



World Meteorological Organization
Organisation météorologique mondiale

Secrétariat

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Weather • Climate • Water
Temps • Climat • Eau

Our ref.: ETR/FEL/TWAS

GENEVA, 25 April 2013

Annexes: 2 (available in English only)

Subject: Call for nomination of candidates for studies leading to awarding of Doctor of Philosophy

Dear Sir/Madam,

In January 2013 WMO and TWAS (The academy of sciences for the developing world) reached an agreement on the selection and sponsorship of students and experts from developing countries for postgraduate training in Brazil, China, India, Kenya, Malaysia and Pakistan. This agreement addresses the need for a targeted approach to support experts in the fields of atmospheric science and hydrology particularly in light of the developing requirements associated with the Global Framework for Climate Sciences. The fellowships, which cover full-time postgraduate study for a Doctor of Philosophy (PhD) degree in the fields of atmospheric and hydrological sciences, are tenable in the host institutions listed in Annex I to this letter.

I invite interested Members to consider the development plans for their NMHSs and associated services and nominate suitable candidates for consideration by TWAS and WMO. Applicants must meet the following criteria and comply with the set procedures:

- (a) Applicants responding to this circular letter are required to provide TWAS: (1) a cover letter indicating that the applicant is also applying through WMO; and (2) all application documents. Annex I contains further information on the potential host institutions and additional information and examples on how to proceed with an application. Further information is also contained in the TWAS website: <http://twas.ictp.it/prog/exchange/fells/fells-overview>. Annex II is a sample of the online application form. Interested candidates may also seek further information from TWAS, their prospective host institutions and through WMO;
- (b) The Permanent Representative of an interested candidate is also required to send a formal Fellowship Nomination Form (FNF) to WMO clearly indicating that the nomination is for a TWAS PhD fellowship. The FNF can be accessed via <http://www.wmo.int/pages/prog/dra/etrp/fellowships/fellowsintouch.php>. Candidates are required to submit a concise research concept outlining their proposed area of PhD study to WMO along with the FNF. The concept note should be of not more than one thousand (1,000) words;

To: Permanent Representatives (or Directors of Meteorological or Hydrometeorological Services) of Members of WMO (PR-6699)

cc: Hydrological Advisers to Permanent Representatives

- (c) TWAS, in consultation with its programme partners, shall select and forward the list of the eligible candidates to WMO;
- (d) WMO in consultation with TWAS shall make a decision on the selection of awardees supported by WMO;
- (e) TWAS shall send notification of awards to the selected candidates with copy to WMO and the Permanent Representative of the candidate's country with WMO;
- (f) WMO will subsequently send a separate notification to the selected candidates detailing WMO requirements and regulations and make the necessary arrangements with the Permanent Representatives of the selected candidates for their administrative release from duties for the duration of the fellowship;
- (g) TWAS will ensure that its programme partners provide stipend and accommodation, and waive or cover tuition and research fees;
- (h) TWAS will make arrangement for tickets and provision for visa fees, transportation lump sum and excess luggage reimbursement (if applicable) for the selected candidates.

In line with the WMO Executive Council Criteria for the award of fellowships as approved by EC-LVIII in June 2006, recommendation for an award will, inter alia, be made on the basis of merit, with strong preference for female applicants and candidates from least developed countries.

Because of the multilateral nature of this award, interested candidates are strongly advised to adhere to the deadlines for submission of applications as set by respective institutions. Failure to do so would lead to automatic disqualification of the application concerned.

I take this opportunity to thank you for the continued cooperation between WMO and your country.

Yours faithfully,



(J. Lengoasa)
for the Secretary-General

TWAS Fellowships for Postgraduate Research

APPLICATION FORM

BEFORE SENDING YOUR APPLICATION:

Please read the TWAS Postgraduate Fellowship Application Guidelines for information on how to apply for the different TWAS postgraduate programmes.

The application guidelines are available at <http://twas.ictp.it/prog/exchange/fells/fells-overview> or can be obtained from fellowships@twas.org.

FOR SUBMISSION OF APPLICATION BY EMAIL, PLEASE NOTE THAT THIS IS A MICROSOFT WORD DOCUMENT AND SHOULD BE COMPLETED, SAVED AND RETURNED AS A WORD DOCUMENT AND NOT AS A PDF DOCUMENT OR EMBEDDED JPEG. PDF OR JPG APPLICATIONS WILL NOT BE PROCESSED.

Please save the completed application form as an MS Word document with both your surname and the Fellowship's acronym in its file name. Example: If your name is John DOE, name the file "DOE_DBTPG.doc" or "DOE_CSIRPG.doc" as appropriate. The form must NOT be filled out in upper case.

To which TWAS Postgraduate Fellowship Programme does this application apply?
(Please tick one box only).

For CNPq, please use the online application available via here:

<http://www.cnpq.br/web/guest/chamadas-publicas>.

For CAS, please use the forms available here:

<http://english.ucas.ac.cn/Admissions/Pages/Article.aspx?ID=144>

☐ TWAS-CSIR (India)
☐ TWAS-DBT (India)
☐ TWAS-SN Bose (India)

☐ TWAS-IACS (India)
☐ TWAS-ICIPE (Kenya)
☐ TWAS-USM (Malaysia)

☐ TWAS-CEMB (Pakistan)
☐ TWAS-ICCBS (Pakistan)

For CSIR, DBT, S.N. Bose, CEMB and ICCBS only, please specify ONE of the following options (Please tick one box only)

☐ FULL-TIME (if you intend to register for a PhD in the host country)

☐ SANDWICH (if you are already registered for a PhD in your home country)

For our records, please also indicate the scientific field in which you work. (Please tick one box only)

☐ Agricultural Sciences
☐ Structural, Cell & Molecular Biology
☐ Biological Systems & Organisms

☐ Medical & Health Sciences, including Neurosciences
☐ Chemical Sciences
☐ Engineering Sciences

☐ Astronomy, Space & Earth Sciences
☐ Mathematical Sciences
☐ Physics

GENERAL INFORMATION

Please remember to attach a photo of yourself as a separate JPEG file and copy of your passport, even if expired. Only the page with personal details is required. **In completing this form, please provide your surname and name exactly as they are indicated in your passport.**

Surname (family name):

First name(s):

Gender: Male ☐ Female ☐

Nationality:

Date of birth:

Place of birth (country):

Passport No:

Date and place issued:

Expiry date:

Applicant's contact address:

Name and contact details of a person to be contacted in case of an emergency:

Tel:

Fax:

E-Mail:

Tel:

Fax:

E-Mail:

FELLOWSHIP DETAILS

HOST INSTITUTION

Ensure you indicate the name and address of at least one HOST research institution where you have applied and have been accepted for all or part of your PhD research (depending on the programme). Please attach official letter of acceptance signed by the head of department, postgraduate programme coordinator or programme partner's contact person (as specified in the application guidelines for each specific fellowship programme) at the host institution.

1. Host institute, Name and Address:

Tel:	Fax:	E-mail:
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Name and Surname of Host supervisor:	Position:	E-mail:
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Reasons for selecting this institution and supervisor:

2. Host institute, Name and Address:

Tel:	Fax:	E-mail:
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Name and Surname of Host supervisor:	Position:	E-mail:
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Reasons for selecting this institution and supervisor:

HOME INSTITUTION

ONLY complete this section if registered for a PhD in your HOME country. In the case of CSIR, DBT, S.N.Bose, CEMB and ICCBS you will also have to submit a signed Registration and No Objection Certificate (see sample at the end).

Name and Address of Home Institute. You must submit a supporting letter from the Director of your HOME institution.

Name:	Address:	
Tel:	Fax:	E-mail:

Name and position of PhD supervisor in your home country.
N.B.: The PhD supervisor cannot be enlisted as one of your referees and s/he must submit a separate supporting letter in addition to the two required reference letters.

Name:	Surname:
Email:	Position:

RESEARCH DETAILS

Area of proposed research/study

PhD project. Please provide a detailed description of the proposed doctoral study/research plan. See sample on the last page. **NOTE: The project's title must be the same as in the preliminary acceptance letter.**

Title:

Project details

Expected benefits. Please provide a short account of the benefits the Fellowship will provide to you and your home institution.

Applicant's acceptance of conditions governing the relevant TWAS Postgraduate Fellowship Programme. Please print this page, sign in original and send as scanned attachment. Do note that unsigned applications cannot be accepted. If you are unable to send a scanned version via e-mail, please send the page with the signature by fax.

I accept the terms and conditions governing these Fellowships and I confirm that I shall return to my home country upon completion of my Fellowship. Moreover, I confirm that to the best of my knowledge the information above is true and correct.

Signature: _____ Date: _____

N.B. The application form cannot be accepted without a signature.

BACK-UP FELLOWSHIP PROGRAMME CHOICE(S)

Please indicate below a second and/or third choice of fellowship programme(s) that you may be interested in if not selected for the programme you are currently applying for. In cases where candidates are ranked highly but are not awarded due to a cap on the number of fellowships available through your selected programme partner, this information should allow us to re-direct your application without you having to re-apply.

