

Experiences from gender work within the International Union of Radio Science - URSI

Asta Pellinen-Wannberg
Professor Emerita of Physics

**Umeå University and Swedish
Institute of Space Physics**



Why am I interested in gender balance issues?

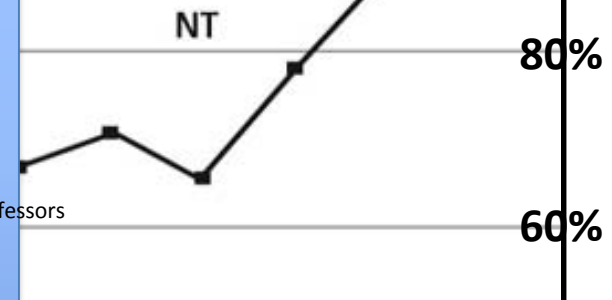
- A seminar given by professor Cecilia Jarlskog at University of Helsinki 1979 – never did a visiting male professor get so many stupid questions.
- Have been wondering “would a male scientists have been handled like this” in many occasions since that.
- Questions to many talks given by female scientists – or no questions at all?
- Universal suffrage in Finland since 1906

Figur 2.

Andel kvinnor och män bland disputerade lärare/forskare i högskolan och bland nya doktorer 2008 inom olika områden

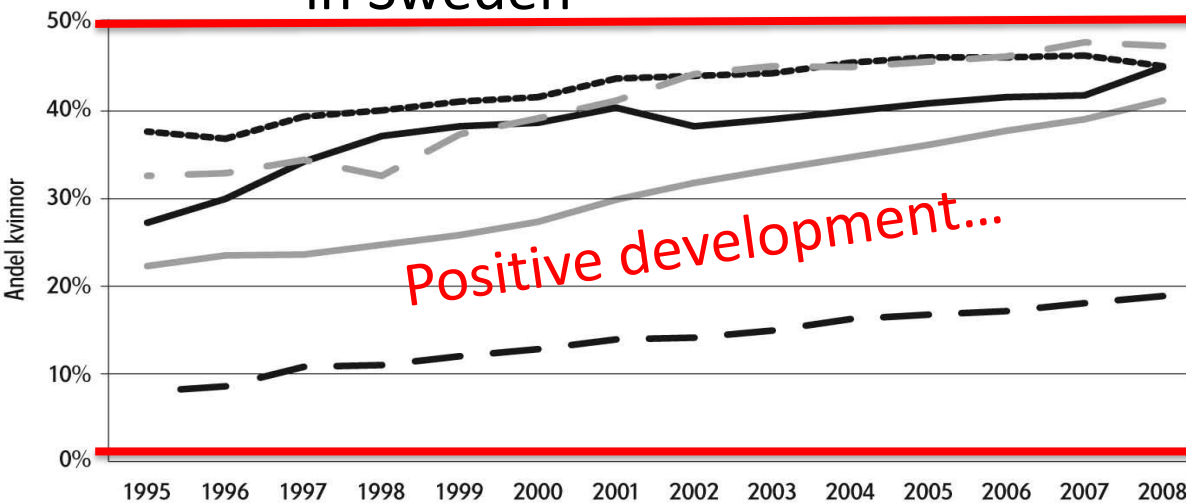


Rate of female scientists in the highest positions in science and technology:

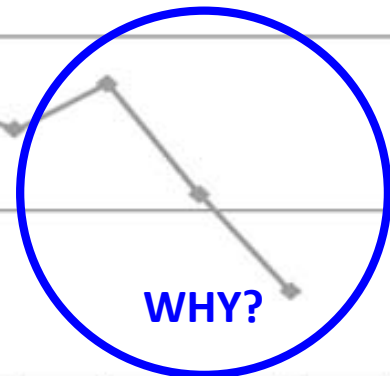


Andel kvinnor bland disputerade lärare/forskare i högskolan och bland nydisputerade 1995-2008

Gender balance - all academia in Sweden



Positive development...



drex (1159)	a fou (943)	foass (487)	lekt (1822)	prof (1537)
nt	nt	nt	nt	nt

Anm: HS = humaniora och samhällsvetenskap, M = medicin, NT = naturvetenskap och teknikvetenskap. Drex = doktorsexaminerade, a fou = annan forskande och undervisande personal, foass = forskarasistenter, lekt = lektorer, prof. = professorer. SLU ingår inte i figurunderlaget. Källa: Högskoleverkets NU-databas (exkl. Sveriges lantbruksuniversitet och kategorin Övriga/gemensamma).

