



The Abdus Salam
**International Centre
for Theoretical Physics
Physics Without Frontiers**



Global Collaboration, Opportunities & Research

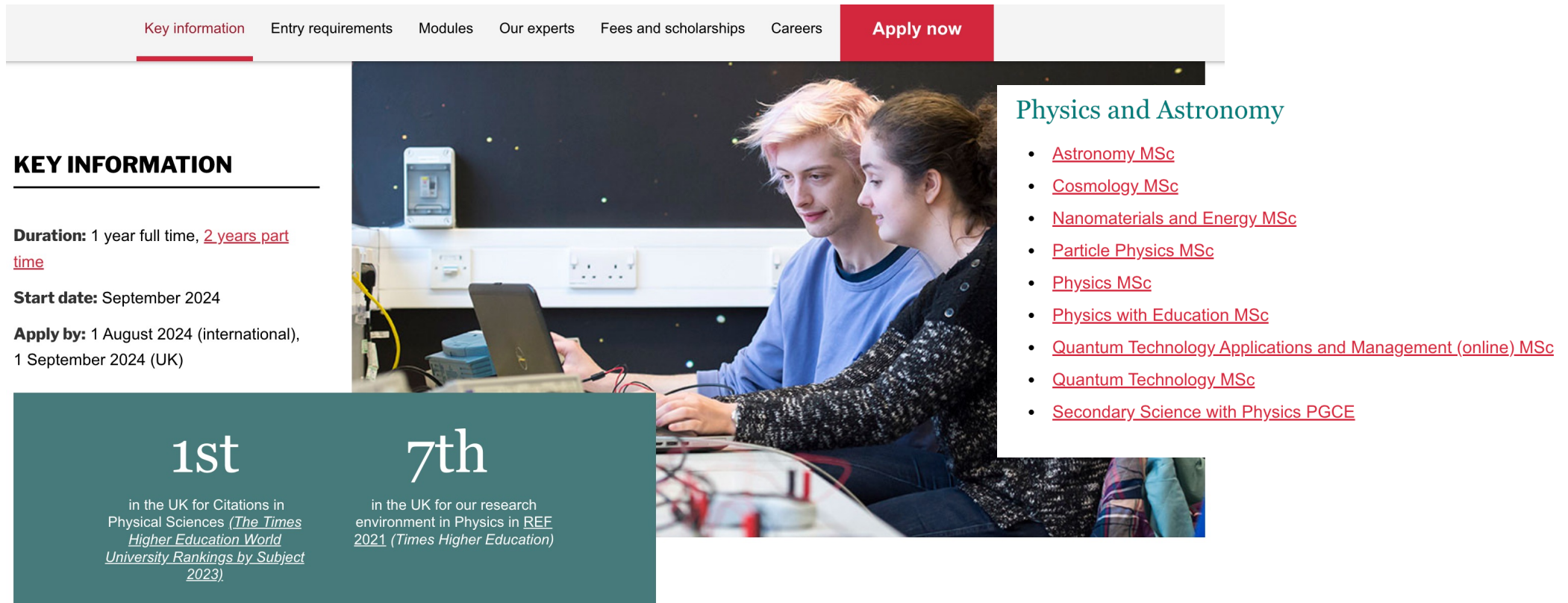
Dr Kate Shaw

The International Centre for Theoretical Physics (ICTP)

The University of Sussex

University of Sussex

- <https://www.sussex.ac.uk/study/masters/courses/physics-msc>



[Key information](#) | [Entry requirements](#) | [Modules](#) | [Our experts](#) | [Fees and scholarships](#) | [Careers](#) | **Apply now**

Physics and Astronomy

- [Astronomy MSc](#)
- [Cosmology MSc](#)
- [Nanomaterials and Energy MSc](#)
- [Particle Physics MSc](#)
- [Physics MSc](#)
- [Physics with Education MSc](#)
- [Quantum Technology Applications and Management \(online\) MSc](#)
- [Quantum Technology MSc](#)
- [Secondary Science with Physics PGCE](#)

KEY INFORMATION

Duration: 1 year full time, [2 years part time](#)