- | | | |
|---|---|---|
| <input type="checkbox"/> TWAS-CNPq (Brazil) | <input type="checkbox"/> TWAS-IACS (India) | <input type="checkbox"/> TWAS-ICCBS (Pakistan) |
| <input type="checkbox"/> TWAS-CSIR (India) | <input type="checkbox"/> TWAS-ICIPE (Kenya) | <input type="checkbox"/> TWAS-NCP (Pakistan) |
| <input type="checkbox"/> TWAS-DBT (India) | <input type="checkbox"/> TWAS-USM (Malaysia) | <input type="checkbox"/> TWAS-BIOTEC (Thailand) |
| <input type="checkbox"/> TWAS-SN Bose (India) | <input type="checkbox"/> TWAS-CEMB (Pakistan) | |

ENCLOSURES CHECKLIST

Important: Ensure that ALL relevant enclosures are included with the completed application form. Please only submit the material requested as any other material not listed is not required (e.g. secondary education certificates, certificates of participation in conferences or training courses etc).

- ☐ Passport size photograph as a separate JPEG file.
- ☐ A copy of passport, even if expired. Only the page with personal details is required.
- ☐ Detailed description of the proposed doctoral study/research plan (see sample on last page).
- ☐ Curriculum Vitae and complete list of publications (do not send papers).
- ☐ University degree certificates and relevant university transcripts of advanced courses for all academic degrees.
- ☐ Official letter of acceptance of a HOST institution as per sample attached. The acceptance letter must be signed by the head of department, postgraduate studies coordinator or programme partner's contact person (as specified in the application guidelines for each specific fellowship programme). The starting date on the acceptance letter must be the year following the application, e.g. If you apply for a fellowship in 2012 the acceptance letter should show the starting date as 2013.
- ☐ Reference letters must be on letter-headed paper, SIGNED and sent as attachments via e-mail to TWAS and the relevant programme partner (except in the cases of S.N.Bose, India and ICCBS, Pakistan). The subject line must contain the name of the Fellowship programme and the candidate's surname. Alternatively, letters should be sent in sealed envelopes by post. N.B. Only signed reference letters can be accepted. The letters can be submitted either by the referee or by the applicant directly.
- ☐ Supporting statement from the head/director of the applicant's HOME institute on headed paper, if registered in the HOME country.
- ☐ Certificate of proficiency in English or language of country to be visited.
- ☐ Signed Registration and No Objection Certificate, if applicable.
- ☐ Supporting letter of PhD supervisor, if registered in the HOME country.
- ☐ Certificate of good health from a qualified medical doctor (for ICCBS only).

OTHER INFORMATION

How did you find out about TWAS Fellowship Programmes? (Please tick one only)

- ☐ Direct mailing [to institution].
- ☐ TWAS website.
- ☐ Word of mouth/email from colleague.
- ☐ Other (please specify):

SAMPLE ACCEPTANCE LETTER FOR HOST INSTITUTIONS

It is important to note that applicants **MUST** already be accepted by a host institution in Brazil, India, Kenya, Malaysia or Pakistan to be eligible for a TWAS Postgraduate Fellowship.

How to obtain the preliminary acceptance letter:

- 1) Identify a suitable host institution from the lists provided (see accompanying application guidelines).
- 2) Contact your selected host institution or a potential host supervisor, providing your CV, research proposal and a copy of the sample acceptance letter (see below).

Signed acceptance letters must be sent to TWAS and the relevant programme partner (except in the case of S.N.Bose, and ICCBS). The head of department, coordinator of postgraduate studies or programme partner's contact person (as specified in the application guidelines for each specific fellowship programme) at the HOST institution must sign the letter. Informal communication exchanged with potential host supervisors can be submitted, but it will **not** be considered as formal evidence of institutional acceptance.

HOST INSTITUTION'S LETTERHEAD

Department's name
Postgraduate programme's name
Institutional address
Tel and fax numbers
E-mail address

[Place and Date]

Dear _____ [candidate's name and surname] - _____ [country of citizenship],

This is to inform you that, as a candidate for a postgraduate fellowship under the agreement established by TWAS and _____ [programme partner], you have been accepted for a _____ [FULL-TIME or SANDWICH, please specify*] postgraduate programme of the duration of _____ [length of time, months/years, please specify] in _____ [field of specialization/academic programme] at this department/institution _____.

If subsequently selected for a TWAS-_____ [programme partner] Fellowship, you should begin your studies/research in the _____ [first or second] academic semester of _____ (year) and expect to conclude by _____ [month and year]. While researching at this institution, you will be under the supervision of Professor _____ [name, and surname of supervisor] to be contacted at _____ [email address]. The topic for which you have been accepted to study at this institution is: _____.

Yours sincerely,

Signature and name of head of department, postgraduate studies coordinator or programme partner's contact person as specified in the guidelines for each specific fellowship programme

N.B. The letter cannot be accepted without a signature.

* The FULL-TIME Fellowship applies to candidates who intend to register for a PhD in the host country. The SANDWICH Fellowship entails one research visit at the host institute for applicants who are already registered for a PhD in their home country. Please verify the minimum and maximum duration of the sandwich programme in the application guidelines (under the "additional information" section of each programme partner).

IMPORTANT

NOTE:

The starting date on the acceptance letter must be the year following the application e.g. If you apply for a fellowship in 2012 the acceptance letter should show the starting date as 2013.

SAMPLE REGISTRATION & NO OBJECTION CERTIFICATE FOR SANDWICH POSTGRADUATE FELLOWSHIP APPLICATIONS

FOR APPLICANTS ALREADY REGISTERED FOR A PHD IN THEIR HOME COUNTRY

ONLY FOR CSIR, S.N. BOSE AND DBT (INDIA), CEMB AND ICCBS (PAKISTAN) SANDWICH FELLOWSHIP APPLICATIONS; FOR CNPQ SANDWICH FELLOWSHIPS REFER TO THE SAMPLE AVAILABLE AT THE LINK BELOW ONLY FROM MID APRIL ONWARDS

[HTTP://WWW.CNPQ.BR/WEB/GUEST/CHAMADAS-PUBLICAS](http://www.cnpq.br/web/guest/chamadas-publicas)

[Institution's Letterhead]

[Institution's address and contact details]

Registration & No Objection Certificate

This is to certify that Mr/Mrs/Ms, son / daughter of, has been registered in the Department of..... at the University of for a PhD in the area of since

We hereby convey our No Objection towards his/her study/work in [indicate host institution, city and country], and also agree to accept Host Supervisor, [indicate title, name and surname of host supervisor] as a Co-Supervisor in the final assessment of the thesis/dissertation based on which the PhD degree could be offered to Mr/Mrs/Ms by us.

[Signature with Seal]

NOTE: This certificate should be signed by the Vice-Chancellor or Registrar of the University where the candidate is registered for his/her PhD

Sample

PROPOSED POSTGRADUATE STUDY/RESEARCH PLAN

Applicant: Name, SURNAME

Title: Studies on the properties of colossal magnetoresistance (CMR) in magnetic ceramics and thin films

1.0 Statement of Purpose

Perovskite manganites are a class of materials that have attracted enormous attention recently because they exhibit the so called colossal magnetoresistance (CMR) effect. These materials display dramatic change in their electrical resistance in an applied magnetic field. The changes are so large that the material can in fact change from an insulator to a metal. At high temperature these materials are paramagnetic insulators, while at low temperatures, they exhibit a number of phases including ferromagnetic metallic and anti ferromagnetic insulating.

The physics of CMR effect is focused on the mechanism of double exchange of carriers between the Mn^{3+} and Mn^{4+} ions. However double exchange alone is not able to explain the change of resistivity as exerted by many workers such as Millis *et al.* who suggested that strong electron-phonon coupling arising from Jahn-Teller effect plays a crucial role. The typical CMR material is derived from perovskite manganites with the chemical formula $Ln_{1-x}A_xMnO_3$ where Ln is the rare earth (Ln = La, Pr, Nd, Sm) and A is the divalent metal (A = Ca, Ba, Sr).

In general, magnetoresistance is a measure of the change in electrical resistance as function of the magnetic field H and is usually calculated as: $MR\% = [R(H) - R(0)]/R(0) \times 100$ where R(H) denotes the field dependent resistance and R(0) the resistance at zero magnetic field.

2.0 Objectives

2.1 General Objective

To produce high quality homogenous dense bulk and thin films of $La_{0.67}Ca_{0.33}MnO_3$ and $La_{0.67}Sr_{0.33}MnO_3$ and $La_{0.67}Er_{0.33}MnO_3$ using coprecipitation method that offers enhancement in CMR properties.

2.2 Specific Objectives

- To produce high quality homogenous dense bulk of LCMO, LSMO and LErMO via coprecipitation method.
- To fabricate the thin film, using Pulsed Laser Ablation Deposition (PLAD) on various substrates.
- To investigate the magnetic properties and T_c determination using AC susceptometer in a temperature range of 25 K-300 K.
- To measure magnetoresistance (MR) effect.
- To investigate the electrical property and T_p determination, using standard four- point probe in a temperature range of 20 K to 300 K.

3.0 Methodology

(i) Fabrication of ceramic component using coprecipitation method

In this project, the polycrystalline samples of magnetoresistive LCMO, LSMO and LErMO will be prepared in bulk form via coprecipitation method.

(ii) Thin Film Preparation by Pulsed Laser Ablation Deposition (PLAD)

Today, PLAD is widely used for producing thin film. Conceptually and experimentally, PLAD is relatively simple. PLAD consists of a target holder and a substrate holder housed in a vacuum chamber. A high-power laser is used as an external energy source to vaporize the target material and to deposit the thin film. A set of optical components is used to focus the laser beam on the target surface. The chamber is pumped to high vacuum using a molecular pump.

