

Gender issues in physics *a self-made-man's perspective*

Wim van Saarloos



OR: yes you can make a difference

February 10 1917: inaugural address Johanna Westerdijk



First female professor in the Netherlands

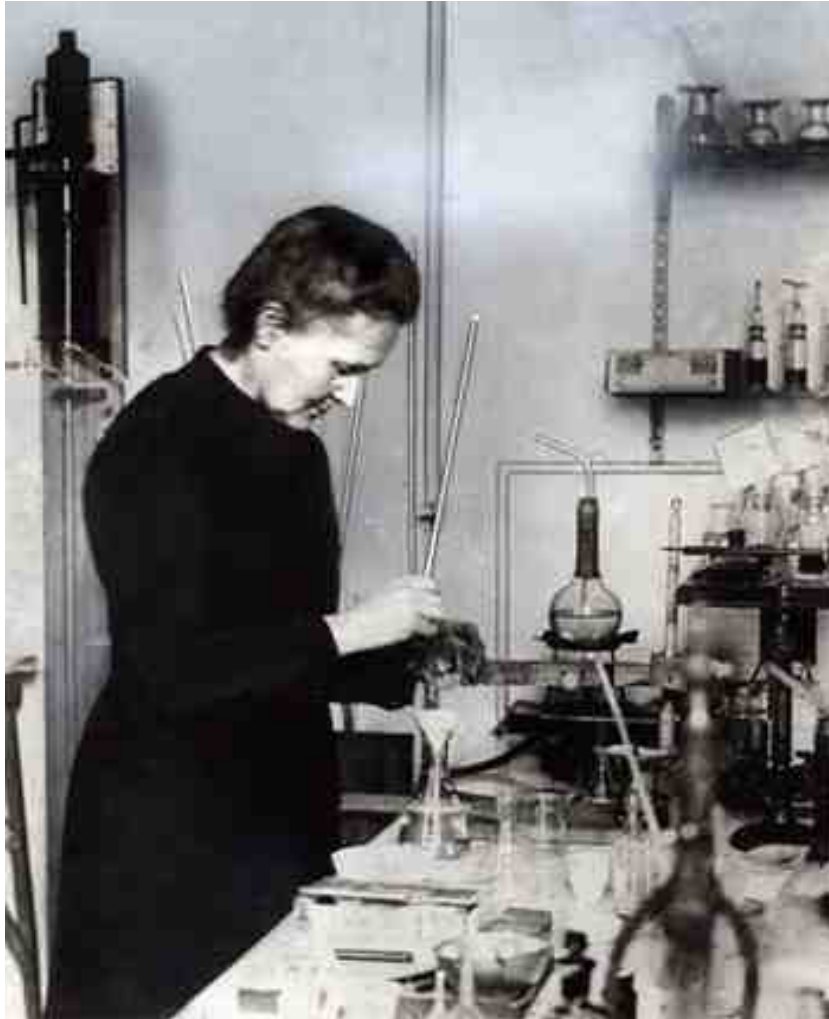
In 1919 women acquired voting rights in the Netherlands

1911: first Solvay conference



Statistical expectation now: 2 women....

Marie Skłodowska Curie



Nobel prize physics 1903
for radioactivity

Nobel prize chemistry 1911
for radium and polonium

... but she was kept out of
the Academie Française....

Elsevier > About > Press releases > Corporate > Share of Women Res...



