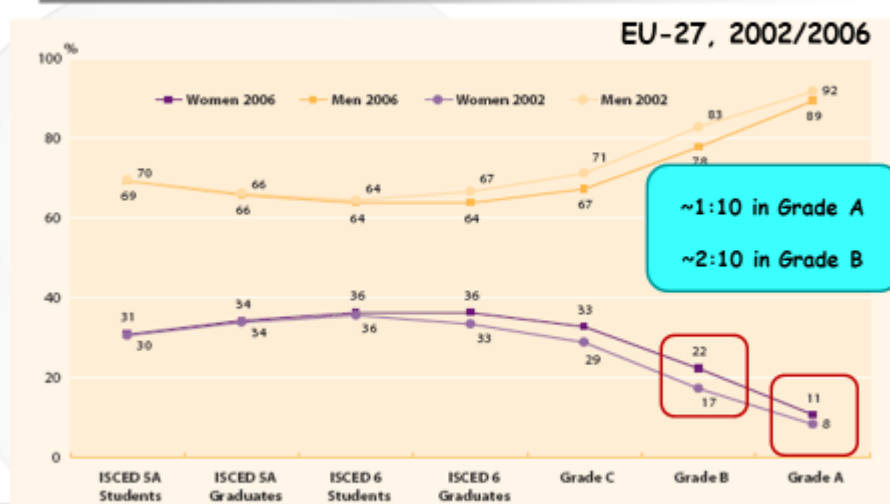
3. the academic profession does not supply adequate support and guidance for women
4. if and when women receive useful advice and mentoring, usually receive them from other women
 - ↳ risk of the small minority of senior women becoming overburdened

Source: B. Bagilhole, J. Goode, *The Contradiction of the Myth of Individual Merit, and the Reality of a Patriarchal Support System in Academic Careers: A Feminist Investigation*. *European Journal of Women's Studies*, vol. 8, 161, 2001



Kick-off Meeting, 14-15 Nov 2013, #29: Gender Issues Awareness

women/men in science & engineering academia



source: *She Figures 2009*, EU Commission, p. 74



Kick-off Meeting, 14-15 Nov 2013, #29: Gender Issues Awareness

so, can women in academia still hope for
a transition from surviving to thriving ?

quantitative study published in 2011

quantitative study (n=1714) in USA

- contrary to almost all published literature, and
- taking into account factors such as
 - ✎ tenure, discipline, family status and doctoral cohort,
- women actually have somewhat more collaborators on average than men do

Source: B. Bozeman, M. Gaughan, How do men and women differ in research collaborations? An analysis of the collaborative motives and strategies of academic researchers, Research Policy, July 2011

social media and networking explosion!

online services for building and reflecting social networks

- FaceBook (750M users)
- MySpace, Tagged, Twitter, LinkedIn, ...
- Academia.edu (600K), ResearchGate (400K), ScienceStage, Scispace, BioMedExperts, Epernicus, ...
- somewhat more women than men use social networking
- average age in USA (~48) as compared to UK (~38)

Sources: <http://blog.nielsen.com/nielsenwire/global/led-by-facebook-twitter-global-time-spent-on-social-media-sites-up-82-year-over-year/>

A. Hoffman, *The Social Media Gender Gap*, Bloomberg Businessweek, May 19, 2008



Kick-off Meeting, 14-15 Nov 2013, #29: Gender Issues Awareness

women mentoring network ?

towards effective and meaningful
networking & mentoring to empower women in academia

- use on-line social networking services
- focus on women
- involve men
- ☺ why not keep up with the progress of the 1:10 ratio?
- ☺ only, the other way around ...
- 👉 focus on women mentoring
- 👉 use semantic technologies to suggest/enrich/enhance meaningful mentoring relationships



Kick-off Meeting, 14-15 Nov 2013, #29: Gender Issues Awareness

IFMBE - WiMBE

IFMBE:

International Federation of Medical & Biological Engineering

- ↗ since 1959
- ↗ as of 2010,
130.000 members and 61 affiliated institutions

IFMBE – WiMBE:

Committee on Women in Medical & Biological Engineering

- ↗ since 2004
- ↗ president: Monique Frize (Canada)

website:

<http://ifmbe.org/organisation-structure/committees/women-in-mbe/>



Kick-off Meeting, 14-15 Nov 2013, #29: Gender Issues Awareness

IFMBE - WiMBE

action plans (amongst else):

- ↗ ensure greater inclusiveness of women in the various roles such as **keynote and plenary speakers**, **Chairs** of sessions, women receiving **awards** and as **judges** for the young presenters awards
- ↗ develop a **database of women** in biomedical engineering and sciences and identify women for high profile roles
- ↗ organise workshops on gender issues at major IFMBE events
- ↗ develop an internet-based **mentor project**



Kick-off Meeting, 14-15 Nov 2013, #29: Gender Issues Awareness

IFMBE - WiMBE

so check WiMBE website for updates:

ifmbe.org/organisation-structure/committees/women-in-mbe/

and look for
WiMBE workshops and events in IFMBE conferences



Kick-off Meeting, 14-15 Nov 2013, #29: Gender Issues Awareness

so, just “add women and stir” ?

should ensure that

women’s interests,
women’s ways of thinking and acting
are an integral part
of the scientific & technological enterprise and
of the academic environment

Source: Byanyima, W., The Role of Women Engineers in Developing Countries, Daphne Jackson Memorial Lecture, RSA Journal CXLII (5454):, 57-66., 1994



Kick-off Meeting, 14-15 Nov 2013: WP overview