Polycrystalline LCMO, LSMO and LErMO thin films, will be fabricated on polished GaAs(100) and Si(100) substrates by pulsed laser ablation deposition (PLAD) using a single LCMO polycrystal target.

UV radiation from an ND: YAG laser (wavelength 532nm) is focused onto a split target at an angle of incident of 45° . The laser is set to produce energy per pulse of 100 mJ and the beam is focused to spot size 3 mm^2 at target, as measured from the total area of a stationary target affected by the laser beam. The target and substrate is 4 cm and the plume stopped just short of the substrate.

4.0 Expected Output

Production of CMR materials with improved properties as sensing elements.

5.0 References

6.0 Timeline/Budget (only if applicable)

TWAS Fellowships for Postgraduate Research

APPLICATION GUIDELINES

PROGRAMME DETAILS

TWAS, the academy of sciences for the developing world – www.twas.org – is an autonomous international organization founded in Trieste, Italy, in 1983. TWAS represents the best of science in the developing world. Its principal aim is to promote scientific capacity and excellence for sustainable development in the South. Since 1986, TWAS has been supporting scientists and institutions in developing countries through a wide range of programmes that focus on scientific capacity building largely through South-South cooperation.

The administration and financial operation of TWAS is undertaken by UNESCO in accordance with an agreement signed by the two organizations.

Each year, the TWAS Fellowship Programme, which operates under agreements with governments and national organizations in developing countries – and particularly with partners in Brazil, China, India, Kenya, Malaysia and Pakistan – offers a number of fellowships to young scientists from developing countries to carry out postgraduate research in countries other than their own. These programme partners include:

National Council for Scientific and Technological Development (CNPq), Brazil

The **TWAS-CNPq Fellowship Programme for Postgraduate Research** offers fellowships to young scientists from developing countries (other than Brazil) who wish to obtain all or part (SANDWICH or FULL-TIME) of their PhD in the natural sciences in Brazil. *Duration: up to 4 years.*

NEW! Chinese Academy of Sciences (CAS), China

The **CAS- TWAS President's Fellowship Programme for Postgraduate Research** offers fellowships to pursue FULL-TIME PhDs (only) at the University of Chinese Academy of Sciences (UCAS), the University of Science and Technology of China (USTC) and/or institutes of CAS around China. *Duration: 4 years.*

Council of Scientific and Industrial Research (CSIR), India

The **TWAS-CSIR Fellowship Programme for Postgraduate Research** offers fellowships to young scientists from developing countries (other than India) who wish to obtain all or part (SANDWICH or FULL-TIME) of their PhD in newly emerging areas in science and technology for which facilities are available in CSIR laboratories and institutes. *Duration: up to 4 years.*

Department of Biotechnology (DBT) of the Ministry of Science and Technology, India

The **TWAS-DBT Fellowship Programme for Postgraduate Research** offers fellowships to young scientists from developing countries (other than India) who wish to obtain all or part (SANDWICH or FULL-TIME) of their PhD in biotechnology at key biotechnology research institutions in India. *Duration: up to 5 years.*

S.N. Bose National Centre for Basic Sciences, India

The **TWAS-SN Bose Fellowship Programme for Postgraduate Research** offers fellowships to young scientists from developing countries (other than India) who wish to obtain all or part (SANDWICH or FULL-TIME) of their PhD in physical sciences. *Duration: 4 years (plus possibility of one year extension).*

Indian Association for the Cultivation of Science (IACS), India

The **TWAS-IACS Fellowship Programme for Postgraduate Research** offers fellowships to young scientists from developing countries (other than India) who wish to obtain a PhD in certain fields of natural sciences, including biological chemistry, condensed matter physics, inorganic chemistry, materials science, non conventional energy, organic chemistry, physical chemistry, polymer science, spectroscopy and theoretical physics. *Duration: up to 4 years.*

The International Centre for Insect Physiology and Ecology (icipe), Kenya

The **TWAS-icipe Fellowship Programme for Postgraduate Research** offers fellowships to young scientists from developing countries (other than Kenya) who wish to obtain all or part (SANDWICH or FULL-TIME) of their PhD in the natural sciences, especially focusing on integrated control methodologies for crop and livestock insect pests and other related arthropods, and insect vectors of tropical diseases. *Duration: up to 3 years.*

Universiti Sains Malaysia (USM), Malaysia

The **TWAS-USM Fellowship Programme for Postgraduate Research** offers fellowships to young scientists from developing countries (other than Malaysia) who wish to obtain a PhD in one of the fields of natural sciences. *Duration: up to 3 years.*

National Centre of Excellence in Molecular Biology (CEMB), Pakistan

The **TWAS-CEMB Fellowship Programme for Postgraduate Research** offers fellowships to young scientists from developing countries (other than Pakistan) who wish to obtain all or part (SANDWICH or FULL-TIME) of their PhD in molecular biology and molecular genetics. *Duration: up to 4 years.*

International Center for Chemical and Biological Sciences (ICCBS), Pakistan

The **TWAS-ICCBS Fellowship Programme for Postgraduate Research** offers fellowships to young scientists from developing countries (other than Pakistan) who wish to obtain all or part (SANDWICH or FULL-TIME) of their PhD in organic chemistry, biochemistry, biotechnology, molecular medicine, pharmacology or physical chemistry. *Duration: up to 4 years.*

Summary of research fields covered by each programme:

Programme	Agricultural sciences	Biology	Chemistry	Earth sciences	Engineering sciences	Mathematics	Medical sciences	Physics
CNPq, Brazil	√	√	√	√	√	√	√	√
CAS, China	√	√	√	√	√	√	√	√
CSIR, India	√	√	√	√	√	√	√	√
DBT, India	√	√	√	√	-	-	√	√
SN Bose, India	-	-	√	-	-	√	-	√
IACS, India	-	√	√	-	√	√	-	√
icipe, Kenya	√	√	√	-	-	-	√	-
	√	√	√	-	√	√	√	√
USM, Malaysia								
CEMB, Pakistan	√	√	-	-	-	-	√	-
ICCBS, Pakistan	√	√	√	-	-	-	√	-

√ = Fellowships offered in this subject area - = Fellowships NOT offered in this subject area.

IMPORTANT NOTES

Applicants may apply for only one TWAS Fellowship per year. For example, applicants to the TWAS-CAS programme cannot also apply to other TWAS Fellowship programmes with other partners, including those provided through CEMB, CNPq, CSIR, DBT, IACS, ICCBS, *icipe*, S.N. Bose, USM, TWAS Fellowships for Research and Advanced Training and the OWSD [TWOWS] Postgraduate Training Fellowships for Women Scientists in Sub-Saharan Africa and Least Developed Countries (LDCs) at Centres of Excellence in the South. Applicants for TWAS Fellowships for Research and Advanced Training and the OWSD Postgraduate Training Fellowships for Women Scientists in Sub-Saharan Africa and Least Developed Countries (LDCs) should download the relevant application form (see either www.twas.org, under 'Programmes', or www.owsdw.org).

GENERAL INFORMATION

Please check the eligibility criteria carefully, especially the age restrictions, timing of the start of the Fellowship and deadline for the receipt of applications. See 'Additional information' sections for specific information regarding each programme. Remember, you can apply for only one Fellowship programme per year.

- Applicants already on site in the host country are **not** eligible (except for CAS, China).
- Applicants already holding a visa for permanent or temporary residency in the host country (except for CAS, China) or in a developed country are **not** eligible.
- Women scientists are especially encouraged to apply.
- International travel (return economy class by the shortest route) and visa expenses will be covered by TWAS.
- Programme partners will provide a stipend to cover living expenses, in some cases also including health insurance. If health insurance is not provided by the programme partner, obtaining suitable health insurance is the candidate's own responsibility and will be at his/her own expense.
- All specific obligations, regulations, stipends etc will be thoroughly explained to successful candidates in the award letter/contract.
- Applicants must provide evidence that they will return to their home country upon completion of their Fellowships.
- Applicants **must submit an official Acceptance Letter from the host institution** (see sample on page 5 to TWAS (in all cases) and to the relevant programme partner organization (except in the cases of DBT, S.N.Bose, India; and ICCBS, Pakistan) when applying, or by the deadline at the latest.
- The Fellowships do not include provisions for accompanying family members.
- Applications for part-time Fellowships will be considered **ineligible**.
- Incomplete/unsigned applications will **not** be accepted. This also applies to submissions by fax and electronic mail, which must include all enclosures and be signed (either digitally or by including a scanned signature).
- Successful applicants must not take up other assignments during the period of their Fellowships.
- Applications will be acknowledged once they have been processed.
- **Successful candidates will be notified by February of the year following the application.**
- TWAS shall be entitled to a repayment of all or part of any funds paid to an applicant hereunder, in the event that the applicant intentionally or negligently fails to fulfil any or all of the present conditions. The applicant agrees to pay any reasonable legal and/or collection costs incurred by TWAS to obtain the repayment.

DEADLINES FOR RECEIPT OF APPLICATIONS

For all programmes, the call for applications is open from March/April of each year until the deadlines indicated below. **CAS and CNPq programmes require direct application!*

N.B. You are strongly suggested to submit your application and ALL required documentation well before the deadline in order to be able to provide any additional information/material required by this office by the deadline.