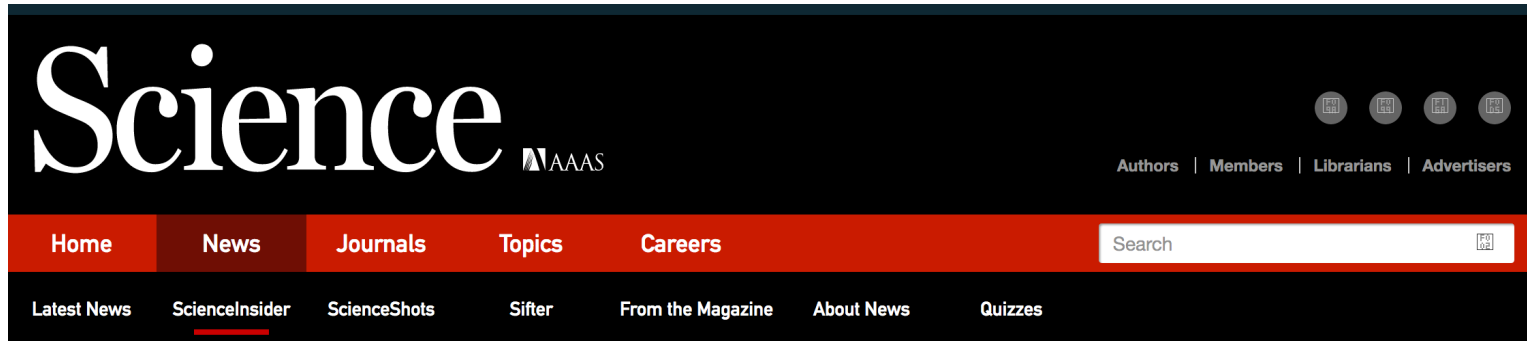
Share of Women Researchers Grows with Their Research as Impactful as Men's

A new study published by Elsevier provides baseline examination of gender in the global research landscape

"Progress is occurring in terms of increased participation of women in research, albeit incrementally and unevenly, which is a sign that efforts to encourage women to engage in research, including in the science, technology, engineering and mathematics (STEM) fields, are gaining traction," said Dr. Holly Falk-Krzesinski, Elsevier's Vice President of Strategic Alliances-Global Academic Relations.



2016



Royal Netherlands Academy of Arts and Sciences President José van Dijck says electing more women won't come at the expense of male candidates.

Millette Raats/Flickr

In bold new step, Dutch science academy holds women-only elections



KNAW

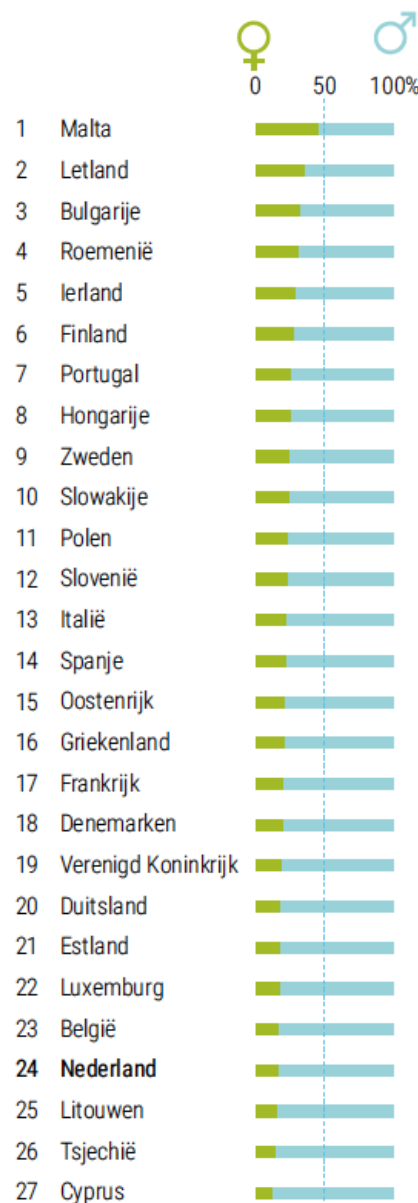
Royal Netherlands Academy
of Arts and Sciences

“ I think it's truly remarkable. I know of no similar example in any academy. ”

Frances Henry, York University

The Netherlands ranks low today....