Contents

- What is URSI and why so male-dominated so far?
- Why are equal opportunities so important?
- Efforts to pass the gender barrier traditions at URSI
- What else can we do?



URSI MISSION STATEMENT

Radio science encompasses the knowledge and study of all aspects of electromagnetic fields and waves. The International Union of Radio Science (Union Radio-Scientifique Internationale), a non-governmental and non-profit organisation under the International Council for Science, is responsible for stimulating and co-ordinating, on an international basis, studies, research, applications, scientific exchange, and communication in the fields of radio science.



Included within the objectives are the following:

- To encourage and promote international activity in radio science and its applications, for the benefit of humanity;
- To encourage the adoption of common methods of measurement, and the intercomparison and standardisation of the measuring instruments used in scientific work;
- to stimulate and co-ordinate studies of:
 - the scientific aspects of telecommunications using electromagnetic waves, guided and unguided;
 - the generation, emission, radiation, propagation, reception, and detection of fields and waves, and the processing of the signals embedded in them.
- to represent radio science to the general public, and to public and private organisations.



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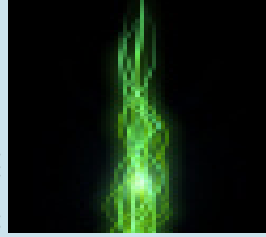
SCIENTIFIC COMMISSIONS

