

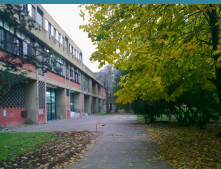
# IUPAP Gender Champion Report

Silvina Ponce Dawson

Departamento de Física, FCEN-UBA and IFIBA (CONICET)

*Executive Committee Meeting, May 3-4, 2018*

- Information to assess the effectiveness of approved policies.
- Description of status of on-going projects.
- Discussion of new policies, ideas to advance further, etc.



# On the role of the IUPAP Gender Champion

## Gender Champion-WG5 liaison

Discussing with members of the IUPAP Working Group on Women in Physics (WG5) we decided that:

The Gender Champion will be an ex-officio member of WG5. As such, she/he will participate of the discussions and be informed about the decisions but will not have voting rights on these decisions. The Chair of WG5 will put together some Terms of Reference for WG5 that will include this definition of the liaison.

# Information on conferences sponsored or endorsed by IUPAP: Statistics on gender distribution.

*Period 2017 and 2018.*

***Number of conferences analyzed: 19***

***Average number of attendees: 403***

***Average number of female attendees: 76 (19%; min= 8%, C4; max= 42%, C19)***

***Average number attendees giving invited papers: 45***

***Average number of female attendees giving invited papers: 7 (17%; min=3.6%, C5; max=38%, C19)***

***Average number of members of International Advisory Committee: 59***

***Average number of female members of IAC: 15 (25%; min= 5%, C5; max=42%, C14; also, one with 4 IAC members all of them female, C13)***

# Information on conferences sponsored or endorsed by IUPAP: Statistics on gender distribution.

**Data from 21 conferences in 2015** (collected by Alinka Lépine-Szily):

***Female attendees:*** mean value 18%, min 8%, max 50%.

***Female invited speakers:*** mean value 14.5%, min 4% max 27%.

***Female members of international advisory/organizing committee:*** mean value 16%, min 0%, max 39%

**Data from 35 conferences in 2016** (collected by Alinka Lépine-Szily):

***Female attendees:*** mean value 19%, min 5%, max 52%.

***Female invited speakers:*** mean value 19%, min 2% max 64% (Phys Educ Conf in Brazil).

***Female members of international advisory/organizing committee:*** mean value 16%, min 0%, max 50%



## About rules for IUPAP endorsed conferences.

**Current on web page:** *IUPAP insists that women should be represented, in reasonable proportions, as organizers, speakers, and attendees of IUPAP sponsored meetings. The presence of women on the local and international committees and as plenary and invited speakers is a condition for IUPAP sponsorship.*

**Document on web page (Agencia Fapesp, Oct 2017) with an interview that says:** *"the 29th General Assembly established, as a recommendation for all affiliated national institutions, that the 20% target (of female participation in conferences) be achieved. And it has been defined, [...] that meetings with female participation of less than 10% are not accepted. The organizers will have a deadline of a few weeks to make the correct corrections"*.

**Which rule do we want? How to enforce it?**

What about commissions?

What about commission chairs?

How to enforce it?

Who keeps track of the statistics?

Should we specify M or F by the names?

# About rules for IUPAP endorsed conferences.

## Statement about harassment

IUPAP requires that supported conferences publish on their websites and in all publications related to the Conference a specific statement on harassment. Among other things, the statement says:

“The conference organisers will name an advisor who will consult with those who have suffered from harassment and who will suggest ways of redressing their problems, and an advisor who will counsel those accused of harassment. The conference organisers may, after due consideration, take such action they deem appropriate, including warning or expulsion from the conference without refund.”

## **How to control and/or enforce it?**

Right now, there is no item on the conferences report form where the organizers could inform whether there was such a problem at the conference and how they handled it.