Start date: September 2024

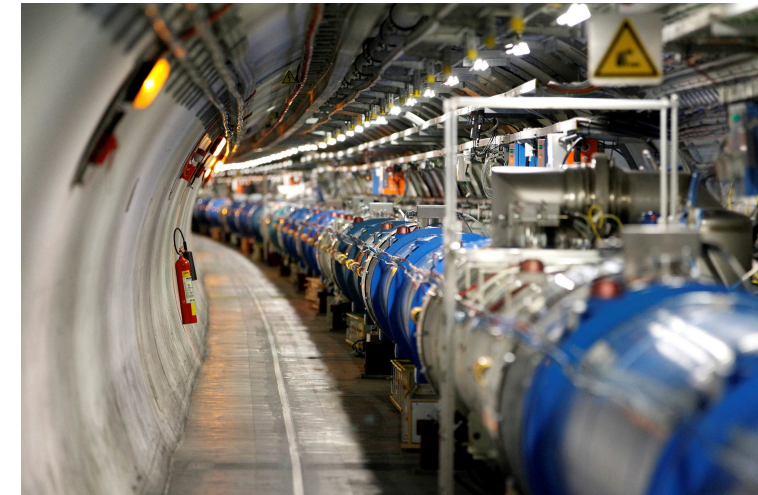
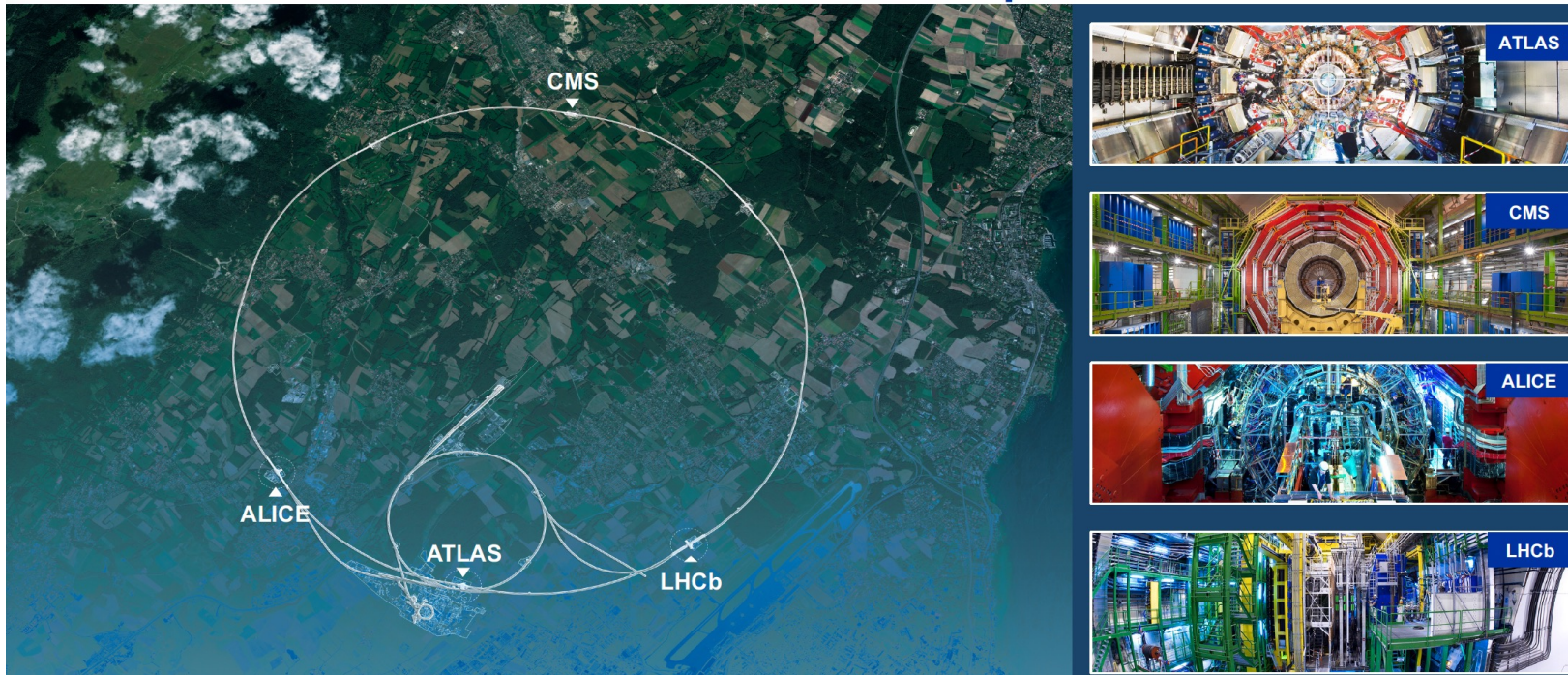
Apply by: 1 August 2024 (international), 1 September 2024 (UK)

