

Women in Radio Science

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Honoré Daumier 1857

Union Radio-Scientifique Internationale



International Union of Radio Science

[Home](#) - [Contact](#)

Search

Meetings

AP-RASC

GASS

AT-RASC

Knowledge Library

Publications

Documents

Young

URSI

Scientists Awards

Scientific

Commissions

Member

Committees

About

Membership

URSI

SCIENTIFIC COMMISSIONS

Commission A



**Electromagnetic
Metrology**

Commission B



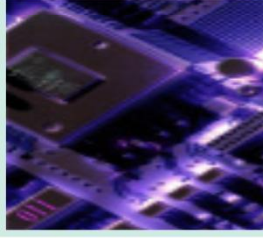
Fields and waves

Commission C



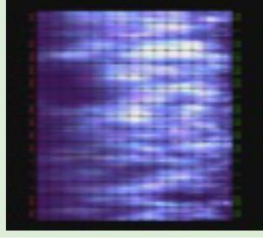
**Radiocommunication
Systems and Signal
Processing**

Commission D



**Electronics and
Photonics**

Commission E



**Electromagnetic
Environment and
Interference**

Commission F



**Wave Propagation and
Remote Sensing**

Commission G



**Ionospheric Radio and
Propagation**

Commission H



Waves in Plasmas

Commission J



Radio Astronomy

Commission K



**Electromagnetics in
Biology and Medicine**

Photos from recent URSI meetings



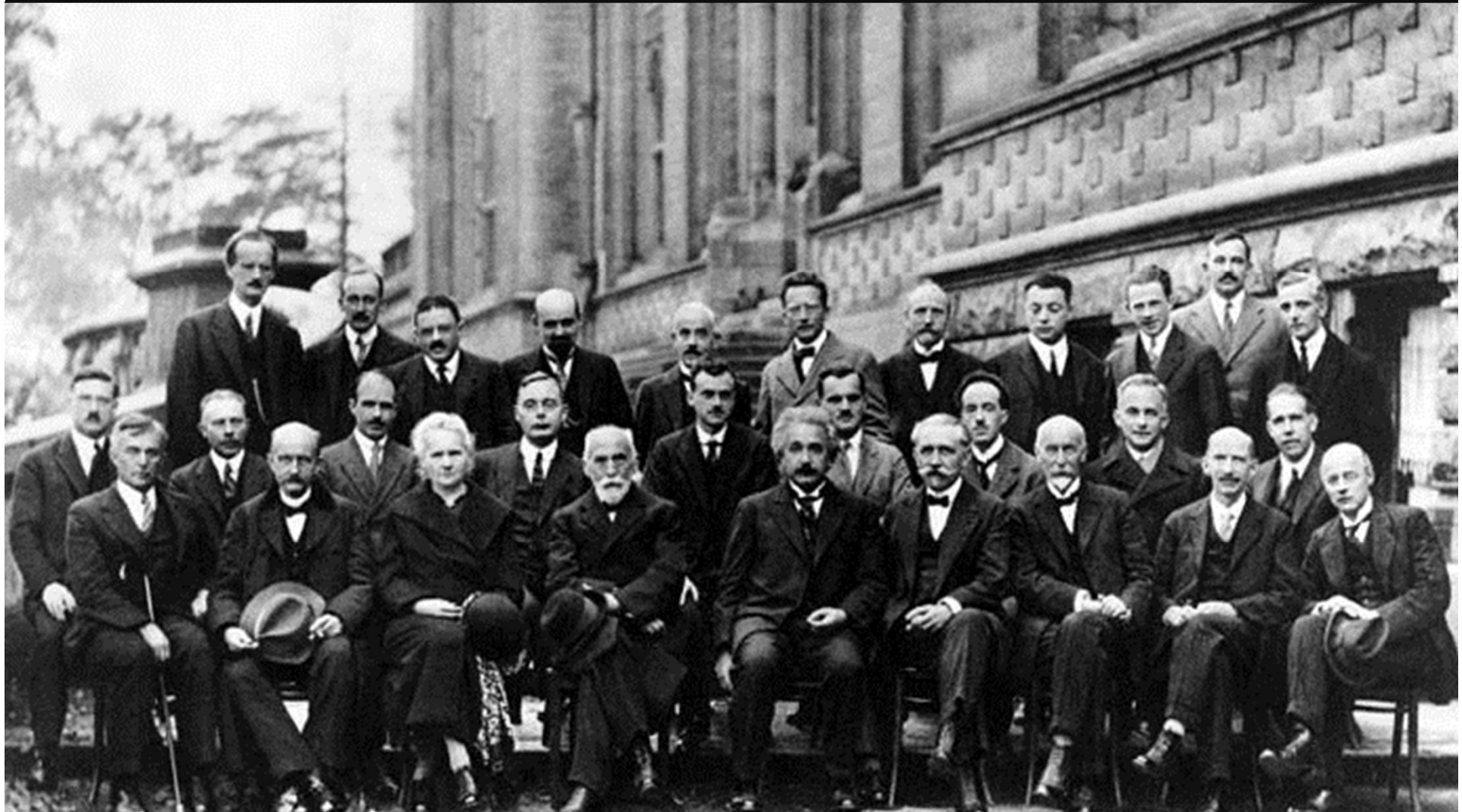
SPC Finalists

Mr. Li Yi (Tohoku University, Japan)
"Large Scale Subsurface Velocity Estimation with Array GPR System YAKUMO"
Li Yi, Kazunori Takahashi and Motoyuki Sato (Tohoku University, Japan)

Mr. Takashi Takeuchi (Nihon University, Japan)