No documents are accepted after the deadline. Incomplete applications will not be considered.

15 June	31 August	15 September
*CAS, China	CSIR, India	icipe, Kenya
*CNPq, Brazil	DBT, India	USM, Malaysia
	S.N. BOSE, India	
	ICCBS, Pakistan	
	CEMB, Pakistan	
	IACS, India	

STEP BY STEP GUIDELINES ON HOW TO APPLY

It is important to note that applicants cannot apply for fellowships tenable in their home country, for instance an Indian applicant applying for a fellowship tenable in India will be considered ineligible. The same applies to applicants already in the host country.

In order to apply for a TWAS Fellowship, each applicant is requested to follow a few key steps that are indicated below:

1. WHICH PROGRAMME SHOULD I CHOOSE?

You should carefully read the "General information" and "Additional information" sections in these application guidelines and choose the most suitable fellowship for your research needs.

2. CHECK ELIGIBILITY CRITERIA:

After choosing a fellowship programme, you should verify that you are eligible and meet ALL the eligibility criteria specified in the "additional information" section of your chosen programme (e.g. age, nationality etc.).

3. CHOOSE AN ELIGIBLE HOST INSTITUTE:

Select a suitable host institution under the fellowship you have chosen. In these guidelines, under "additional information", you will find the website addresses leading to the lists of eligible host institutes for each programme.

4. GET PRELIMINARY ACCEPTANCE:

Applying is subject to preliminary acceptance at a host institute. After choosing an eligible host institute, you must seek to obtain preliminary acceptance and an Acceptance Letter (see sample on page 5). To request an Acceptance Letter you must contact the chosen host institution via e-mail, fax or by sending a letter with your CV, research proposal and the sample copy of the Acceptance Letter. This must indicate a starting date in the year following the application, for instance if applying in 2012, the letter must indicate 2013 as the starting date.

Obtaining preliminary acceptance at an eligible host institute is the responsibility of the applicant.

For specific information on how to obtain an Acceptance Letter and who to contact in this regard, please refer to the "additional information" section of each specific fellowship programme.

Applications will not be considered or processed without the Acceptance Letter from a host institution.

6. SUBMIT THE APPLICATION:

Once the Acceptance Letter has been received, you should submit to the TWAS Fellowships Office (fellowships@twas.org) and to the other programme partner (in specified cases) the completed application form by e-mail (as MS Word file) together with ALL the required enclosures in one zipped (compressed) electronic file. Alternatively, applications can be submitted by fax or by post.

You are advised to apply for the Acceptance Letter well in advance so that there is sufficient time for you to collate all required documents for submission by the deadline.

No documents are accepted after the deadline. Incomplete applications will not be considered.

An official acknowledgment will be sent confirming the status of your application once it has been processed and not upon receipt.

If awarded, the fellowship must be taken up in the year following the application.

SAMPLE ACCEPTANCE LETTER FOR HOST INSTITUTIONS

It is important to note that applicants **MUST** already be accepted by a host institution in Brazil, *China, India, Kenya, Malaysia or Pakistan to be eligible for a TWAS Postgraduate Fellowship.

For China the acceptance letter is different and is called the "Supervisor's Comment Pages". Please see page 10 and 11 relating to the CAS-TWAS President's Fellowship.

How to obtain the preliminary acceptance letter:

- 3) Identify a suitable host institution from the lists provided (see "additional information" sections).
- 4) Contact your selected host institution or a potential host supervisor, providing your CV, research proposal and a copy of the sample acceptance letter (see below).

Signed acceptance letters must be sent to TWAS and the relevant programme partner (except in the case of S.N.Bose and ICCBS). The head of department, coordinator of postgraduate studies or programme partner's contact person (as specified in the guidelines for each specific fellowship programme) at the HOST institution must sign the letter. Informal communication exchanged with potential host supervisors can be submitted, but it will **not** be considered as formal evidence of institutional acceptance.

HOST INSTITUTION'S LETTERHEAD

Department's name
Postgraduate programme's name
Institutional address
Tel and fax numbers
E-mail address

[Place and Date]

Dear _____ [candidate's name and surname] - _____ [country of citizenship],

This is to inform you that, as a candidate for a postgraduate fellowship under the agreement established by TWAS and _____ [programme partner], you have been accepted for a _____ [FULL-TIME or SANDWICH, please specify*] postgraduate programme of the duration of _____ [length of time, months/years, please specify] in _____ [field of specialization/academic programme] at this department/institution _____.

If subsequently selected for a TWAS-_____ [programme partner] Fellowship, you should begin your studies/research in the _____ [first or second] academic semester of _____ (year) and expect to conclude by _____ [month and year]. While researching at this institution, you will be under the supervision of Professor _____ [name, and surname of supervisor] to be contacted at _____ [email address]. The topic for which you have been accepted to study at this institution is: _____.

Yours sincerely,

Signature and name of head of department, postgraduate studies coordinator or programme partner's contact person as specified in these guidelines for each specific fellowship programme
N.B. The letter cannot be accepted without a signature.

* The FULL-TIME Fellowship applies to candidates who intend to register for a PhD in the host country. The SANDWICH Fellowship entails one research visit at the host institute for applicants who are already registered for a PhD in their home country. Please verify the minimum and maximum duration of the sandwich programme in these application guidelines (under the "additional information" section of each programme partner).

IMPORTANT

NOTE:

The starting date on the acceptance letter must be the year following the application e.g. If

you apply for a fellowship in 2013 the acceptance letter should show the starting date as 2014.

SAMPLE REGISTRATION & NO OBJECTION CERTIFICATE FOR SANDWICH POSTGRADUATE FELLOWSHIP APPLICATIONS**FOR APPLICANTS ALREADY REGISTERED FOR A PHD IN THEIR HOME COUNTRY**

ONLY FOR CSIR, S.N. BOSE AND DBT (INDIA), ICIPE (KENYA), CEMB AND ICCBS (PAKISTAN) SANDWICH FELLOWSHIP APPLICATIONS; FOR CNPQ SANDWICH FELLOWSHIPS REFER TO THE SAMPLE AVAILABLE AT
[HTTP://WWW.CNPQ.BR/WEB/GUEST/CHAMADAS-PUBLICAS](http://www.cnpq.br/web/guest/chamadas-publicas)

[Institution's Letterhead]

[Institution's address and contact details]

Registration & No Objection Certificate

This is to certify that Mr/Mrs/Ms, son / daughter of, has been registered in the Department of..... at the University of for a PhD in the area of since

We hereby convey our No Objection towards his/her study/work in [*indicate host institution, city and country*], and also agree to accept Host Supervisor, [*indicate title, name and surname of host supervisor*] as a Co-Supervisor in the final assessment of the thesis/dissertation based on which the PhD degree could be offered to Mr/Mrs/Ms by us.

[Signature with Seal]

NOTE: This certificate should be signed by the Vice-Chancellor or Registrar of the University where the candidate is registered for his/her PhD

Additional information: TWAS-CNPq, Brazil

TWAS-CNPq Postgraduate Fellowship Programme

Deadline for receipt of applications: 15 June

Programme Details

- TWAS-CNPq Postgraduate Fellowships are tenable at research institutions in Brazil for a period of up to four years and are awarded to students from developing countries (other than Brazil) to enable them to pursue all or part (SANDWICH or FULL-TIME) of their research leading towards a PhD degree in the natural sciences.
- The academic year in Brazil usually begins on 1 March and the second semester in early August of each year. Candidates will enrol for their PhD at the host institution and must observe the academic calendar of the host institution and be ready to start their Fellowship on the first day of classes/courses (most likely in Portuguese).
- For the complete list of eligible institutions/programmes (CAPES-Conceito 5, 6 and 7) under CNPq, refer to the worksheet that you can view and download from: <http://twas.ictp.it/prog/exchange/fells/fells-pg/bra-pg> or download directly here: [CAPES inst 2013 5-6-7](#).
- CNPq will provide a standard monthly allowance which should be used to cover living costs, such as accommodation, food and health insurance. The monthly stipend will not be convertible into foreign currency.
- Information about living conditions, such as possibilities of accommodation, transportation, and any other issues related to the candidate's stay in Brazil must be obtained locally, directly from the host institution. Neither TWAS nor CNPq can provide this information.
- In most institutions the language of instruction is Portuguese; in a few institutions it is English.

Eligibility

Applicants for these fellowships must meet the following criteria:

Sandwich Postgraduate

- Be at most 35 years old on 31 December 2013;
- Hold a university degree in the Natural Sciences (minimum Master's degree);
- Have good command of Portuguese and/or Spanish and/or English;
- Be a national of a developing country other than Brazil;
- Must not hold a visa for permanent or temporary residency in Brazil or in a developed country;
- Be officially enrolled as a PhD Student in the home country for at least 1 (one) year by the date of the application;
- Provide evidence that s/he will return to her/his home country on completion of the fellowship;
- Not take up other assignments during the period of her/his fellowship;
- provide an official acceptance letter from the host institution (see sample Acceptance Letter on page 5). Only CAPES-listed (levels 5, 6 or 7) Brazilian institutions are eligible (see point 3 above);
- Prove knowledge of Portuguese or provide a certificate of proficiency in Spanish or English (if these languages are not the candidate's mother tongue);
- Have an updated Curriculum Vitae on CNPq's Lattes Platform (see note on online applications below);
- Present a detailed research plan agreed by her/his host supervisor;
- Be financially responsible for any accompanying family members.