1st in the UK for Citations in Physical Sciences (*The Times Higher Education World University Rankings by Subject 2023*)

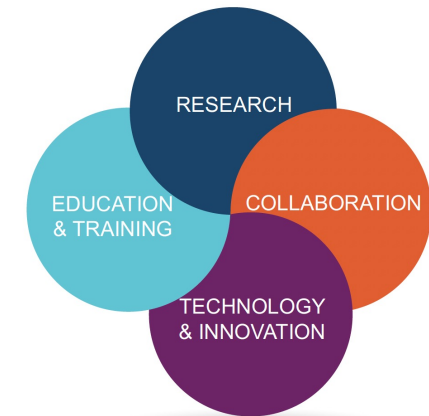
7th in the UK for our research environment in Physics in REF 2021 (*Times Higher Education*)

CERN

Giant detectors record the particles formed at the four collision points



Four pillars underpin CERN's mission



CERN

Science for peace

CERN was founded in 1954 with 12 European Member States



23 Member States

Austria – Belgium – Bulgaria – Czech Republic
 Denmark – Finland – France – Germany – Greece
 Hungary – Israel – Italy – Netherlands – Norway
 Poland – Portugal – Romania – Serbia – Slovakia
 Spain – Sweden – Switzerland – United Kingdom

3 Associates Member States in the pre-stage to membership

Cyprus – Estonia – Slovenia

7 Associate Member States

Croatia – **India** – Latvia – Lithuania – **Pakistan**
 Turkey – Ukraine

6 Observers

Japan – Russia – USA
 European Union – JINR – UNESCO

More than 50 Cooperation Agreements with non-Member States and Territories

Albania – Algeria – Argentina – Armenia – Australia – Azerbaijan – **Bangladesh** – Belarus – Bolivia
 Bosnia and Herzegovina – Brazil – Canada – Chile – Colombia – Costa Rica – Ecuador – Egypt – Georgia – Iceland
 Iran – Jordan – Kazakhstan – Lebanon – Malta – Mexico – Mongolia – Montenegro – Morocco – **Nepal**
 New Zealand – North Macedonia – Palestine – Paraguay – People's Republic of China – Peru – Philippines – Qatar
 Republic of Korea – Saudi Arabia – **Sri Lanka** – South Africa – Thailand – Tunisia – United Arab Emirates – Vietnam

CERN's annual budget
 is 1200 MCHF (equivalent
 to a medium-sized European
 university)

As of 31 December 2020
 Employees:
2635 staff, **756** fellows

Associates:
11 399 users, **1687** others

Opportunities

- ICA with CERN
 - PWF can help
- Teacher programme (for high school teachers)
- CERN Summer School
 - For BSc 4th year student