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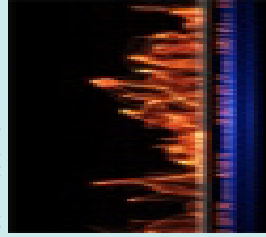
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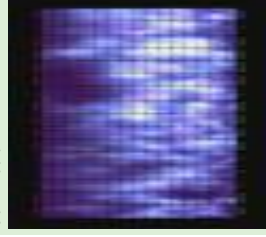
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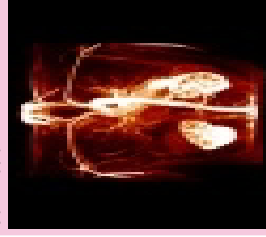
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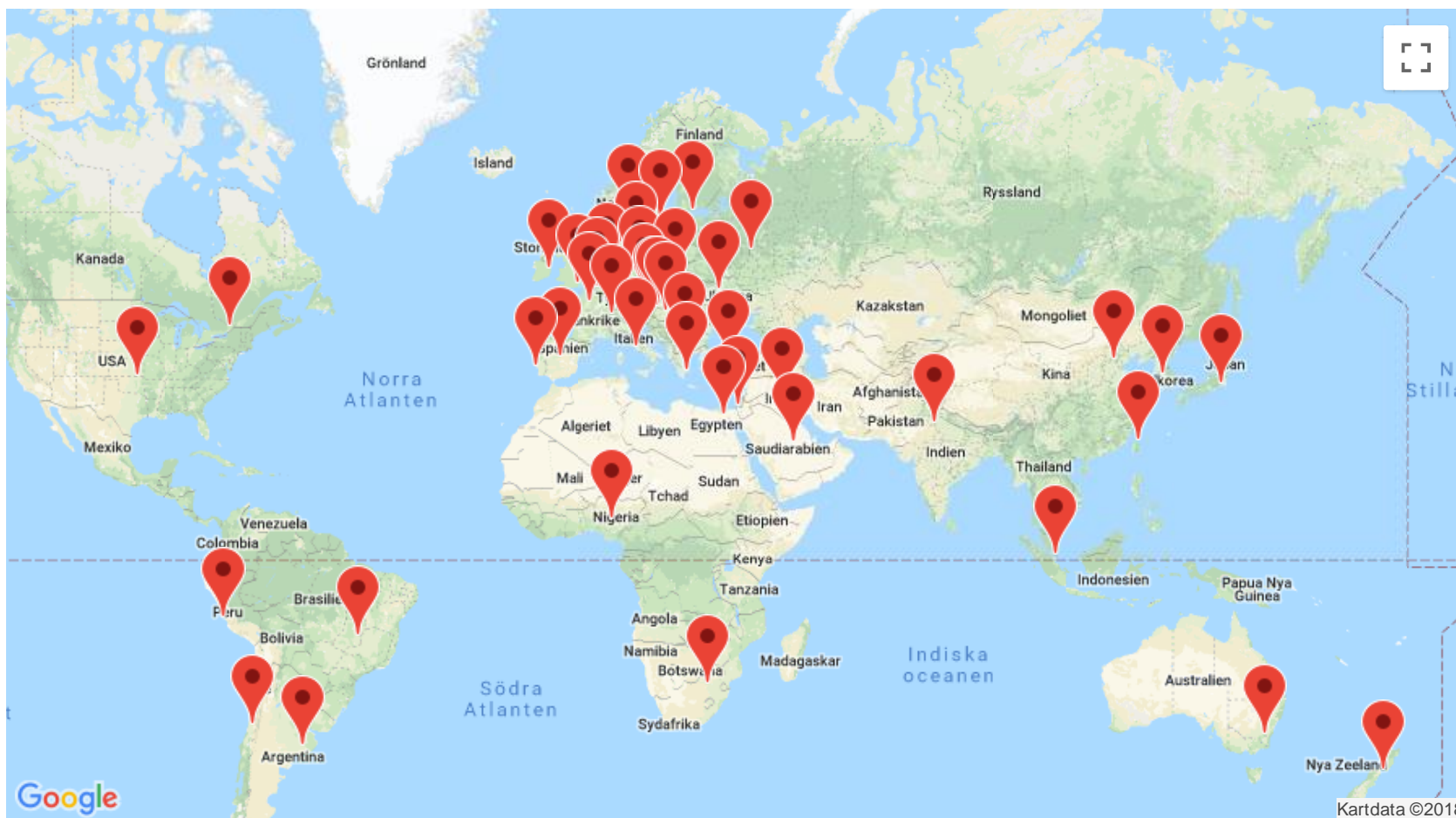
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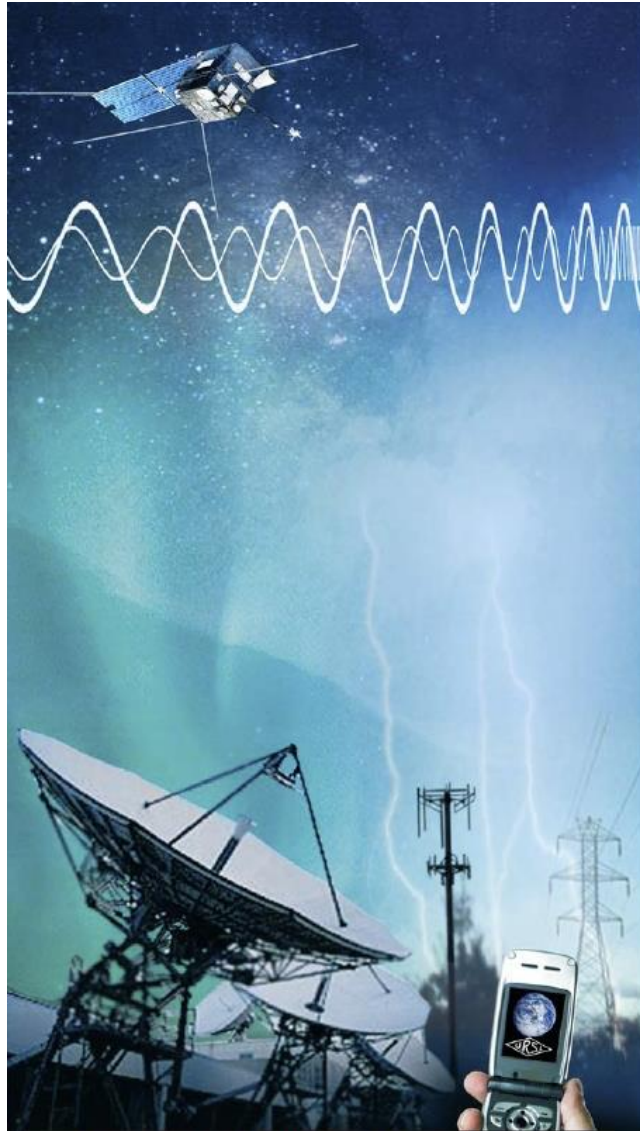
**Electromagnetics in
Biology and Medicine**