Percentage of female professors in all disciplines

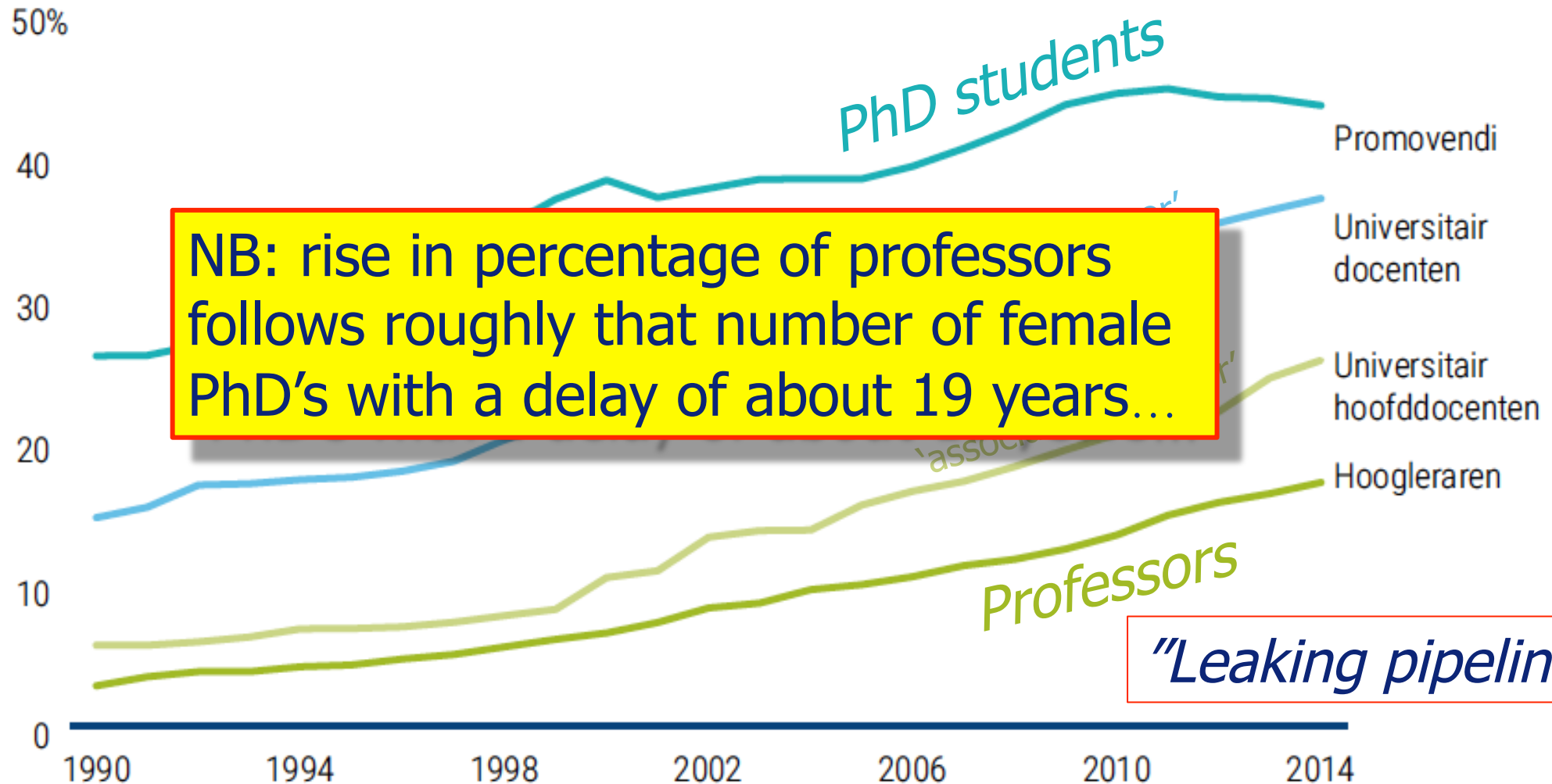


17%

13 Italy
17 France
18 Denmark
19 UK
20 Germany
24 Netherlands

There is progress, but...

