



**A Global Approach to the Gender Gap
in Mathematical, Computing and Natural Sciences:
How to Measure It, How to Reduce It?**

**Welcome and
Presentation of the ICTP Conference
4-8 November 2019**

**Marie-Françoise Roy, IMU
Coordinator of the project
Director of the Conference**

A Global Approach to the Gender Gap in Mathematical, Computing and Natural Sciences: How to Measure It, How to Reduce It ?



4 - 8 November 2019
Trieste, Italy

Further information:
<https://gender-gap-in-science.org/>
<http://indico.ictp.it/event/8731/>
smr3335@ictp.it

Final meeting of a collaborative project (2017-2019), funded by the International Council for Science, of eleven major scientific international unions and organizations: findings, discussions, conclusions and recommendations.

Description:

Reducing the gender gap is a major challenge for the whole scientific community, in developed as well as developing countries, and concerns everyone, men and women. The project has concentrated its efforts on three main tasks: the Joint Global Survey with 30,000 respondents (male and female) in more than 130 countries using 8 languages, the Joint Study on Publication Patterns analyzing comprehensive metadata sources of publications of more than 500,000 scientists since 1970, a Database of Good Practices for girls and young women, parents, and organizations. The aim of the Conference is to present its results and formulate recommendations.

Topics:

- Report on the findings and achievements of the three tasks of the project, globally, by scientific discipline and by geographical zone.
- Discuss and evaluate the results of the project.
- Formulate recommendations and discuss new initiatives

How to apply:

Online application:
<http://indico.ictp.it/event/8731/>

Female scientists are encouraged to apply.

Grants:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee.

Directors:

M. J. ROY
International Mathematical Union
M. H. CHIU
International Union of Pure and Applied Chemistry
I. GLEDHILL
International Union of Pure and Applied Physics

Local Organizer:

E. COPPOLA
International Centre for Theoretical Physics

Speakers:

S. BADALONI, University of Padova
J.-P. BOURGUIGNON, European Research Council
C. BOBAN, Diversity Working Group, Wikimedia Strategy 2030
A. BROOKS, UNESCO (retired)
T. K. CAMR, Colorado School of Mines
K. CLANCY, University of Illinois
M. GOOS, University of Limerick
R. IVIE, American Institute of Physics
G. LOZANO, University of Arizona
L. MERNER, American Institute of Physics
H. MIHALJEVIC, Hochschule für Technik und Wirtschaft Berlin
M. F. OUEDRAOGO, African Women in Mathematics Association
S. PONCE-DAWSON, Instituto de Física de Buenos Aires
M. RENTETZ, National Technical University of Athens
L. SANTAMARIA, Independent Researcher
J. TIMS, Baldwin Wallace University
C. TOPAZ, Williams College

Deadline:

2 August 2019



Welcome

Directors of the Conference

Marie-Françoise Roy, IMU

Mei-Hung Chiu, IUPAC

Igle Gledhill, IUPAP

Local organizer

Erika Coppola, ICTP

Co-organizers

Tamara Grava, SISSA

Tonya Blowers, OWSD

Welcome

According to UN and UNESCO instructions, one conference director Mei-Hung Chiu was not allowed by ICTP to attend the meeting. The reason is that she has a non UN passport, being from Taiwan. Fortunately the regulations are not the same at SISSA and you will meet her in person on wednesday afternoon.

Her welcome video is on the Gender Gap in Science website <https://gender-gap-in-science.org/>

The participants

More than 100

Coming from 60 different countries

All continents

**Several scientific disciplines : mathematics
(including applied), physics, astronomy, computer
science, biology, chemistry, history of sciences**

90 % female

Our sponsors for the meeting

**International Mathematical Union thanks to the
funding of the International Science Council**

International Center for Theoretical Physics

SISSA

Unions and Organizations of the project

Your institutions

Your documents

Programme of the Meeting

Preliminary Report of the Project

Group assignement for the World Cafe

Tuesday 5 November 16 H-18 H

(thanks to Igle Gledhill and Colette Guillopé)

PLEASE READ PAGES 9 TO 13 OF THE REPORT



A Global Approach to the Gender Gap
in Mathematical, Computing, and
Natural Sciences: How to Measure It,
How to Reduce It?

Preliminary Report

PLEASE READ PAGES 9 TO 13 OF THE REPORT

What is the Gender Gap ?

Gap between women and men interms of their levels of participation, access to career-advancing opportunities and resources, rights, remuneration or benefits.

How to measure it and to reduce it in Science ?

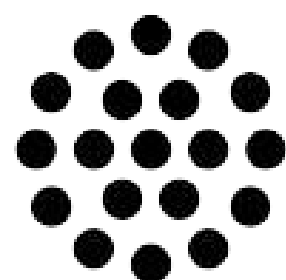
What is the Gender Gap in Science Project ?