Summer Schools

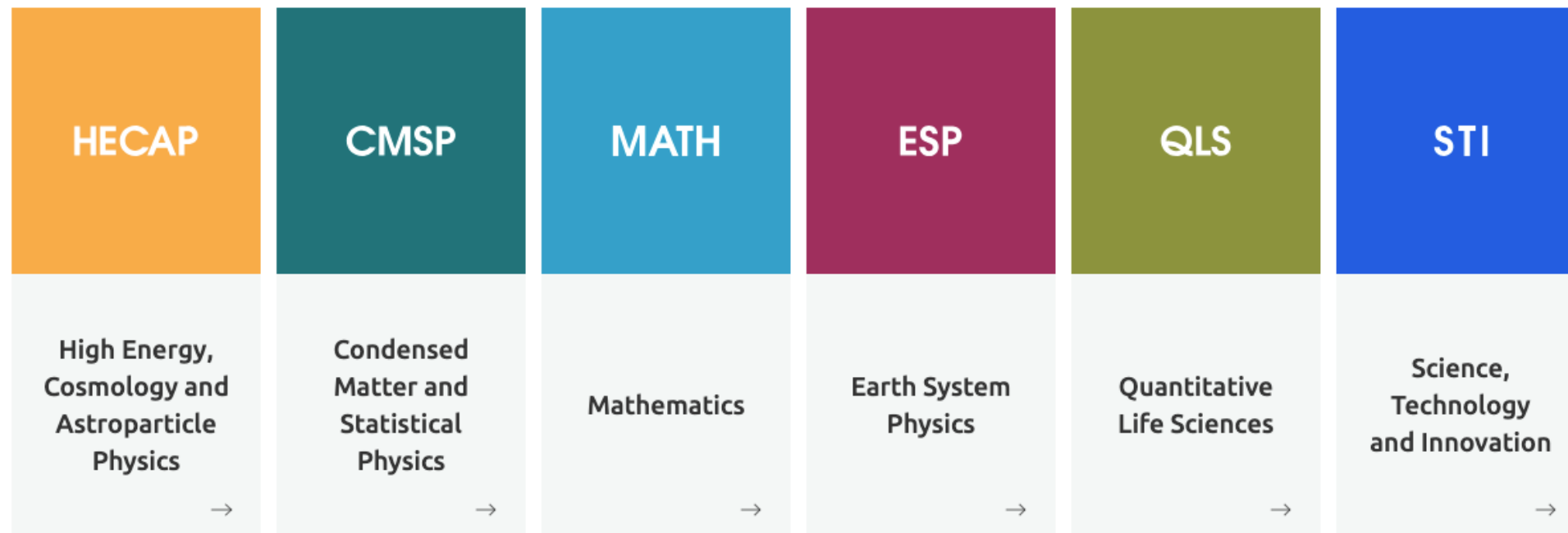
CERN Summer School: For advanced BSc and Master students in physics, computing or engineering, to spend the summer at CERN doing courses and research project. **DEADLINE: January 2023**. Funding positions available for non-member state countries.

- Also Open Lab and technical student school

DESY Summer School: For advanced BSc and Master students in physics or related natural science degree, students spend the summer at DESY looking at synchrotron radiation experiments or high energy physics experiments. Includes lectures and research project. **DEADLINE: January 2023**. *Few* funding positions available for non-member state countries.

The Abdus Salam International Centre for Theoretical Physics

ICTP supports research groups in several areas of **physical sciences and mathematics**. From its early focus on theoretical high energy physics, the Centre's research areas have evolved in response to the needs of physicists and mathematicians from disadvantaged countries, and now include the following areas:



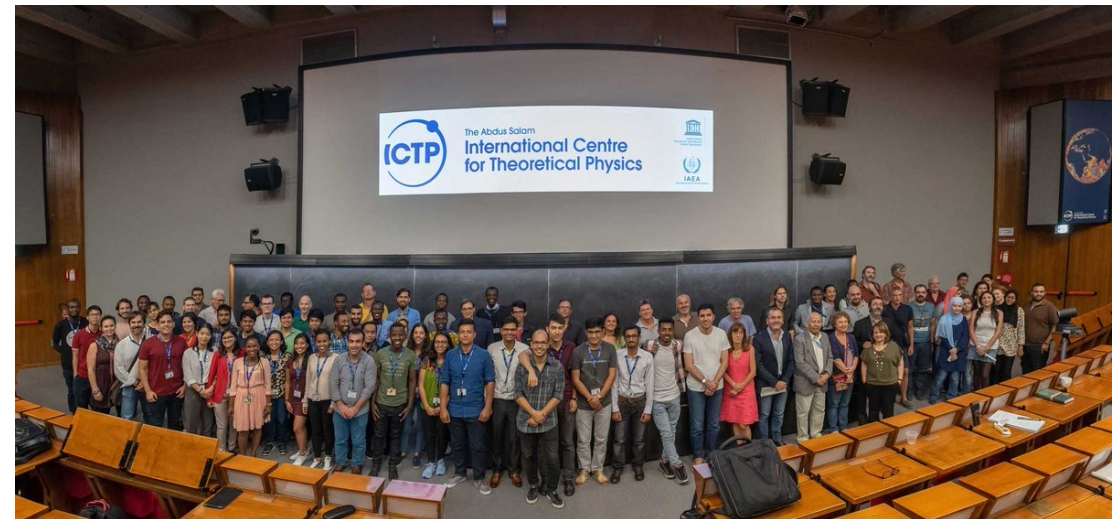
The Abdus Salam International Centre for Theoretical Physics