Full time Postgraduate

- Be at most 35 years old on 31 December 2013;
- Hold a university degree in the Natural Sciences (minimum Master's degree);
- Have good command of Portuguese and/or Spanish and/or English;
- Must not hold a visa for permanent or temporary residency in Brazil or in a developed country.
- Provide evidence that s/he will return to her/his home country on completion of the fellowship;
- Not take up other assignments during the period of her/his fellowship;

- provide an official acceptance letter from the host institution (see sample Acceptance Letter on page 5). Only CAPES-listed (levels 5, 6 or 7) Brazilian institutions are eligible (see point 3 above);
- Prove knowledge of Portuguese or provide a certificate of proficiency in Spanish or English (if these languages are not the candidate's mother tongue);
- Have an updated Curriculum Vitae on CNPq's Lattes Platform (see note on online applications below);
- Present a detailed research plan agreed by her/his host supervisor;
- Be financially responsible for any accompanying family members.

CNPq mandatory documents required

For Sandwich Postgraduate:

1. TWAS application form in Microsoft WORD format;
2. Signature page of TWAS form signed and scanned;
3. Research project
4. Lattes Curriculum
5. Master's degree certificate
6. CV with list of publications
7. Passport copy
8. Official letter of preliminary acceptance
9. Certificate of language(s) proficiency
10. Support declaration from supervisor from home institution

For Full time Postgraduate:

1. TWAS application form in Microsoft WORD format
2. Signature page of TWAS form signed and scanned
3. Research project
4. Lattes Curriculum
5. Master's degree certificate
6. CV with list of publications
7. Passport copy
8. Official letter of preliminary acceptance
9. Certificate of language(s) proficiency

Submitting your application

The call for applications is open **from mid April to 15 June** for 2013. No applications will be accepted after this date. Therefore, it is recommended to submit your electronic application as early as possible.

- From 2010, **all applications to the TWAS-CNPq Fellowships programmes must be submitted online only via the following link <http://www.cnpq.br/web/guest/chamadas-publicas>**. The call for applications where you will find the programme details, eligibility criteria, required documents and certificates as well as the online application form **will only be available from mid April to 15 June.**
- **Applicants must be aware that CNPq and TWAS will not accept applications submitted by any other means except via the online application form.**
- Incomplete applications are not accepted by the online system. Please ensure you have all necessary documents ready for uploading before applying.
- Queries concerning the call for applications to the TWAS-CNPq Fellowships programmes should be directed exclusively to: twas.ascin@cnpq.br.

CONTACT DETAILS

**National Council for Scientific and
Technological Development - CNPq**
International Cooperation Office - CNPq/ASCIN
SHIS Quadra 01 Conjunto B - Bloco D - 1o.
andar - Edifício Santos Dumont - Lago Sul -
Brasília, DF, CEP: 71605-001, Brazil
Tel: +55 61 3211- 9440
Fax: +55 61 3211 9442
Email: twas.ascin@cnpq.br

Additional information: NEW! CAS-TWAS President's Fellowships, China

CAS-TWAS President's Fellowship Programme

Deadline for receipt of applications: 15 June

Programme Details

The CAS-TWAS President's Fellowship Programme will provide students from developing countries with the opportunity to pursue full-time PhDs at the University of Chinese Academy of Sciences (UCAS), the University of Science and Technology of China (USTC) and/or institutes of CAS around China.

TWAS will be responsible for providing round-trip travel support for 50 awardees each year to and from China, or for providing one way travel support for 80 awardees each year to China. TWAS will make active efforts to secure additional funds to cover more awardees for travel supports. In addition, TWAS will also cover visa related expenses and a contribution to excess luggage fees for stays in China of more than 12 months.

CAS will be responsible for a monthly payment to cover accommodation and living expenses. Successful applicants will receive a monthly stipend (including living expenses, local travel expenses and health insurance) of RMB 7,000 (approx. USD 1,100) or RMB 8,000 (approx. 1,250) from CAS through UCAS, depending on whether he/she has passed a qualification test arranged by UCAS for all PhD candidates after admission. Awardees of the Fellowship will be exempted from tuition fees.

The Fellowship awardee who fails the qualification test twice within one year will face the consequences including:

1. *termination of his/her Fellowship;*
2. *discontinuity of his/her PhD study at UCAS;*
3. *getting a diploma of completion*

All the procedures will adhere to UCAS regulations and rules.

The duration of the Programme is 4 years, divided into:

- Maximum 1 year study of courses and participation in centralized training at the International College of UCAS (IC-UCAS) on Beijing campus, including 4 months compulsory courses in Chinese Language and Culture.
- Practical research and completion of degree dissertation at UCAS colleges, schools and CAS institutes.

Eligibility

Applicants for these Fellowships must meet the following criteria:

- Be financially responsible for any accompanying family member;
- Be a national of a developing country other than China;
- Must not hold any visa for temporary or permanent residency in a developed country;
- Not take up other assignments during the period of his/her this fellowship.

Applicants for PhD Study Scholarship should also:

- Meet the admission criteria set for international students by UCAS (please refer to <http://english.ucas.ac.cn/Admissions/Pages/Article.aspx?ID=78>);
- Be maximum age of 35 years on 31 December in the year of application;
- Have a master degree before the beginning of the fall semester;
- Provide evidence that he/she will return to their home country on completion of their studies in China according to CAS-TWAS agreements;
- Provide proof of knowledge of English or Chinese language e.g. studies taken in these languages, certificates etc;
- Provide recommendation letters from two professors in a relevant field, for example the applicant's supervisor at the home institution or head of department and/or an eminent scientist from outside the home institution. If a TWAS member is familiar with the applicant's work he may ask him/her for a letter of support. Due to privacy reasons, TWAS cannot provide contact details of TWAS members.

Submitting your application*

The call for applications is open **until 15 June** of each year.

1. Download and fill in **A)** the "Admission Application Form for International Students of UCAS" (<http://englishucas.ac.cn/Admissions/Pages/Article.aspx?ID=78>) and **B)** "Application Form for the CAS-TWAS President's Fellowship" (<http://englishucas.ac.cn/Admissions/Pages/Article.aspx?ID=144>) and submit these **two application forms** (Supervisor's Comment Pages not to be included) **with the following materials to the Office of CAS-TWAS President's Fellowship Programme at UCAS:**

- Notarized photocopy of the highest degree certificate (This year's graduates provide a pre-graduation certificate);
- Notarized photocopy of the transcript of all undergraduate or graduate study;
- Curriculum vitae and detailed research proposal;
- Photocopy of the first page of a regular passport [Photocopy of the title page and abstract of each published academic paper;
- Foreigner Physical Examination Form;
- Payment certification of the application processing fee (RMB 600, see the "Admission Application Form for International Students of UCAS" for more details).

Note: Applicants may submit scanned copies of the required application document via email. After receiving the offer of the scholarship, applicants are required to send the original notarized photocopy of their highest degree certificate and the original notarized photocopy of the transcript of their undergraduate or graduate study to IC-UCAS. The detailed requirements and contact information of IC-UCAS will be provided in the admission offer documents sent to the awardees.

2. Contact professors affiliated with UCAS colleges, schools and CAS institutes (<http://englishucas.ac.cn/Academics>) and get agreement from a Professor to be your tutor (supervising professor).
3. Send the Supervisor's Comment Pages in the "Application Form for the CAS-TWAS President's Fellowship" to your host supervisor/ tutor (supervising professor in China), and ask him/her to fill in the comment pages. Make sure that your host supervisor/tutor (supervising professor) will send the completed "comment pages" directly to the Office of CAS-TWAS President's Fellowship Programme at UCAS.
4. The applicant must obtain recommendation letters from two professors in a relevant field, for example the applicant's supervisor at the home institution or head of department and/or an eminent scientist from outside the home institution. If a TWAS member is familiar with his/her work the applicant may ask him/her for a letter of support. Due to privacy reasons, TWAS cannot provide contact details of TWAS members.
5. The applicants who do need travel support for international travel to and from China, should provide a separate written request and send the request together with the "Application Form for the CAS-TWAS President's Fellowship" to the Office of CAS-TWAS President's Fellowship Programme at UCAS. CAS will coordinate with TWAS to process and make decision on travel support issues.

***NO MATERIAL IS TO BE SENT TO TWAS!**

- Queries concerning the call for applications to the TWAS-CAS President's Fellowship programmes should be directed exclusively to: **president-fellowship@ucas.ac.cn**

CONTACT DETAILS**Office of CAS-TWAS President's Fellowship Programme**

University of Chinese Academy of Sciences

Add.: 19A Yuquanlu, Beijing, 100049 China

Tel: 86-10-88256424; 86-10-88256206

Fax: 86-10-88256207

E-mail: president-fellowship@ucas.ac.cn

Additional information: TWAS-CSIR, India

TWAS-CSIR Postgraduate Fellowship Programme

Deadline for receipt of applications: 31 August

Programme details

- TWAS-CSIR Postgraduate Fellowships are tenable in CSIR research laboratories and institutes in India for a maximum period of four years.
- Applicants may be registered for a PhD degree in their home country, or may enrol in a PhD course at an Indian university.
- **Eligible CSIR institutions:** Information on CSIR laboratories and institutes can be obtained by following the links from the CSIR homepage (www.csir.res.in). Alternatively, refer to the worksheet that you can view and download from: <http://twas.ictp.it/prog/exchange/fells/fells-pg/csir-pg> or download directly here: CSIR institutes and here: CSIR-Centres.doc.
- SANDWICH Fellowships (for those registered for a PhD in their home country): The Fellowship may be granted for a minimum period of 6 months and a maximum period to be decided by the host institute.
- FULL-TIME Fellowships (for those not registered for a PhD): The Fellowship may be granted for an initial period of up to 12 months. Such Fellowships may then be extended for a further 3 years, subject to the student's performance and his/her registration for PhD at a university in India. CSIR will confirm any such extensions to both TWAS and the candidate.
- In both the sandwich and full-time Fellowship options, the programme envisages only one journey to the host country.
- CSIR will provide a monthly stipend to cover living costs, food and health insurance. The monthly stipend will not be convertible into foreign currency. In addition, Fellowship awardees are entitled to subsidized accommodation.
- The language of instruction for foreign scholars in CSIR laboratories/institutes is English.