Percentage of women in various academic ranks in NL

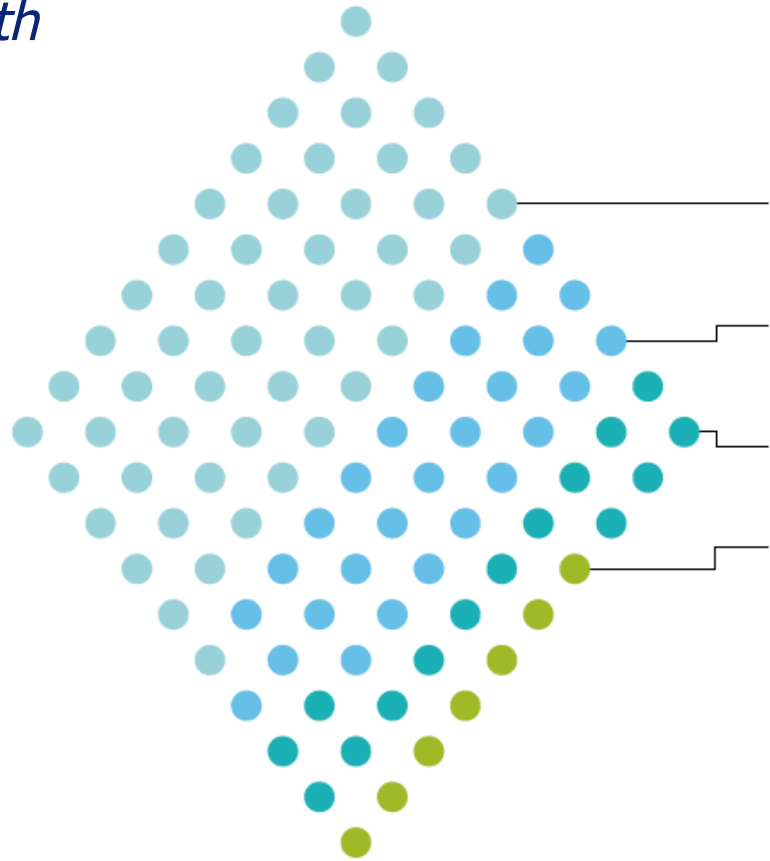


NB: rise in percentage of professors follows roughly that number of female PhD's with a delay of about 19 years...

"Leaking pipeline?"

There still is a pay-gap

Each dot represents
€ 7/month



Average NL academic pay difference €799

Correction for age

€409

€390

Correction for function category

€217

€173

Correction for function

€120

Unexplainable difference

€53

Some 'arguments' for not doing anything

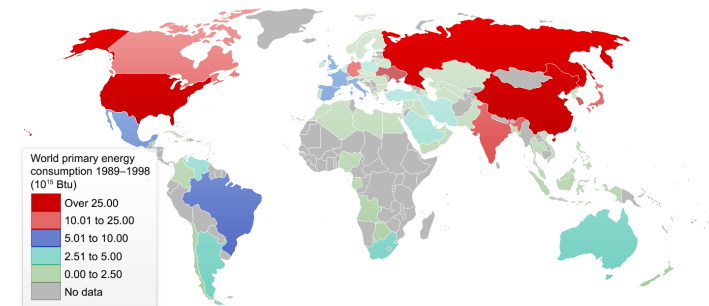
- "Just go for the best"
- "There are no women"
- "Everyone is free to chose"
- "No positive discrimination!"
- "We already pay attention"
- "It already starts at elementary school"
- "Innate differences between men and women"



Larry Summers,
Harvard president
2005

Why things should change...