The ICTP's one-year [Postgraduate Diploma Programme](https://diploma.ictp.it/) helps students from disadvantaged countries gain the knowledge and study skills they need to pursue PhD degrees anywhere in the world. diploma.ictp.it/

Open to young, qualified graduates with a degree equivalent to a BSc or MSc in physics, mathematics, or a related field, and fluency in English. The Programme comprises two semesters of classes, followed by a research project and dissertation. Students can apply to study in one of five subject areas:

- High Energy, Cosmology and Astroparticle Physics
- Condensed Matter Physics
- Earth System Physics
- Mathematics
- Quantitative Life Sciences

ICTP awards 10 scholarships in each field to successful to cover travel and living expenses during their stay at the Centre. The selection of the candidates is based on their university performance as well as on academic recommendations.






The Abdus Salam International Centre for Theoretical Physics

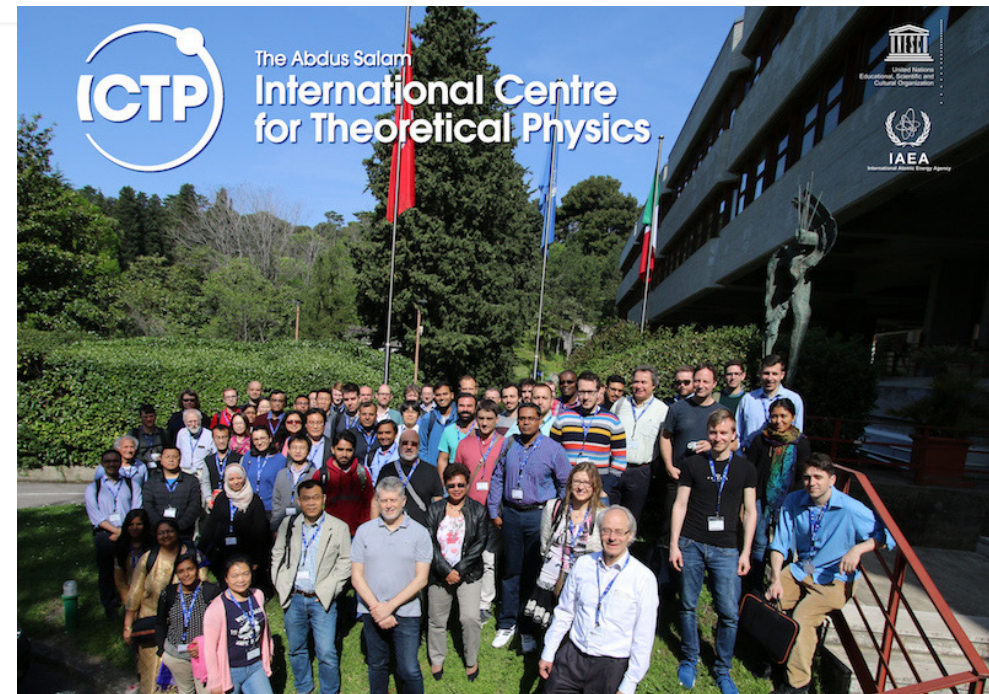
ICTP organises many **scientific activities**. Often there is no registration fee and if scientists are eligible and from a developing country ICTP supports a number of **grants to support the attendance** of the selected participant. www.ictp.it/home/scientific-calendar