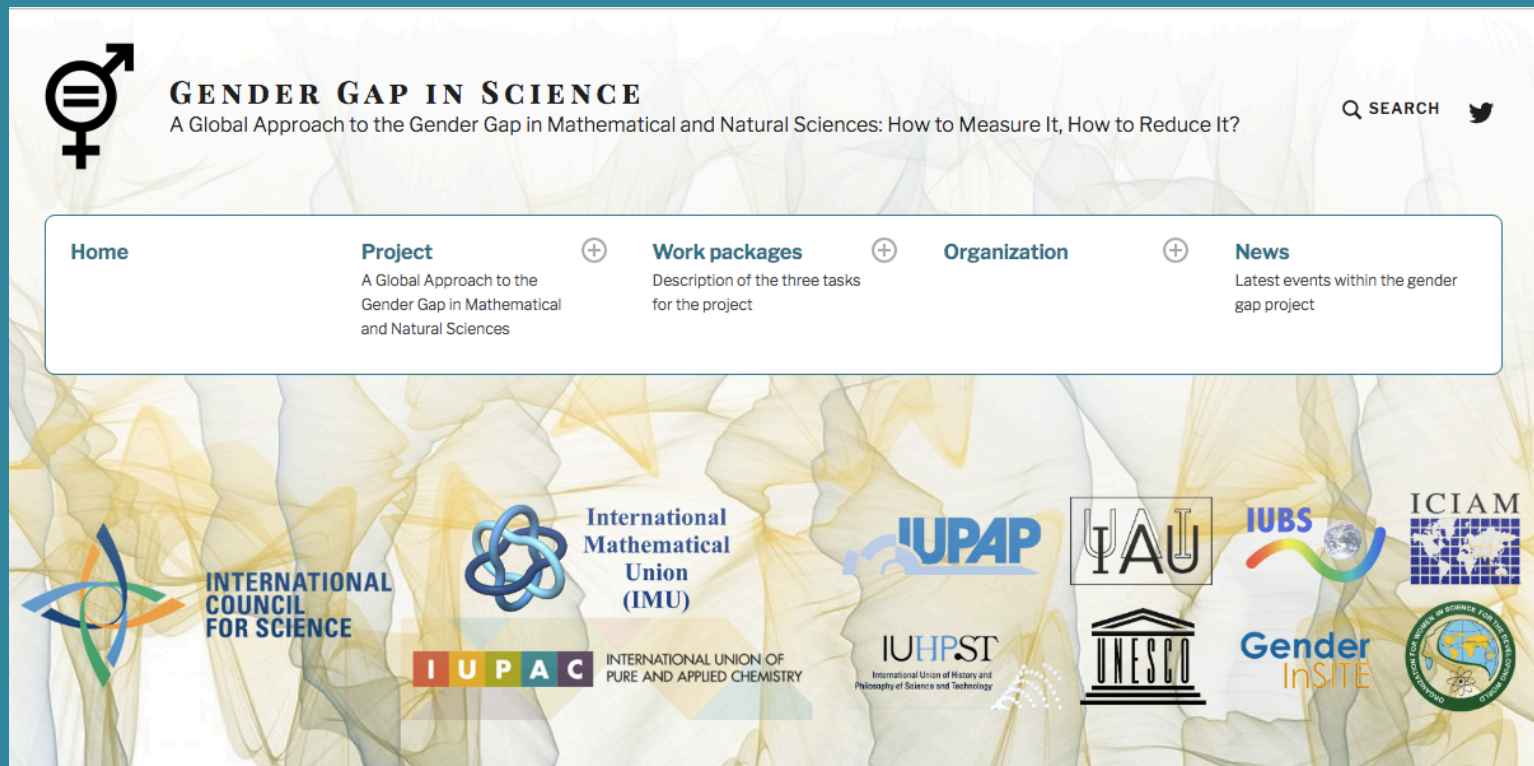
There is no requirement either for the organizers to describe how they would manage such situations when applying for IUPAP sponsorship or endorsement. Can we add something about it in the application and report forms?

It would be good if IUPAP could give a set of guidelines (available on its web page) on how to act in these cases (particularly, how to preserve the privacy and fairness of the whole process). In that regard, the Waterloo Charter that we have drafted with the Working Group on Women in Physics which contains recommendations could be useful.