Eligibility

Applicants for these Fellowships must meet the following criteria:

- be a maximum age of 35 years on 31 December of the application year;
- be nationals of a developing country (other than India);
- must **not** hold any visa for temporary or permanent residency in India or any developed country;
- hold a Master's degree in science and technology;
- be regularly employed in their home country and hold a research assignment there;
- SANDWICH Fellowships: be registered PhD students in their home country and provide the "Registration and No Objection Certificate" from the HOME university (see sample on page 6) **OR**
- FULL-TIME Fellowships: be willing to register at a university in India within the first year, **if** agreed to by CSIR;
- be accepted at a CSIR laboratory/institution and provide an official Acceptance Letter from the host institution (see sample Acceptance Letter, on page 5) to this effect. **N.B. Requests for acceptance must be directed to the chosen CSIR host institution(s), with copy to the CSIR contact person. This will allow CSIR to monitor requests and offer support or assistance in finding suitable host institution(s), if necessary;**
- provide evidence of proficiency in English.

Submitting your application

The call for applications is open **from March/April until 31 August** of each year.

- If already registered for a PhD in their home country, applicants should ensure that the Vice-Chancellor or Registrar of the HOME university signs a copy of the "Registration and No Objection Certificate" (see on page 6), a copy of which should be sent to both CSIR and TWAS.
- Applicants should submit the acceptance letter from a CSIR institution to CSIR and TWAS when applying or by the deadline at the latest. Without preliminary acceptance, the application will **not** be considered for selection.
- Reference letters must be on letter-headed paper, SIGNED and sent as attachments via e-mail to TWAS and CSIR. The subject line must contain CSIR/PG/ and the candidate's surname. Alternatively, letters

should be sent in sealed envelopes by post. N.B. Only signed reference letters can be accepted. The letters can be submitted either by the referee or by the applicant directly.

- Applications for the **TWAS-CSIR Postgraduate Fellowship Programme** should be sent to TWAS and CSIR (by post, fax or email).

CONTACT DETAILS

TWAS Fellowships Office

ICTP campus, Strada Costiera 11
34151 Trieste, Italy
Tel: +39 040 2240 314
Fax: +39 040 2240 689
E-mail: fellowships@twas.org

Mr. Jaipal Singh, Senior Technical Officer

Council Of Scientific & Industrial Research (CSIR)

International S&T Affairs Directorate (ISTAD)
Anusandhan Bhavan - 2 Rafi Marg
New Delhi 110 001, India
Tel: +91 11 2331 6751
Fax: +91 11 2373 9041, 2371 0618
E-mail: jaipal@csir.res.in

Additional information: TWAS-DBT, India

TWAS-DBT Postgraduate Fellowship Programme

Deadline for receipt of applications: 31 August

Programme Details

- TWAS-DBT Postgraduate Fellowships are tenable at key biotechnology research institutions in India for a period of up to five years.
- To help candidates in their choice of a suitable host institution a list of biotechnology institutes in India is available for download from: <http://twas.ictp.it/prog/exchange/fells/fells-pg/dbt-pg>
- However, candidates are free to choose an Indian biotechnology institution that does not appear on the list.
- SANDWICH Fellowships (for those registered for a PhD in their home country): The Fellowship may be granted for a minimum period of 12 months and a maximum period of 2 years.
- FULL-TIME Fellowships (for those not registered for a PhD): The Fellowship is granted for an initial period of up to 3 years. Such Fellowships may then be extended for a further 2 years, subject to the student's performance. Candidates will register for their PhD at a university in India. DBT will confirm any such extensions to both TWAS and the candidate.
- DBT will provide a monthly stipend to cover living costs, food and health insurance. The monthly stipend will not be convertible into foreign currency. In addition, the fellowship holder will receive a house rent allowance.
- The language of instruction is English.

Eligibility

Applicants for these Fellowships must meet the following criteria:

- be a maximum age of **35** years on 31 December of the application year;
- be nationals of a developing country (other than India);
- must **not** hold any visa for temporary or permanent residency in India or any developed country;
- hold a Master's or equivalent degree in science or engineering;
- for SANDWICH Fellowships: be registered PhD students in their home country and provide the "Registration and No Objection Certificate" from the HOME university (see sample on page 6); **OR**
- FULL-TIME Fellowships: be willing to register at a university in India;
- be accepted at a biotechnology institution in India (see sample Acceptance Letter, on page 5). **N.B. Requests for acceptance must be directed to the chosen host institution(s), and NOT to DBT;**
- provide evidence of proficiency in English.

Submitting your application

The call for applications is open **from March/April until 31 August** of each year.

- For SANDWICH Fellowships (only if already registered for a PhD in the HOME country) applicants should ensure that the Vice-Chancellor or Registrar of the university sends a signed copy of the "Registration and No Objection Certificate" on institutional headed paper to TWAS (see sample form, on page 6).
- Applicants should submit the Acceptance Letter from an Indian biotechnology institution to TWAS when applying or by the deadline at the latest. Without preliminary acceptance, the application will **not** be considered for selection.
- Reference letters must be on letter-headed paper, SIGNED and sent as attachments via e-mail to TWAS and DBT. The subject line must contain the name DBT/PG/ and the candidate's surname. Alternatively, letters should be sent in sealed envelopes by post. N.B. Only signed reference letters can be accepted. The letters can be submitted either by the referee or by the applicant directly.
- Applications for the **TWAS-DBT Postgraduate Fellowship Programme** should be sent to TWAS and CICS (see contact details below) (by post, fax or email).

CONTACT DETAILS

TWAS Fellowships

ICTP campus, Strada Costiera 11
34151 Trieste, Italy

Tel: +39 040 2240 314

Fax: +39 040 2240 689

E-mail: fellowships@twas.org

Office Dr. (Mrs) A. Amudeswari

Director

**Centre for International Cooperation in Science
(CICS)**

2, Gandhi Mandapam Road

Chennai 600 025, India

Tel: +91 44 24430228, 24901367, 24419466

Fax: +91 44 24914543

E-mail : cics2010@vsnl.net, dircics@gmail.com

Website: WWW.cics.tn.nic.in

Additional information: TWAS-SN Bose, India

TWAS-SN Bose Postgraduate Fellowship Programme

Deadline for receipt of applications: 31 August

Programme Details

- TWAS-SN Bose Postgraduate Fellowships are tenable at the S.N. Bose National Centre for Basic Sciences in Kolkata, India – www.bose.res.in – for studies leading towards a PhD degree in the physical sciences for four years with the possibility of a one-year extension.
- The Centre carries out the following **research activities**:

Linear and Non-linear spectroscopy, Ultrafast molecular processes and spectroscopy, Ultrafast dynamics in biological macromolecules and magnetization, Ultrafast laser induced processes, Soft condensed matter systems of chemical and biological interests, mesoscopic physics, ionic liquids, multi-component liquid mixtures, supercooled melts, supercritical fluids, bio-nano interface, nano-magnetism, magnonic crystals, micromagnetic simulations, Nanomaterials in general, and Physics of Correlated oxides, low dimensional systems, magnetic shape memory alloys, dilute magnetic semi-conductors, multi-ferroic materials, thin films of metals and oxides, electronic, magnetic and structural properties of complex materials, superconductivity, strongly correlated electronic systems, quantum many-body physics, micromagnetic and monte carlo simulation of static and dynamic properties of nanomagnets, theoretical study of thermal conductivity, Ab initio plane wave pseudo-potential calculation, strongly correlated electron systems, electronic structure and transport through nano-materials.

Quantum field theory, mathematical physics, cognitive science, granular physics, non-commutative quantum mechanics, statistical physics, non-linear dynamics, turbulences, lattice gauge theories, representation theory of lie groups and coherent states, quantum optics, black holes, constrained dynamics, quantum gravity, quantum spin systems, collective behaviour and emergent phenomena, explosive percolation, complex networks and critical phenomena.

Cosmology, Relativistic Astrophysics, ionospheric science, Astrochemistry.

- Admission to the PhD programme at the S.N. Bose National Centre will depend on the successful completion of coursework (about one year's duration).
- Applicants may be registered for a PhD degree in their home country (SANDWICH option), or may enrol in a PhD course at the S.N. Bose National Centre for Basic Sciences (FULL-TIME option). In both cases, the programme envisages only one journey to the host country.
- S.N. Bose will provide a monthly stipend to cover living costs, food and health insurance. The monthly stipend will not be convertible into foreign currency. Free on-campus accommodation will be provided.
- The language of instruction is English.