MEMBER COMMITTEES



At the international level, almost every branch of science functions under the auspices of, and is represented by, an organization known as a union. For the science involving the various forms of what are commonly called radio waves, the pertinent union is the International Union of Radio Science, commonly referred to by its acronym URSI (based on its name in French: Union Radio-Scientifique Internationale). URSI and other unions associated with other branches of science are, in turn, members of the International Council of Science (ICSU).



INTERNATIONAL UNION OF RADIO SCIENCE



Presentation

At the international level, almost every branch of science functions under the auspices of, and is represented by, an organization known as a union. For the science involving the various forms of what are commonly called radio waves, the pertinent union is the **International Union of Radio Science**, commonly referred to by its acronym **URSI** (based on its name in French: Union Radio-Scientifique Internationale). URSI and other unions associated with other branches of science are, in turn, members of the International Council of Science (ICSU).



URSI was founded in the early days of radio telegraphy. Since that time radio science has matured to encompass the fields of radio, telecommunication and the electronic sciences, all of which are pervasive and have dramatically altered modern life. Radio, television, cellular telephones, computers, and the Internet all have developed from the fields of science associated with URSI.

URSI was founded in 1919 at the time that ICSU itself was constituted. Since then the basic technical area covered by URSI has expanded and proven highly important in the development of radio science. A number of Nobel prizes have been awarded to scientists actively involved in radio science.



From left to right and top to bottom:
E.V. Appleton (1947), N.G. Bacon, A.M. Makin
and C.H. Townes (1964), B.D. Josephson (1973),
H. Alfvén (1970), A. Hewish and M. Ryle (1974),
A.A. Penzias and R.W. Wilson (1978), J.H. Taylor
(1993), V.L. Ginzburg (2003).

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"The history of our Union is one of steady growth and of effort to coordinate the international scientific foundations of the fantastically extending roles of radio and electronic applications. Our domain extends over the Earth, throughout the solar system, and out among the galaxies. We can be sure of one thing: when man reaches the outermost limits of the observable Universe, he will materially be assisted by means of radio for communications navigation and control using the electromagnetic waves envisaged by the genius of Maxwell a hundred years ago".

J.H. DELLINGER

1963

And, as we look to the future, even more dramatic change is promised: the development of the electromagnetic environment, the development of nanotechnology, the prospect of new modes of transportation of energy by electromagnetic waves, and the explosion of wireless communications.



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URSI Structure

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Prof. Ari Sihvola
(Finland)



Prof. Piergiorgio Uslenghi
(U.S.A.)

Why are equal opportunities so important?

- At ordinary working places in Sweden the absence due to sickness has decreased with growing gender balance
- The atmosphere improves – the discussion topics stay tidy (hopefully)
- In science women might come with a new point of view - still in my generation we tried to find an own slot if we were not integrated in the projects properly
- When female scientists start to be “normal” everywhere, even the unconscious discrimination decreases