**How to enforce it?**

Information on an on-going project where the role of the IUPAP is very relevant:

## Gender Gap in Science Project funded by ICSU



The screenshot shows the homepage of the Gender Gap in Science project. At the top left is a logo combining the male and female symbols with an equals sign. The main title is "GENDER GAP IN SCIENCE" with the subtitle "A Global Approach to the Gender Gap in Mathematical and Natural Sciences: How to Measure It, How to Reduce It?". A search bar and a Twitter icon are on the right. Below the title is a navigation menu with five items: "Home", "Project" (with a description: "A Global Approach to the Gender Gap in Mathematical and Natural Sciences"), "Work packages" (with a description: "Description of the three tasks for the project"), "Organization" (with a description: "Latest events within the gender gap project"), and "News". The bottom section features a collage of logos for partner organizations: International Council for Science, International Mathematical Union (IMU), IUPAC (International Union of Pure and Applied Chemistry), IUPAP, IUHPST (International Union of History and Philosophy of Science and Technology), UNESCO, IAU, IUBS, Gender InSITE, and ICIAM.

<https://icsugendergapinscience.org/>



INTERNATIONAL  
COUNCIL  
FOR SCIENCE

ICSU a non-governmental organization composed of national scientific bodies (122 members representing 142 countries) + 31 international scientific unions. Its last general assembly approved the merger with the International Council of Social Sciences.

Some scientific unions that are members of ICSU

Math (IMU, ICIAM), Chemistry (IUPAC), Physics (IUPAP), Biology (IUBS), Astronomy (IAU)

ICSU mobilizes knowledge and resources of the international scientific community to strengthen international science for the benefit of society. It is very focused on sustainable development.

ICSU works with the UN as organizing partner for the Scientific and Technological Community Major Group.

The ICSU Secretariat is in Paris. There are also three regional offices in Africa, Asia-Pacific and Latin America.

In 2016 ICSU started a new grants program. Projects needed at least two scientific unions that acted as leading applicants. Unions could not lead more than one project but could support more.

The Gender Gap Project, led by IMU and IUPAC, got one of the three 300,000 euro grants.

## ICSU Grants Programme

Three Projects are awarded under the 2016-2019 Grants Programme.

Lead Applicant	Supporting Applicants	Regional Offices	Title of Proposal
IMU-IUPAC	IUPAC, IAU, IUBS, ICIAM, UNESCO, GenderInsite	ROA, ROLAC	<a href="#"><u>A Global Approach to the Gender Gap in Mathematical and Natural Sciences: How to Measure it? How to Reduce it?</u></a>
IUBS-INQUA	IUSS, IMU, IUGS, IUGG, IUPHST, IUFRO, AUC, CODATA, IMAGINARY, NRF, AAS, INSA, Mongolia, Ecuador and Egypt	ROA	<a href="#"><u>TROP-ICSU: Trans-disciplinary Research Oriented Pedagogy for Improving Climate Studies and Understanding</u></a>
IUPAP-IUCr	IUMRS, UNESCO, ICTP, SESAME, AflS	ROA, ROLAC	<a href="#"><u>Utilisation of Light Source and Crystallographic Sciences to Facilitate the Enhancement of Knowledge and Improve the Economic and Social Conditions in Targeted Regions of the World</u></a>



# The Project

## A Global Approach to the Gender Gap in Mathematics, Natural and Computational Sciences: How to Measure It, How to Reduce It?"

Three tasks:

- A global survey including all natural sciences and math (AIP again in charge of it).
- Study of patterns of publication (detailed analysis of metadata)
- Compilation and elaboration of lists of good practices (considering regional differences)

All information is available on its website:  
<https://icsugendergapinscience.org/>

The screenshot shows the homepage of the Gender Gap in Science project. At the top left is a logo combining a male symbol (♂) and a female symbol (♀). To its right is the text "GENDER GAP IN SCIENCE" and a subtitle: "A Global Approach to the Gender Gap in Mathematical and Natural Sciences: How to Measure It, How to Reduce It?". On the top right, there is a search bar and a Twitter icon. Below this is a navigation menu with five items: "Home", "Project" (with a sub-description: "A Global Approach to the Gender Gap in Mathematical and Natural Sciences"), "Work packages" (with a sub-description: "Description of the three tasks for the project"), "Organization", and "News" (with a sub-description: "Latest events within the gender gap project"). The bottom of the page features a collage of logos for various international organizations, including the International Council for Science, International Mathematical Union (IMU), IUPAC, International Union of Pure and Applied Chemistry, IUPAP, IAU, IUBS, ICIAM, UNESCO, and Gender InSITE.