- We should not accept our educational system to fail motivating female talent
the same holds for dropouts in school, minority groups!
- Science thrives on diversity so we will get better science with a diverse academic staff
monoculture gives a lower quality science, on average
- We just need you!
 - shortage of science PhD's
 - global challenges



My own motivation dating back to 1997



Why are women underrepresented

- MIT Birgeneau report
- Biased procedures for

*MIT report 1995: "...J
that family-work conflict
from those of their
women, many tenured
excluded from a
Marginalization increased
careers at MIT.
marginalization was
salary, space, awards
offers between men
less despite professional
their male colleagues*



So we can already distill some lessons

- Get men on board – men with daughters are a good target
- Prepare grant-committees for hidden bias (movie, discussion)
- Always (preferably at least two) women on a search committee
- Prefer tenure track path ('automatic' promotion after evaluation)
- Always open searches & scouting
- Get role models
- Put work balance on the agenda
- Avoid hidden 'innate ability' signals
- Special 'Physics Lady days' do help
- Look critically at your open days - hire 'women spies'



There *is* progress: Nature Feb 2011

The screenshot shows the Nature News website interface. At the top is a red header with the 'naturenews' logo in white. To the right of the logo is a 'Login' link. Below the header is a navigation bar with links: 'nature news home', 'news archive', 'specials', 'opinion', 'features', 'news blog', and 'nature journal'. The main content area features a 'comments on this story' link on the left. The central article is titled 'Science gender gap probed' with a sub-headline 'Overt sexism is no longer the norm, but societal barriers remain for women in science.' It includes publication details: 'Published online 7 February 2011 | Nature 470, 153 (2011) | doi:10.1038/470153a'. On the right, there is a 'most recent' sidebar with three items: 'Sex and violence linked in the brain', 'Corrections', and 'Evolution: A can of worms', all dated '09 February 2011'. A 'commented' tab is also visible.

naturenews [Login](#)

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Published online 7 February 2011 | *Nature* **470**, 153 (2011) | doi:10.1038/470153a

News

Science gender gap probed

Overt sexism is no longer the norm, but societal barriers remain for women in science.

most recent **commented**

- [Sex and violence linked in the brain](#)
09 February 2011
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09 February 2011

Stories by subject

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[the study] '.. finds that overt discrimination of the sort that would make a female candidate less likely to be hired, published or funded when competing against an equally qualified male is largely a thing of the past. Instead, trade-offs between pursuing a career and raising a family, coupled with societal factors and gender expectations that can influence professional choices at a young age, are more likely to account for the shortage of women in some fields.'

A nice message about early hidden negative signals

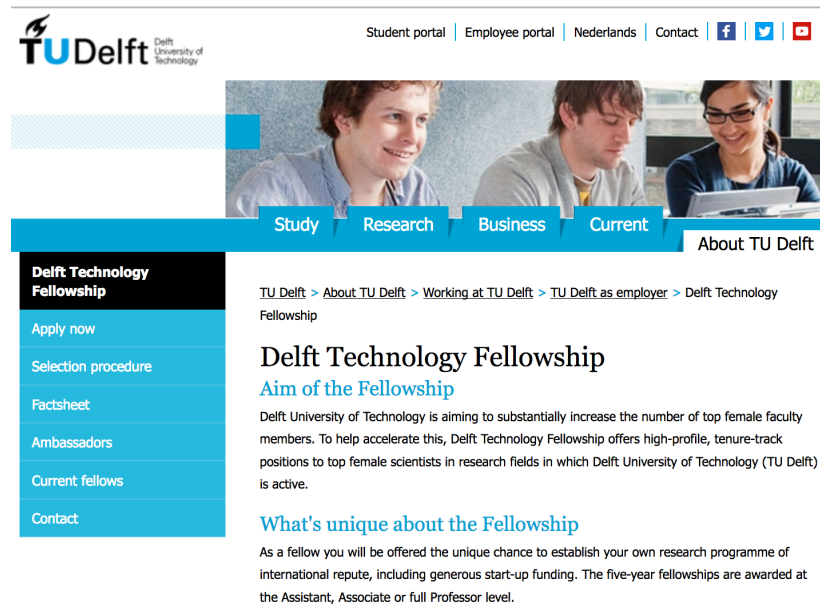
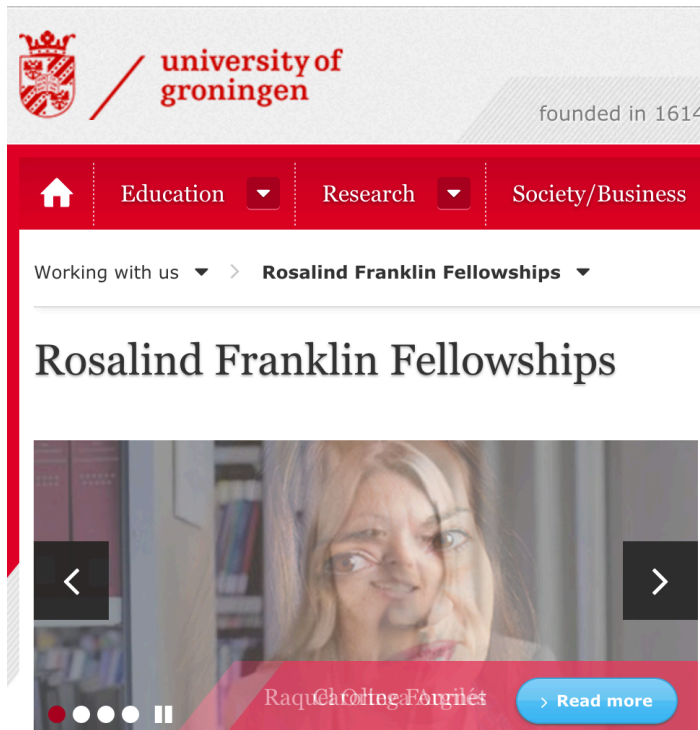
Movie around women's day 2016