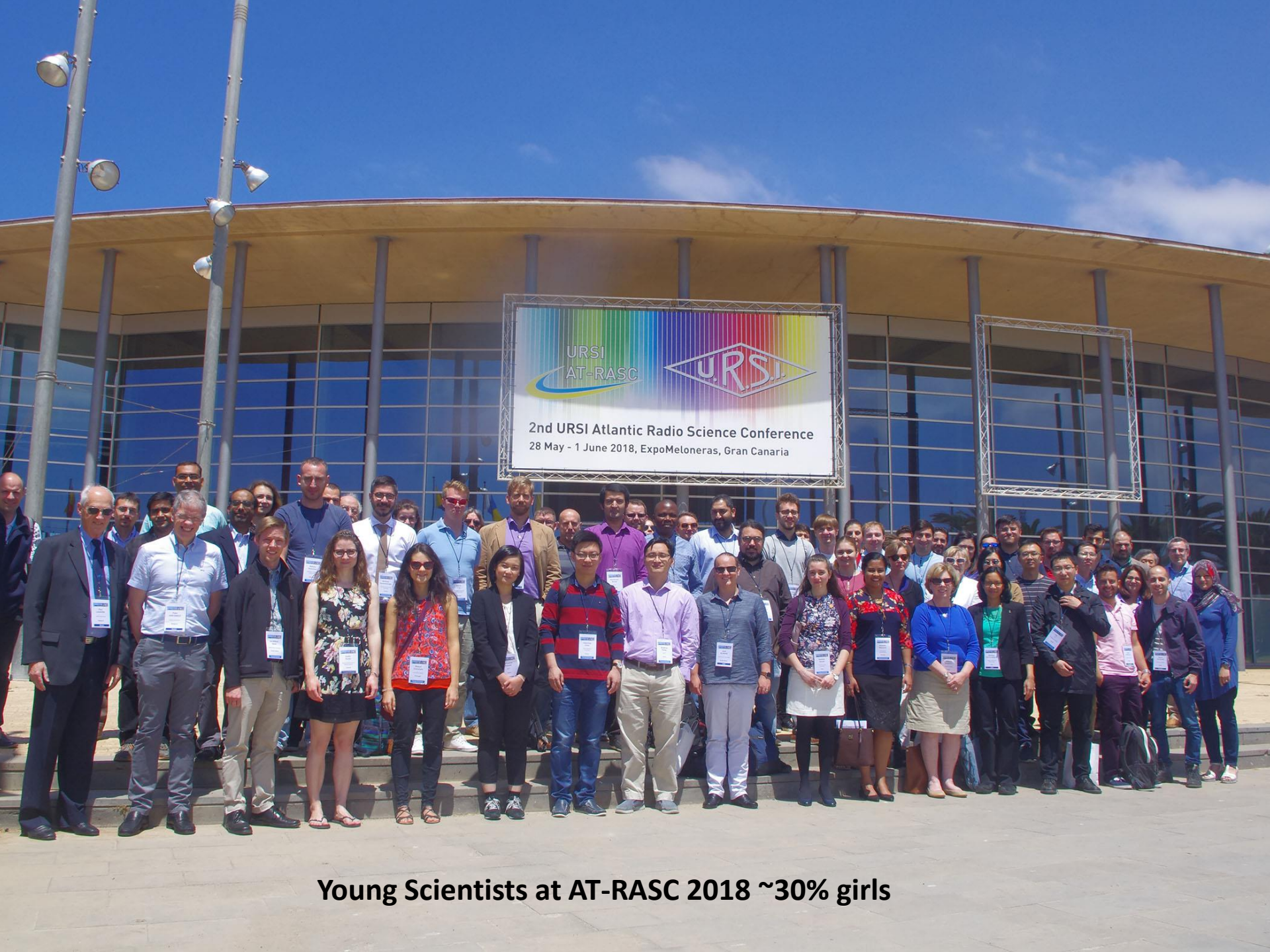
Gender at AT-RASC and URSI

(AT-RASC was a conference held at Gran Canaria in May 2018)

- Total registrants: 552
 - 108 female (of which 36 accompanying persons) ~13% (sci)
 - 103 applied for a YS Award, 30 of them were female ~30%
 - 47 YS have been selected, of which 14 are female ~30%
- Total convenors: 154
 - 23 of them are female ~15%
- Official Positions within URSI
 - Board: no females 0%!
 - Com Chairs: 1 of 10 is female 10%
 - Vice-Chairs, 2 of 10 are female 20%
 - ERC: 3 of 20 are female 15%
- Presidents of URSI Committees:
 - 44 total, 4 are female ~9%

Efforts to pass the gender barrier traditions at URSI

- Young scientist programs with awards have been very successful
- Women in Radio Science (WiRS) column in Radio Science Bulletin (RSB) since 2015
- Invitation to Japan to tell about equal opportunities work in Sweden for Research Organisation of Information and Systems (ROIS)
- Invitation to organize a WiRS session at AT-RASC



URSI
AT-RASC

URSI

2nd URSI Atlantic Radio Science Conference
28 May - 1 June 2018, ExpoMeloneras, Gran Canaria

Young Scientists at AT-RASC 2018 ~30% girls



Asta Pellinen-Wannberg
Umeå University, Department of Physics and
Swedish Institute of Space Physics
S-90187 Umeå, Sweden
Tel: +46 90 786 7492
E-mail: asta.pellinen-wannberg@umu.se

Introduction by the Associate Editor

In February, I was invited by the Research Organization of Information and Systems (ROIS) Female Research Development Office to spend some time in Japan. The Japanese government has gotten interested in promoting gender equality in science through its research organizations. For example, one of the purposes of my visit was to tell how Sweden is striving towards gender balance in academia.