"Maxwell-Schrodinger Hybrid Simulation for Optically Controlling Quantum States. A Two-Level System Manipulated by a Light Pulse Pair"
Takashi Takeuchi, Shinichiro Ohnuki and Tokuei Sako (Nihon University, Japan)

Mr. Yu Yasuda (Osaka University, Japan)
"Terahertz Wireless Transmission Enabled by Photonics Using Binary Phase-shift Keying At 300 GHz"
Yu Yasuda and Shintaro Hasegawa (Osaka University, Japan);
Shinji Kuwano, Jun Terada and Akihiro Ohtsuka (Terakura Corporation);
Takashi Higatsuma (Osaka University, Japan)

Solvay Conference ~1911



Solvay Conference ~1911





[Home](#) - [Contact](#)

Search

Meetings
AP-RASC GASS AT-RASC

Knowledge Library
Publications Documents

Young Scientists
URSI Awards

Scientific Commissions

Member Committees

Individual Membership

About URSI

[Mission Statement](#) - [URSI Keydates](#) - [History of URSI](#) - [Statutes of URSI](#) - [Structure](#) - [General Assemblies](#) - [URSI Leaflet](#) - [Downloadable forms](#)

URSI Structure

[Current](#) [Past](#)

Current

[Officers](#) [Secretariat](#) [Chairs](#) [Commission ECR](#) [Network Committees](#) [Ad-hoc groups](#) [Standing Committees](#) [List of Officials](#)

Current Officers



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Prof. Makoto Ando
(Japan)



Past President
Prof. Paul Cannon
(U.K.)



Secretary-General
Prof. Peter Van Daele
(Belgium)

Vice-Presidents



Prof. Willem Baan
(Netherlands)