**There is no single cause
So there is no single solution**

‘spray-gun approach’

Special programmes for women do make a difference!



MacGillavry Fellowship

Wervingsprogramma voor vrouwelijk onderzoekstalent

De Faculteit der Natuurwetenschappen, Wiskunde en Informatica stimuleert de diversiteit van de onderzoekers binnen de onderzoeksinstituten.



- ✓ No preselected fields (important!)
- ✓ Often over 100 applicants for a few positions
- ✓ Based on tenure track model (promotion to professor after evaluation)
- ✓ Challenged in court for discrimination but upheld at EU level

1998: start Fom/v programme

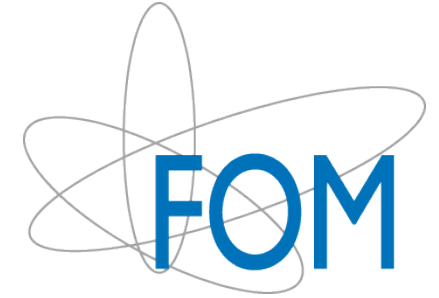


- Flexible programme aimed at increasing the number of women in physics
- Over 13-fold more female professors since 1998!
- Simple start...

A bright yellow, multi-pointed starburst graphic with a slight drop shadow, containing the text 'Gradually more initiatives' in red, italicized font.

*Gradually more
initiatives*


Start 1998



- Aid to universities in attracting women
'rooftile constructions'; FOM sometimes 'broker'
- Special postdoc positions
- Minerva prize for the best publication by a women



Gradually expanded into...

- Two-yearly women physics days
- Create awareness about giving implicit negative signals to women *evening for group leaders with actors at yearly physics meeting*
- Workshop '*are you really choosing the best?*' for management
- Mentoring programme for women in the FOM-organisation
- Stiff targets for our own organisation, also for support positions
- Stimulate scouting (*'my most wanted women'* list at institutes)
- Faculty positions for women through national committee
-  *Women in Science Excel* programme to attract female researchers at national institutes
- Daycare at the national physics conference
- Doublecheck female-friendliness of job-ads
- Pay attention to composition of committees



Women in physics day



Yes we can!



Small initiatives do help!

You can make a difference!

Suggestions for discussion

- Do you have additional *'best practices'*?
- Does your organisation have a *'gender-instruction'* for committees?
- Would a *women-friendliness* mark for departments help?
- What should we do to put the *'two-body problem'* on the agenda?