## Project Partners

### **Original ones:**

International Mathematical Union (IMU); the International Union of Pure and Applied Chemistry (IUPAC); the International Union of Pure and Applied Physics (IUPAP); the International Astronomical Union (IAU); the International Union of Biological Sciences (IUBS); the International Council for Industrial and Applied Mathematics (ICIAM); the United Nations Educational, Scientific and Cultural Organization (UNESCO); Gender in Science, Innovation, Technology and Engineering (GenderInSITE).

### **Partners that joined later:**

The International Union of History and Philosophy of Science and Technology (IUHPST), an ICSU member, the Organization of Women in Science for the Developing World (OWSD) and the Association for Computing Machinery (ACM)

# Project Organization

## **Executive Committee of 21 members:**

4 from IMU, 4 from IUPAC, 4 from IUPAP, 1 from IAU, 1 from IUBS, 1 from ICIAM, 1 from IUHPST, 1 from ACM, 2 from UNESCO, 1 from GenderInSITE, 1 from OWSD

## **Coordination groups:**

Each one in charge of one of the three tasks (IUPAP is on the coordination group for the survey)

## **Advisory Board**

# Funding

The participating scientific unions contribute with additional funds beyond those received from ICSU.

The three tasks of the project are related to previous activities of some of the partners.

The survey has its immediate antecedent on the global survey of physicists carried out by the American Institute of Physics with the direct involvement of the IUPAP working group on women in physics for the elaboration of the questionnaire and dissemination.

As in the case of the survey of physicists, the new survey of scientists has been together by the AIP, it is hosted on their secure servers, they will collect and analyze the data (more on this later).

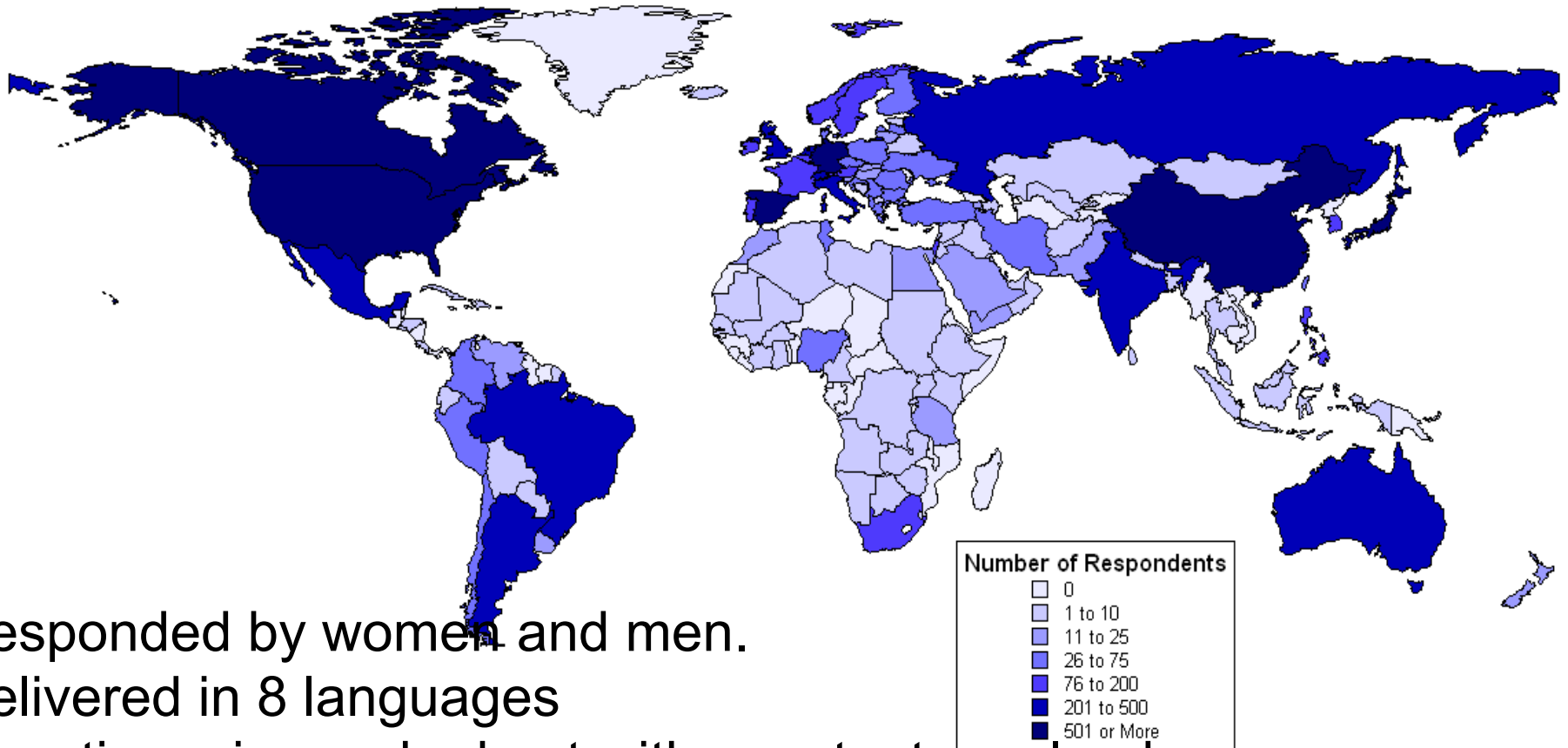
The study of publication patterns is based on a previous study performed on mathematics publications