November 2023

November

20

<p>Duration</p> <p>20 - 24 Nov Nov</p> <p>Apply before</p> <p>03 Sep 2023</p>	<p>Workshop</p> 	<p>Workshop on Communication in Extreme Environments for Science and Sustainable Development (smr 3893)</p>	<p>ICTP Budnich Lecture Hall (LB)</p> <p>STI SCIENCE, TECHNOLOGY AND INNOVATION</p> <p>SMR3893</p>
<p>Duration</p> <p>20 - 24 Nov Nov</p> <p>Application Closed</p>	<p>Workshop</p> 	<p>Joint ICTP-IAEA Workshop on Artificial Intelligence in Ionizing Radiation for Medical Physicists (smr 3895)</p>	<p>ICTP Kastler Lecture Hall (AGH)</p> <p>SMR3895</p>
<p>Duration</p> <p>20 - 01 Nov Dec</p> <p>Application Closed</p>	<p>School</p> 	<p>Joint ICTP-IAEA School on Systems-on-Chip Based on FPGA for Scientific Instrumentation and Reconfigurable Computing (smr 3891)</p>	<p>ICTP Giambiagi Lecture Hall (AGH)</p> <p>STI SCIENCE, TECHNOLOGY AND INNOVATION</p> <p>SMR3891</p>



The World Academy of Sciences (TWAS)

TWAS is the voice for science in the South

Twas.org



TWAS Research Grants Programme: Maintenance

Under this scheme, grants are awarded to past grant recipients of the TWAS Research Grant programme who procured equipment through the grant in one of the S&T-lagging countries identified by TWAS.

No call for this programme will open in 2023

Partner Organizations
Swedish International Development Cooperation Agency

Country where tenable
Science- and technology-lagging countries

Minimum degree held
PhD

Field
Biology, Chemistry, Mathematics, Physics

Age limit
None

The **TWAS Research Grants Programme for Maintenance grants** was established in response to the needs of researchers in developing countries, particularly those attached to institutions that lack appropriate research facilities. Under this scheme, grants can be awarded for maintenance and repair(s) to individual young researchers, or to research units in the [science-and-technology-lagging countries](#) (S&TLC) identified by TWAS, to enable them to repair and fix any unutilised laboratory equipment they need to enhance their productivity.

The information on this page refers to applications submitted for maintenance grant.

The **TWAS Maintenance Grant Programme** aims to:

- Reduce unused equipment in laboratories;
- Lengthen the shelf life of pieces of equipment in laboratories;

The TWAS Maintenance Grant Programme is generously supported by the Swedish International Development Cooperation Agency (Sida).

Programme Details

- TWAS Maintenance Grants are awarded to support repair and servicing of existing lab equipment already procured through a past TWAS Research grant (Individual or Group) in the S&T-lagging countries (S&TLC) identified by TWAS.
- Maintenance Grants to individual scientists amount to a maximum of USD 3,000.
- The grants, which are normally provided for a period of 12 months. Purchase of new equipment cannot be supported through this grant.

Eligibility

- Individual applicants must be nationals of developing countries.
- The applicants **must** be previous recipients of TWAS Research Grants (either Individual or Group).
- The equipment requiring servicing or maintenance must have been purchased through the previous TWAS Research Grant award.
- Individual scientists who submit a satisfactory final report on a previous grant may apply for this grant.

Agreement



Research and Project Grants

TWAS research grants are awarded to both individual scientists and research groups

[SEE ALL](#)



Awards and Medals

TWAS has long recognized that awards provide an incentive for scientists to do their best work, while winning them global acknowledgment. Honours awarded by TWAS and its partners are among the most prestigious given for research in the developing world. They range from the TWAS-Awards, honoring established scientists in the South, to awards given to early-career scientists already making impressive contributions to their field.

[SEE ALL](#)



Fellowships

With the world's largest South-South PhD and postdoctoral research fellowship programme, TWAS helps early-career researchers to gain education and experience at top science institutions. TWAS currently offers about 160 PhD fellowships, in conjunction with eight partners in six countries, and about 100 postdoctoral fellowships in conjunction with nine partners in five countries.

[SEE ALL](#)



Science Diplomacy and Other Training

TWAS offers financial assistance to the organizers of international and regional scientific conferences, workshops, symposia and special meetings in the developing world.