I had opportunities to discuss gender issues with Prof. Genshiro Kitagawa, at that time the President of the Inter-University Research Institute Corporation, ROIS, as well as with the incoming President, Prof. Ry oichi Fujii, whom I have known since long ago, when we both were members of the EISCAT Council. I also met the ROIS Female Research Development Office leader, Prof. Isao Katsura, and the coordinator, Dr. Yoshiko Nakamura, who was friendly in guiding me through the offices and surroundings.

I had a chance to have discussions with female researchers at the National Institute of Polar Research (NIPR) and the National Institute of Information and Communications Technology (NICT), where I gave scientific talks. I was happy to see that the whole leadership of NIPR – the Director-General, Prof. Kazuyuki Shiraiishi, as well as the three Vice Director-Generals, and Profs. Hiroyuki Enomoto, Yoshifumi Nogi, and Takuji Nakamura – were present at the seminar, “Gender Issues in Science,” and they were eager to afterwards discuss the topic. Takuji was my very good host during the whole visit, and we had many interesting discussions.

Through my meetings with female scientists, I had a possibility of recruiting some new people for my Women in Radio Science column. This time, I will present for the first time a Japanese researcher, Yuka Sato, a PhD and project researcher in the Space and Upper Atmospheric Science Group at NIPR. It was especially nice to meet Yuka, together with her (at that time) eight-month-old son, Soshi. She was still on parental leave in February, but is now back in business. Here comes her own story.



Figure 1. Dr. Yuka Sato with her son, Soshi.

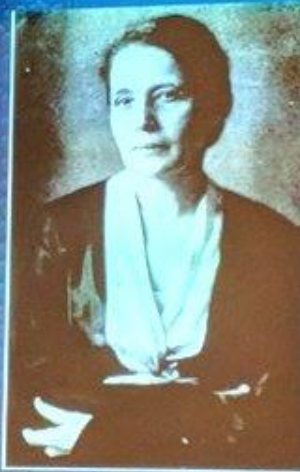
My personal recommendations to improve the gender balance

- Presence of good examples at all levels is important for younger female scientists to be able to identify themselves with
- Student exchange or postdocs positions abroad especially to places with many female scientists can be encouraging
- Even senior male researchers can contribute by taking the young female scientists seriously
- All committees must have at least 40% of each gender

The responsibility of the society

- Let women themselves decide about their lives
- Good childcare and senior houses
- Paid parental leave for both parents
- Student loans for everybody to be able to study
- Cost-free university education

Lise Meitner and the Discovery of Fission



(1878-1968)

Outline

Introduction

Early Years

Escape from Germany

Discovery of Fission

Later Years

Interesting Comments

Dr Anthea Coster (MIT-Haystack) giving a talk about Lise Meitner
at URSI AT-RASC Women in Radio Science session on
Gran Canaria, May 29 2018

What else can we do?

- Support young female scientists:
 - Say they are good
 - Suggest awards even for them
 - Encourage them to apply for positions
 - Tell them which parameters are important for the career
 - Mentors?
- Support for senior female scientists:
 - Suggest them to give keynote talks, general lectures etc
 - Suggest them to committees etc
 - Encourage them to apply for senior positions
- In research grant evaluations we can point out lack of gender balance if applicable
 - In countries not so far away with many talented female scientists, there are not any rules for gender balance

Summarizing thoughts

- There is a positive trend towards gender balance
 - Even the male scientists want to modernize their organizations
- The topmost positions are still behind hard work
 - Why was there not any female candidates?
- Why do often women think they are not good enough?
- A position created for a person with a lot of teaching load goes to an outsider genius?