The dissemination of lists of good practices among its members is something that most scientific unions have been doing.

# The Global Survey of Physicists (2009-2010)

Carried out by the American Institute of Physics (funded by the Henry Luce Foundation)

Global Survey of Physicists; Most Recent Country of Respondent



Responded by women and men.

Delivered in 8 languages

Questionnaire worked out with country team leaders.

Comparability across countries insured.

## GLOBAL SURVEY OF PHYSICISTS

إجراء استطلاع الرأي باللغة العربية. يرجى قراءة هذا. مرحبًا بكم في استطلاع الرأي العالمي بشأن الفيزيائيين

欢迎参与全球物理工作者调查。以中文参与调查。请点击此处

Welcome to the Global Survey of Physicists. [To take the survey in English, click here](#)

Bienvenue à l'étude mondiale à l'intention des physiciens et physiciennes. [Pour participer à cette étude en français, cliquez ici](#)

Wir möchten Sie bei der globalen Umfrage unter Physikerinnen und Physikern begrüßen. [Klicken Sie hier, um die Umfrage in deutscher Sprache auszufüllen](#)

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## Data from Rachel Ivie, AIP

<30% of the respondents were students  
(students: mainly graduate)

Web distributed

14,932 respondents from 130  
countries

Language of responses:

60% English; 11% German; 11%  
Spanish; 7% Japanese; 5% Chinese;  
3% French; 2% Russian; 1% Arabic

Responses by region:

37% Europe

32% North America

17% Asia

7% South America

3% Africa

2% Middle East

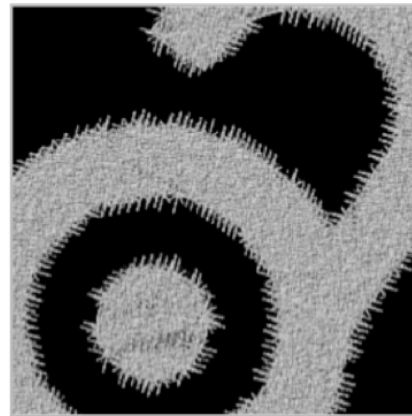
2% Australia

75% from Very Highly Developed Countries  
(21% Female); 25% from Less Developed  
Countries (27% Female); 1% had been to  
ICWIP's

A physicist, a  
social scientist, a  
mathematician

## Task 2: joint data-backed study Team

Lucía Santamaría, Marco Tullney, Helena Mihaljević-Brandt



They have already studied patterns of publication in math using data from zbMATH which has info about millions of publications since 1970 of ~150,000 mathematicians.

Looked at: development over time, collaboration through coauthorships, presumed journal quality and distribution of research topics. Observed significant differences between genders (PLoS ONE, 2016).