Eligibility

Candidates for these Fellowships must meet the following criteria:

- be a maximum age of 35 years on 31 December of the application year;
- be permanent resident in a developing country (other than India);
- must **not** hold any visa for temporary or permanent residency in India or any developed country;
- hold a Master's degree (that satisfies criteria equivalent to MSc in India) in physics, mathematics or physical chemistry;
- for SANDWICH Fellowships: be registered PhD students in their home country and provide the "Registration and No Objection Certificate" from the HOME university (see sample on page 6); **OR**
- FULL-TIME Fellowships: be willing to register at the S.N. Bose;
- be accepted by a department of the S.N. Bose National Centre. Requests for acceptance must be directed to the Dean (Academic Programme), S.N. Bose National Centre for Sciences by e-mail (deanap@bose.res.in) (see sample Acceptance Letter, on page 5). In contacting the Dean (Academic Programme), applicants **must** accompany their request for an Acceptance Letter with copy of their CV, a research proposal outline and two reference letters;
- provide evidence of proficiency in English.

Submitting your application

The call for applications is open **from March/April until 31 August** of each year.

- For SANDWICH Fellowships (only if already registered for a PhD in the HOME country) applicants should ensure that the Vice-Chancellor or Registrar of the university sends a signed copy of the

"Registration and No Objection Certificate" on institutional headed paper to TWAS (see sample form, on page 6).

- Applicants must submit an Acceptance Letter from a department of the S.N. Bose National Centre when applying, or by the deadline at the latest. Without preliminary acceptance the application will **not** be considered for selection.
- Reference letters must be on letter-headed paper, SIGNED and sent as attachments via e-mail to TWAS only. The subject line must contain SNBOSE/PG/ and the candidate's surname. Alternatively, letters should be sent in sealed envelopes by post. N.B. Only signed reference letters can be accepted. The letters can be submitted either by the referee or by the applicant directly.
- Applications for the **TWAS-S.N. Bose Postgraduate Fellowship Programme** should be sent to TWAS **only** (by post, fax or email).

CONTACT DETAILS

TWAS Fellowships Office
ICTP campus, Strada Costiera 11
34151 Trieste, Italy
Tel: +39 040 2240314
Fax: +39 040 2240689
E-mail: fellowships@twas.org

Dean (Academic Programme)
S.N. Bose National Centre for Basic Sciences
JD Block, Sector 3, Salt Lake City - Kolkata 700098, India
Tel: +91 33 2335 5706
Fax: +91 33 2335 3477
E-mail: deanap@bose.res.in

Additional information: TWAS-IACS, India

TWAS-IACS Postgraduate Fellowship Programme

Deadline for receipt of applications: 31 August

Programme Details

- TWAS-IACS Postgraduate Fellowships are tenable at the Indian Association for the Cultivation of Science (IACS) – www.iacs.res.in – for a period of maximum four years for studies leading to a PhD degree. **Research areas** carried out include:
 - Theoretical physics
 - Condensed matter physics
 - Spectroscopy
 - Materials science
 - Non-conventional energy
 - Physical chemistry
 - Organic chemistry
 - Inorganic chemistry
 - Biological chemistry
 - Polymer science
- IACS will provide a monthly stipend which should be used to cover living costs, such as food, accommodation and health insurance. The monthly stipend will not be convertible into foreign currency.
- Applicants must observe the IACS academic calendar, which starts in April each year, and be ready to start their Fellowship on the first day of classes/courses.
- The language of instruction is English.

Eligibility

Applicants for these Fellowships must meet the following criteria:

- be a maximum age of 30 years on 31 December of the application year;
- hold a Master's degree in a field of natural sciences;
- be nationals of a developing country (other than India);
- must **not** hold any visa for temporary or permanent residency in India or any developed country;
- provide an official Acceptance Letter from a department of the Indian Association for the Cultivation of Science (IACS) (see sample Acceptance Letter, on page 5). Requests for acceptance must be directed to the Dean-Academic Prof. Sreebrata Goswami by e-mail (icsg@iacs.res.in) who will facilitate assignment of a host supervisor. In contacting Prof. Goswami applicants **must** accompany their request for an Acceptance Letter with copy of their CV and a research proposal outline;
- provide evidence of proficiency in English.

Submitting your application

The call for applications is open from March/April until 30 June of each year.

- Applicants should submit the acceptance letter from a IACS department to TWAS and IACS when applying or by the deadline at the latest. Without preliminary acceptance, the application will **not** be considered for selection.
- Reference letters must be on letter-headed paper, SIGNED and sent as attachments via e-mail to TWAS and IACS. The subject line must contain IACS/PG/ and the candidate's surname. Alternatively, letters should be sent in sealed envelopes by post. N.B. Only signed reference letters can be accepted. The letters can be submitted either by the referee or by the applicant directly.
- Applicants to the **TWAS-IACS Postgraduate Fellowship Programme** should send a copy of their application both to TWAS (by post, fax or email) and IACS (hard copy only).

CONTACT DETAILS

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Prof. Sreebrata Goswami

Dean-Academic

Dept. of Inorganic Chemistry

**Indian Association for the Cultivation of Science
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Additional information: TWAS-*icipe*, Kenya

TWAS-*icipe* Postgraduate Fellowship Programme

Deadline for receipt of applications: 15 September

Programme details

- For a complete overview of eligible research interests please see here: [2013-icipe-eligible-research-topics](#)
- SANDWICH Fellowships (for those registered for a PhD in a developing country): The Fellowship may be granted for a minimum period of 6 months and a maximum period of 12 months.
- FULL-TIME Fellowships (for those not registered for a PhD in their home country): The Fellowship is granted for a period of up to 3 years. Candidates will register for their PhD at any university in a developing country.
- The programme envisages only one journey to the host country.
- *Icipe* will provide a monthly stipend to cover living costs, food and health insurance. The monthly stipend will not be convertible into foreign currency. In addition, Fellowship awardees are entitled to subsidized accommodation.
- The language of instruction for foreign scholars in *icipe* is English.

Eligibility

Applicants for the full-time postgraduate fellowships should:

- be permanent residents in a developing country (other than Kenya);
- be a maximum of between 35 and 40 years of age by 31 December in the year of application;
- hold a university degree (minimum qualification is a Master's degree);
- provide evidence that s/he will return to their home country/country on completion of the fellowship;
- not take up other assignments during the period of his/her fellowship;
- be financially responsible for any accompanying family member;
- have official acceptance at an eligible department, institution or laboratory at *icipe*.

Applicants for sandwich postgraduate fellowships should:

- be permanent residents in a developing country (other than Kenya);
- hold a university degree (minimum qualification is a Master's degree);
- be registered PhD students in a developing country and provide a "Registration and No Objection Certificate" from their home university;
- provide evidence that s/he will return to their home country on completion of the fellowship;
- not take up other assignments during the period of his/her fellowship;
- be financially responsible for any accompanying family member;
- have a letter of agreement of his/her supervisor in his/her home country and an acceptance letter at an eligible department, institution or laboratory of the *icipe*. Both the home and the host supervisors are obligated to collaborate, in order to accompany the development of the awardee's research;
- there is no age limit for these positions.

Submitting your application

The call for applications is open **from March/April until 15 September** of each year.

- For SANDWICH Fellowships (if already registered for a PhD in developing country) applicants should ensure that the Vice-Chancellor or Registrar of the university sends a signed copy of the "Registration and No Objection Certificate" on institutional headed paper to TWAS (see sample form, on page 6).
- Applicants should submit the acceptance letter from the chosen department when applying or by the deadline at the latest. Without preliminary acceptance, the application will not be considered for selection.
- Reference letters must be on letter-headed paper, SIGNED and sent as attachments via e-mail to TWAS and *icipe*. The subject line must contain ICiPE/PG/ and the candidate's surname. Alternatively, letters should be sent in sealed envelopes by post. N.B. Only signed reference letters can be accepted. The letters can be submitted either by the referee or by the applicant directly.

- Applications for the **TWAS-*icipe* Postgraduate Fellowship Programme** should be sent to TWAS **only** (by post, fax or email).

CONTACT DETAILS

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E-mail: fellowships@twas.org

Mrs. Lillian Igweta, Training Officer

International Centre of Insect Physiology and Ecology (*icipe*)

Strategic Partnerships & Capacity Strengthening Prog.

Duduville, Kasarani – off Thika Road

P.O. Box 30772-00100 GPO, Nairobi, Kenya

Tel: +254 20 863 2272

Fax: +254 20 863 2001/2

E-mail: ligweta@icipe.org

Additional information: TWAS-USM, Malaysia

TWAS-USM Postgraduate Fellowship Programme Deadline for receipt of applications: 15 September

Programme Details

- TWAS-USM Postgraduate Fellowships are tenable in the departments, institutions and laboratories of the Universiti Sains Malaysia – www.ips.usm.my – for a period of three years for studies leading to a PhD degree in the natural sciences.
- The academic year in Malaysia begins in September and the second semester in February of each year, following the year of application. Candidates will enrol for their PhD at a USM department/laboratory and must observe USM's academic calendar and be ready to start their fellowship on the first day of classes/courses.
- USM will provide a standard monthly allowance which should be used to cover living costs, such as accommodation, food and health insurance.
- The language of instruction is English.