3 Tasks







- Task 1: Joint global survey
- Task 2: Joint data-backed study on publication patterns
- Task 3: Database of good practices for girls and young women, parents, and organizations


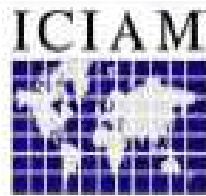

Our results to be presented monday tuesday

Funding and Partner Organizations



**International
Science Council**

	International Mathematical Union
	International Union of Pure and Applied Chemistry
	International Union of Pure and Applied Physics
	International Union of History and Philosophy of Science and Technology
	International Astronomical Union
	United Nations Educational, Scientific and Cultural Organization

	International Union of Biological Sciences
	Gender in Science, Innovation, Technology and Engineering
	International Council for Industrial and Applied Mathematics
	Organization for Women in Science for the Developing World
	Association for Computing Machinery

Main issues

Document the gender gap

By geographical zone

By development level

By discipline

Our results to be presented tuesday and wednesday

What are the Recommendations of the Gender Gap Project ?

Preliminary recommendations in the Report

for instructors and parents

for local institutions

for national (and beyond) organizations

To be discussed in an interactive way during the **World Cafe**
on tuesday afternoon

PLEASE READ PAGES 9 TO 13 OF THE REPORT

Part of the last session on friday

Many activities

See details in the Programme

Colloquium Talk by Petra Rudolf

Molecular Motors and Switches at Surfaces

Monday afternoon at the Main Building

ICTP COLLOQUIA 2019

Molecular Motors and Switches at Surfaces



Professor **Petra Rudolf**
University of Groningen
The Netherlands

Monday 4 November 2019 at 16.30

Budinich Lecture Hall
Leonardo Building, ICTP



The Abdus Salam
International Centre
for Theoretical Physics



Many activities

Cinema **Hidden Figures**

2016 American biographical drama film directed by Theodore Melfi, based on the non-fiction book by Margot Lee Shetterly about black female mathematicians who worked at the National Aeronautics and Space Administration (NASA) during the Space Race. The film stars Taraji P. Henson as Katherine Johnson, a mathematician who calculated flight trajectories for Project Mercury and other missions, Octavia Spencer as NASA supervisor and mathematician Dorothy Vaughan and Janelle Monáe as NASA engineer Mary Jackson, with Kevin Costner, Kirsten Dunst, Jim Parsons, Glen Powell, and Mahershala Ali in supporting roles.

Tuesday evening at Adriatico



Genius has no race. Strength has no gender.
Courage has no limit.

TARAJI P. HENSON OCTAVIA SPENCER JANELLE MONÁE KEVIN COSTNER KIRSTEN DUNST JIM PARSONS

HIDDEN FIGURES

BASED ON THE UNTOLD TRUE STORY

COMING SOON

Sessions in small groups

See details in the Programme

By discipline

By continent

Computer activities with the tools of the project

Mini-projects

Design of wikipedia pages

« Excursion » on Wednesday

See details in the Programme

Round table at SISSA

The gender gap in science in Europe and North America
and reception

Social dinner at Casa Pepe (pizzeria)

Several lectures

See the Programme

In particular : Initiatives by ICTP, UNESCO

Poster Presentation

See the Programme

On Monday and Thursday after lunch

(thanks to **Silvina Ponce-Dawson**)

We need your input !

Please participate actively

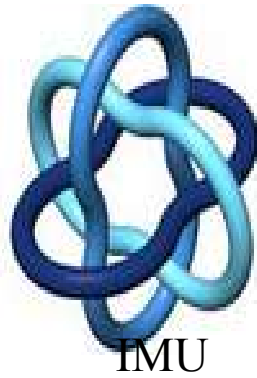
Please help us improve the recommendations

Have a wonderful week in Trieste !

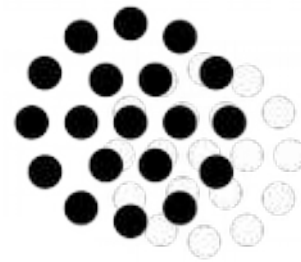


GENDER GAP IN SCIENCE

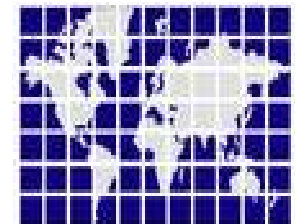
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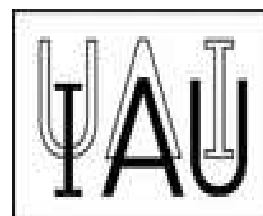
IMU



International
Science Council



ICIAM



Gender
InSITE



Association for
Computing
Machinery
(ACM)



Organization for Women in
Science for the Developing
World (OWSD)