## Goals of Task 2

- Extend existing study on math to physics, chemistry, astronomy and biology
- Include information on countries, regions and institutions
- Establish continuous data import and processing flow to allow for easy updates and longitudinal analyses
- Build professional code interfaces and offer analyses and visualizations to the public
- Help develop additional items for the global survey to answer questions that remained open in previous study
- Report on established results in form of scientific publications, popular press and social media

## Some challenges of Task 2

Find suitable data sources (have reached agreement with ArXiv).

Analyze geographical information

Formulate new research questions

Develop algorithms

- Source partners currently identified are

- zbMATH for mathematics (including part of applications)
- arXiv for math as well as theoretical physics and CS

\* ADS for astronomy



## About Task 3

The people in charge of collecting the lists of good practices have already put some at: <https://icsugendergapinscience.org/work-packages/database-good-practices/>

I've generated a website for the Latin American workshop: <http://wp.df.uba.ar/ggapsla>, where we collected information from Latin America and other regions.

# Timeline of the project and activities.

We've had a first coordination workshop in Paris in June, 2017.



In 2017 we also had regional workshops in Asia, Latin America and Africa to bring in a regional point of view.

The survey has just been launched (will be open May-Oct 2018).

We will have a closing activity (organized by OWSD @ICTP in Trieste) in 2019.



Asia regional workshop,  
Taiwan, November, 2017



Latin America regional workshop,  
Colombia, November, 2017



Africa regional workshop,  
South Africa, December, 2017

## The Global Survey Scientists.

We had a first draft of the questionnaire for the regional workshops. We discussed extensively about it (and made suggestions).

A new version was available in February for the Executive committee to make suggestions/corrections.

Translations (into 6 languages) were available for revision in March (a lot of work there about “gendered language”).

Dissemination letter re-worked in the 7 languages.

It is now available in 7 languages (English, Spanish, French, Russian, Chinese, Arabic and Japanese) and as of May 1st, open for responses (until the end of October, 2018).

Available at:

<https://statisticalresearchcenter.aip.org/cgi-bin/global18.pl>

## Global Survey of Scientists

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Welcome to the Global Survey of Scientists. [To take the survey in English, click here.](#)

Bienvenue dans l'enquête mondiale destinée aux scientifiques. [Pour répondre aux questions de l'enquête en français, veuillez cliquer ici.](#)

欢迎参加全球科学工作者调查。 [要使用中文参加本调查，请单击此处。](#)

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مرحبًا بك في الاستبيان العالمي للعلماء.  [للمشاركة في الاستبيان باللغة العربية، انقر هنا.](#)

# Dissemination of questionnaire and sampling

Snowball distribution

Possibility of drawing some “good” samples (in agreement with scientific societies) as done in the past with APS, GPS.

## Access to data and analysis

Major issue to discuss during our Exec Comm meeting in Paris, June 2018: **Access to raw data**. The AIP Stat Res Ctr is very keen to preserve confidentiality: how to do it if data is shared with so many partners? What about open questions?

The AIP Research Ctr is willing to distribute tables, but is not sure about raw data. People that participated in the definition of the questionnaire want to have access.

*Any ideas?*



# The Waterloo Charter

A declaration of principles on inclusivity in physics +  
Guidelines to advance towards a more inclusive practice.

It was initiated at the 5th IUPAP International Conference for Women in Physics, Waterloo, Canada, August 2014.

It is based on the rubrics of the Baltimore Charter and the Pasadena Recommendations formulated by the American Astronomical Society in 1993 and 2003.

It is also shaped and guided by the principles dictated by Project Juno initiated by the Institute of Physics, UK.

Its main body contains the declaration of principles and the rationale for its need.

*Any ideas?*

It is appended with a set of recommendations for key players of the physics community at all levels to implement strategies that will enable women to succeed within the existing structures of physics and allow the desired acceptance of diversity to develop fully.

During the sixth ICWIP (Birmingham, UK, in July 2017) we had a broad discussion about the Charter and agreed on a set of guidelines on how to finalize it. The new draft can be downloaded from:

[http://wgwip.df.uba.ar/Waterloo%20Charter\\_Ver7.pdf](http://wgwip.df.uba.ar/Waterloo%20Charter_Ver7.pdf)  
(I've sent email with the link).

In particular, we decided on its current structure.

How should we proceed for the IUPAP Executive Council to modify it (or not) and eventually approve it?

*Any ideas?*



Thank you!