[SEE ALL](#)

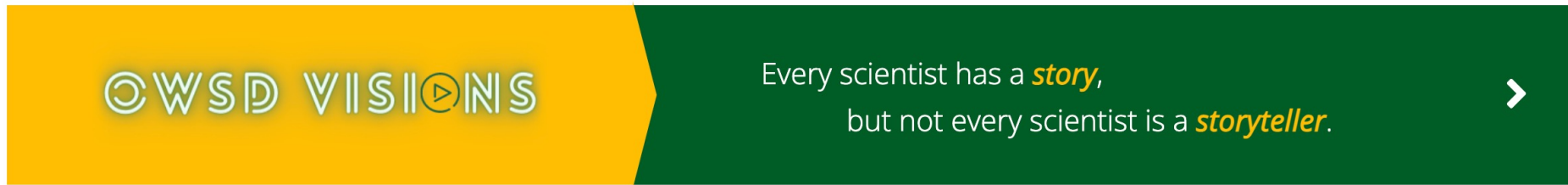
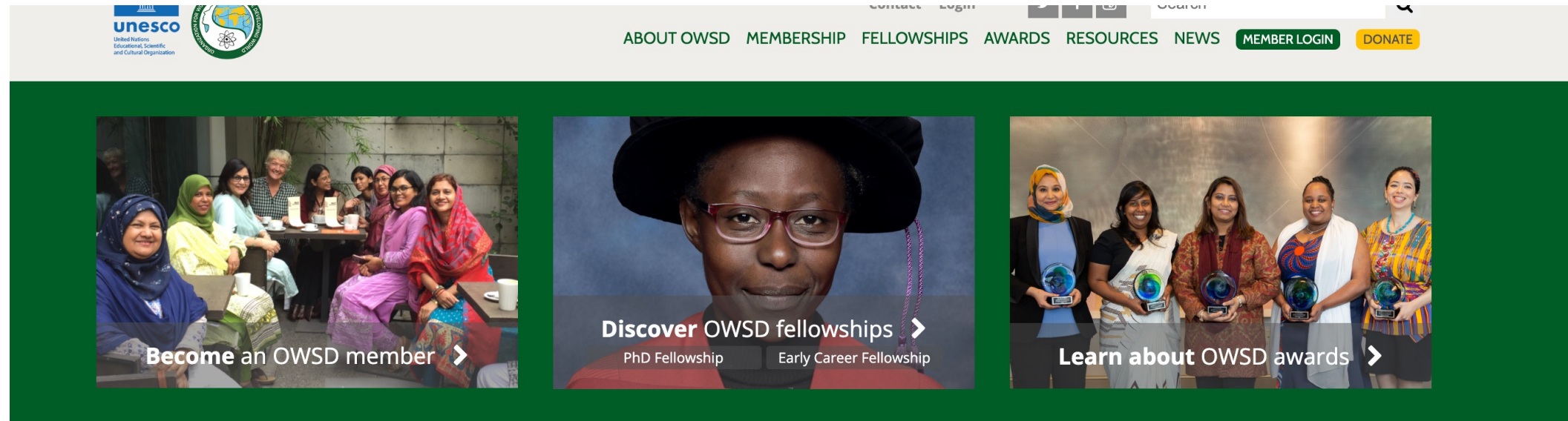


Visiting Scientists

Experienced scientists can be invited to developing nations as visiting professors to help build expertise in a given field. Or they can travel as visiting researchers to hundreds of scientific institutions worldwide to collaborate on new projects and build international partnerships.

[SEE ALL](#)

The Organization for Women in Science for the Developing World (OWSD) (owsd.net)



- PhD opportunities
- Early Career funding
- Membership (<https://owsd.net/network/asia-pacific/other>)

Global Collaboration, Opportunities & Research

- Create a roadmap about research field, infrastructure needed, training and collaboration.
- Who is best to collaborate with internationally
 - CERN, ICTP, other scientific labs
 - Universities (Sussex!), or partners India, Chia, elsewhere
 - Individual networks, conferences and workshop for networking
- Search for opportunities for training, research, and funding.