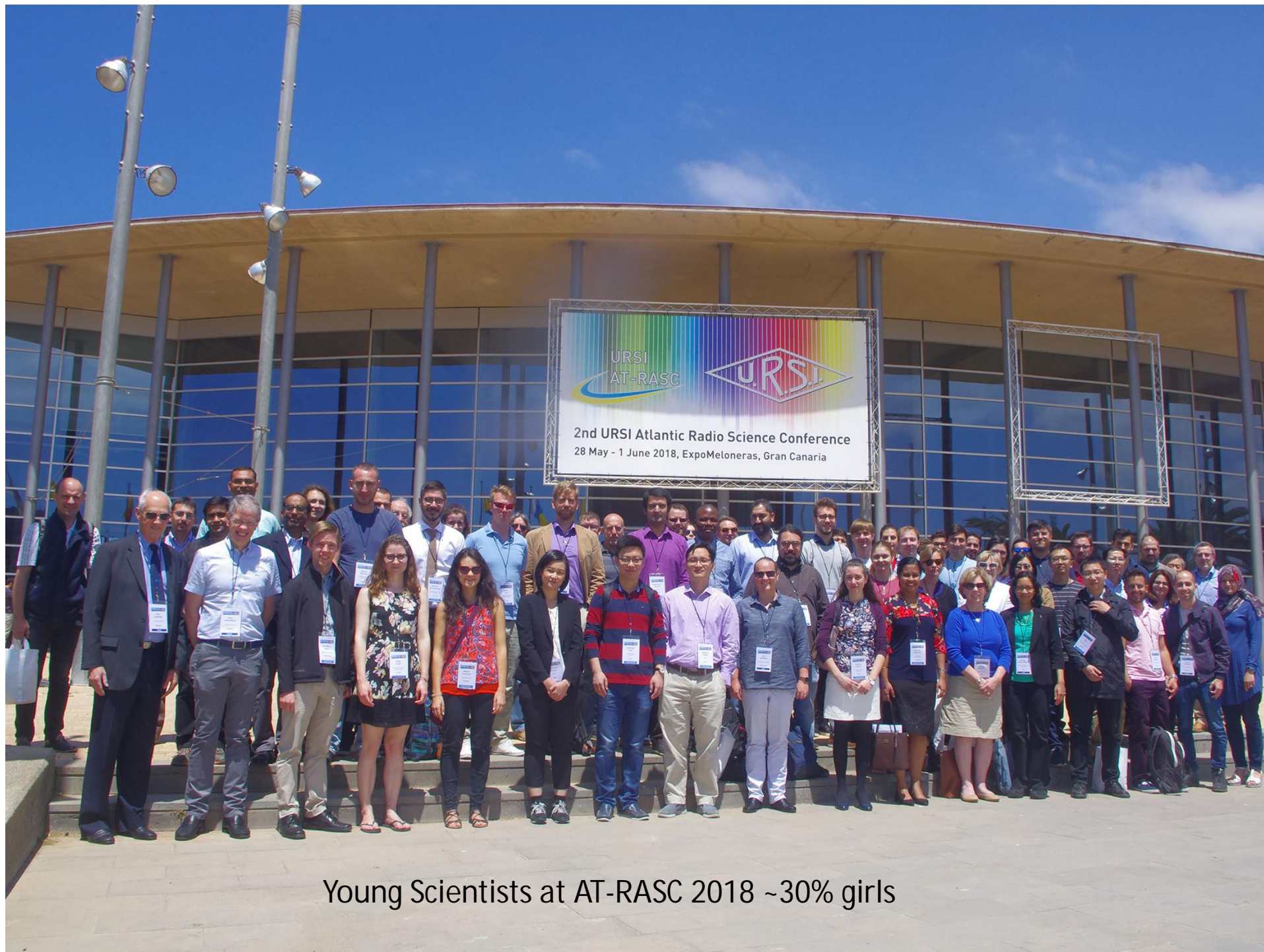
Prof. Ondrej Santolik
(Czech Republic)



Prof. Ari Sihvola
(Finland)



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



Young Scientists at AT-RASC 2018 ~30% girls

PUBLICATIONS



- [Intro](#)
- [Newsletters](#)
- [Radio Science Bulletin](#)
- [White Papers](#)
- [Radio Science](#)
- [URSI Radio Science Letters](#)

Intro
The URSI Newsletter

The URSI Newsletter is part of the plan to increase the visibility of URSI, and to stimulate the exchange of information amongst the URSI scientists. The Newsletter is published now and then and is distributed by e-mail. It allows more informal communication with URSI scientists.

The Radio Science Bulletin

The Radio Science Bulletin (published quarterly in March, June, September and December) contains scientific articles covering the fields of interest of the ten scientific commissions of URSI. Emphasis lies on non-specialised contributions that are oriented towards the radioscintist community.

The Radio Science Bulletin also contains items of information concerning the activities of URSI; such as notices relating to past and future scientific symposia, announcements about the activities of the Board of Officers and the Scientific Commissions and the Working Groups of URSI, reports on relevant decisions of other ICSU organisations, as well as book reviews, and historical articles of interest to radioscintists.

Lists of the names and addresses of the Officers of URSI appear each year in the December issue. The Radio Science Bulletin has not been available in printed form since 2012, following a decision taken by the URSI Council at the Istanbul GASS.

URSI Radio Science Letters

[URSI Radio Science Letters](#) (RSL) is a new electronic journal owned and operated by URSI. Its purpose is to rapidly publish original and previously unpublished scientific research work in all areas of radio science, in the form of short contributions that are rigorously reviewed. The journal is open access and will be published only in electronic format, one volume per calendar year. Each accepted contribution will be identified by volume number, year of publication, page numbers, and DOI. Each reviewed and accepted paper will be published as soon as full editing is completed. The URSI Board has appointed Prof. Piergiorgio L. E. Uslenghi as the first Editor-in-Chief (EIC) of the RSL.

URSI White Papers

URSI has published a white paper which is available for download from this website.

URSI-sponsored Journals

Radio Science

The Radio Science Journal, sponsored by URSI and published by the American Geophysical Union, contains original articles on all aspects of electromagnetic phenomena related to physical problems. It covers the propagation through and interaction of electromagnetic waves with geophysical media, biological media, plasmas, and man-made structures.



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Women in Radio Science



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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. Ryoichi 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.

Women in Radio Science columns so far

- Myself Umeå University and Swedish Institute of Space Physics 2015
- Sheila Kirkwood Swedish Institute of Space Physics 2016
- Anthea Coster MIT Haystack Observatory, MA, USA
- Galina Ryabova Tomsk State University, Russia
- Margaret Campbell-Brown University of Western Ontario, London, Canada
- Maria Hajdukova Astronomical Institute of the Slovak Academy of Sciences, Slovakia 2017
- Yuka Sato National Institute of Polar Research, Tokyo, Japan
- Iwona Stanislawska Polish Academy of Sciences, Poland
- Lee-Anne McKinnell South African National Space Agency, South Africa
- Jamesina Simpson University of Utah, Salt Lake City, UT, USA - Santimay Basu Medal 2018
- Ivana Kolmasova Czech Academy of Sciences and Charles University, Czech Republic
- Reflections from myself
- Patricia Doherty Boston College, MA, USA
- Tuija Pulkkinen Aalto University, Finland -> University of Michigan, MI, USA 2019
- Rowayda Sadek Beni Suef University and Helwan University, Egypt

- Elizabeth Alexander 1908-1958 Radio Development Laboratory 1942-1945, New Zealand

Can be found at <https://www.ursi.org/publications.php#tab-section3>

Reflections from the WiRS column

- Successful scientists with good positions
- Some come from scientific dynasties
- Several have big brothers
- No experience of discrimination
- Many thank their good luck and support



Three best student poster teams from Alexandria University and AASTMT (Alex.).

Rowayda Sadek, Egypt



- PhD in Communication and Electronics, Alexandria Univ., 2005
- Vice Dean, Beni Suef Univ.
- Assoc. prof., Helwan Univ., Cairo
- General Secretary in the Egyptian URSI Committee
- SCADA Project, Canada
- Supportive supervisor for many female students



Coming topics in WiRS



- Hedy Lamarr, 1914 – 2000
- Film career in Hollywood
- Had inventions as a hobby
- Discussions with Howard Hughes about communication problems
- Together with George Antheil suggested “self-playing” piano type mechanism with 88 frequencies for coded information
- US Patent 2,292,387 “Secret Communication System”, 1941
- Today frequency-hopping spread spectrum (FHSS) is used in Bluetooth and WiFi signaling protocols

Does the WiRS column matter?

- I do not know how much people read it, but...
- Presents capable female scientists,
- who could be nominated for awards or medals
- or for positions in research organizations such as URSI?

- Important to make it normal with female candidates at all levels in science
- Everything else is very old-fashioned!