Eligibility

Applicants for these Fellowships must meet the following criteria:

- be a maximum age of 35 years on 31 December of the application year;
- be nationals of a developing country (other than Malaysia);
- must **not** hold any visa for temporary or permanent residency in Malaysia or any developed country;
- hold a Master's degree in a field of the natural sciences;
- provide an official Acceptance Letter from a department, laboratory or institute at USM (see sample Acceptance Letter, on page 5). Requests for acceptance must be directed to the Dean, Institute of Postgraduate Studies, USM (Prof. Muhamad Jantan by e-mails: twasusm@gmail.com, mjantan@usm.my) who will facilitate assignment of a host supervisor. In contacting Prof. Jantan, applicants **must** accompany their request for an Acceptance Letter with all the following documents: copy of an updated CV, a short write-up of research proposal (maximum 5 pages), scanned copies of certificates, academic transcripts and related credentials, and a scanned copy of the front page of their publications.
- provide evidence of proficiency in English;
- be financially responsible for any accompanying family member.

Submitting your application

The call for applications is open **from March/April until 15 September** of each year.

- Applicants should submit the acceptance letter from a USM department/laboratory to TWAS and USM when applying or by the deadline at the latest. Without preliminary acceptance, the application will **not** be considered for selection.
- Reference letters must be on letter-headed paper, SIGNED and sent as attachments via e-mail to TWAS and USM. The subject line must contain USM/PG/ and the candidate's surname. Alternatively, letters should be sent in sealed envelopes by post. N.B. Only signed reference letters can be accepted. The letters can be submitted either by the referee or by the applicant directly.
- Applicants to the **TWAS-USM Postgraduate Fellowship Programme** should send their application to TWAS and USM (by post, fax or email).

CONTACT DETAILS

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Fax: +60 4 6532 931
Email: twasusm@gmail.com, mjantan@usm.my

Additional information: TWAS-CEMB, Pakistan

TWAS-CEMB Postgraduate Fellowship Programme

Deadline for receipt of applications: 31 August

Programme Details

- TWAS-CEMB Postgraduate Fellowships are tenable at departments of the National Centre of Excellence in Molecular Biology (CEMB) – www.cemb.edu.pk – for a period of up to four years for studies leading to a PhD degree in: molecular biology, molecular genetics, plant molecular biology or medical molecular biology.
- SANDWICH Fellowships (for those registered for a PhD in their home country): The Fellowship may be granted for a minimum period of 6 months and a maximum period to be decided with CEMB.
- FULL-TIME Fellowships (for those not registered for a PhD): The Fellowship is granted for maximum 4 years.
- In both cases, TWAS covers only one return journey to the host country.
- CEMB will provide a monthly stipend which should be used to cover living costs, such as food, accommodation and health insurance. The monthly stipend will not be convertible into foreign currency.
- If awarded, applicants must sit a compulsory entrance examination in either April or September prior to starting their Fellowship.
- The language of instruction is English.

Eligibility

- Applicants for these Fellowships must meet the following criteria:
- be a maximum age of 35 years on 31 December of the year of application;
- be nationals of a developing country (other than Pakistan);
- must **not** hold any visa for temporary or permanent residency in Pakistan or any developed country;
- hold a Master's degree in a field of natural sciences;
- for SANDWICH Fellowships: be registered PhD students in their home country and provide the "Registration and No Objection Certificate" from the HOME university (see sample on page 6) **OR**
- FULL-TIME Fellowships: be willing to register at CEMB;
- provide an official Acceptance Letter from CEMB (see sample Acceptance Letter, page 5). Requests for acceptance must be sent to the Acting Director of CEMB (Prof. Tayyab Husnain, by e-mail: director@cemb.pu.edu.pk and camb1@wol.net.pk) who will facilitate assignment of a host supervisor. In contacting Prof. Tayyab Husnain, applicants **must** accompany their request for an Acceptance Letter with copy of their CV and a research proposal outline;
- provide evidence of proficiency in English.

Submitting your application

The call for applications is open **from March/April until 30 June** of each year.

- If already registered for a PhD in their home country, applicants should ensure that the Vice-Chancellor or Registrar of the HOME university signs a copy of the "Registration and No Objection Certificate" (see on page 6), a copy of which should be sent to both CEMB and TWAS.
- Applicants must submit an Acceptance Letter from CEMB when applying, or by the deadline at the latest. Without preliminary acceptance the application will **not** be considered for selection.
- Reference letters must be on letter-headed paper, SIGNED and sent as attachments via e-mail to TWAS and CEMB. The subject line must contain CEMB/PG/ and the candidate's surname. Alternatively, letters should be sent in sealed envelopes by post. N.B. Only signed reference letters can be accepted. The letters can be submitted either by the referee or by the applicant directly.
- Applicants to the **TWAS-CEMB Postgraduate Fellowship Programme** should send a copy of their application (by email, fax or post) to TWAS and CEMB. (For CEMB only: if sending by email or fax, a hard copy must also be submitted by post).

CONTACT DETAILS

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Dr. Ahmad Ali Shahid

In charge of MPhil/PhD Programme

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Lahore 53700, Pakistan

Tel: +92 42 529 3148

Fax: +92 42 516 4155, 42 529 3149

Email: camb1@wol.net.pk, director@cemb.edu.pk

Additional information: TWAS-ICCBS, Pakistan

TWAS-ICCBS Postgraduate Fellowship Programme

Deadline for receipt of applications: 31 August

Programme Details

- TWAS-ICCBS Postgraduate Fellowships are tenable at the International Center for Chemical and Biological Sciences (ICCBS) – comprising the H.E.J. Research Institute of Chemistry and the Dr. Panjwani Center for Molecular and Drug Research, www.iccs.edu – for a period of up to four years for studies leading to a PhD degree in the following fields: organic chemistry, biochemistry, biotechnology, molecular medicine, pharmacology or physical chemistry.
- SANDWICH Fellowships (for those registered for a PhD in their home country): The Fellowship may be granted for a minimum period of 6 months and a maximum period to be decided with ICCBS. Under the sandwich option, TWAS covers only one return journey to the host country.
- FULL-TIME Fellowships (for those willing to register for a PhD in Pakistan):
 - The Fellowship is granted for maximum 4 years. If awarded the Fellowship, full-time candidates must sit a compulsory entrance examination in either April or October at the University of Karachi, prior to starting their Fellowship. Upon passing the entry exam, awardees will register at the University of Karachi and ICCBS.
 - With a view to sitting the entrance examination at the University of Karachi, awardees are requested to apply for a six-month visa at their nearest Pakistan embassy. After getting PhD admission, awardees are required to go back to their home country for obtaining a long-term study visa (up to 4 years).
 - Neither TWAS nor ICCBS will support awardees' travel expenditures to travel to Pakistan to sit the entry exam. Travel support is provided by TWAS after awardees have successfully passed the entry exam and are ready to travel back to Pakistan for the actual start of the Fellowship. TWAS covers only one return journey to the host country, upon receipt of a copy of the long-term study visa.
- Once accepted, ICCBS will provide a monthly stipend which should be used to cover living costs, such as food, accommodation and health insurance while in Pakistan. The monthly stipend will not be convertible into foreign currency.
- The language of instruction is English.

Eligibility

Applicants for these Fellowships must meet the following criteria:

- be a maximum age of 35 years on 31 December of the year of application;
- be nationals of a developing country (other than Pakistan);
- must **not** hold any visa for temporary or permanent residency in Pakistan or any developed country;
- hold a Master's degree in a field of natural sciences;
- for SANDWICH Fellowships: be registered PhD students in their home country and provide the "Registration and No Objection Certificate" from the HOME university (see sample on page 6) **OR**
- FULL-TIME Fellowships: be willing to register at the University of Karachi (Pakistan);
- provide a certificate of good health from a qualified medical doctor;
- provide an official Acceptance Letter from ICCBS (see sample Acceptance Letter, page 5). Requests for acceptance must be sent to the Director of ICCBS (Prof. M.I. Choudhary: by e-mail hej@cyber.net.pk and pcmd@cyber.net.pk) who will facilitate assignment of a host supervisor. In contacting Prof. Choudhary, applicants **must** accompany their request for an Acceptance Letter with copy of their CV and a research proposal outline;
- provide evidence of proficiency in English.

Submitting your application

The call for applications is open **from March/April until 30 June** of each year.

- If already registered for a PhD in their home country, applicants should ensure that the Vice-Chancellor or Registrar of the HOME university signs a copy of the "Registration and No Objection Certificate" (see on page 6), a copy of which should be sent to TWAS.
- Applicants must submit an Acceptance Letter from ICCBS when applying, or by the deadline at the latest. Without preliminary acceptance the application will **not** be considered for selection

- Reference letters must be on letter-headed paper, SIGNED and sent as attachments via e-mail to TWAS. The subject line must contain the name of the Fellowship programme and the candidate's surname. Alternatively, letters should be sent in sealed envelopes by post. N.B. Only signed reference letters can be accepted. The letters can be submitted either by the referee or by the applicant directly.
- Applicants to the **TWAS-ICCBS Postgraduate Fellowship Programme** should send one copy of their application to TWAS **only** (by post, fax or email). Please do **not** send a copy to ICCBS.

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Prof. Muhammad Iqbal Choudhary, Director

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TWAS SOUTH-SOUTH FELLOWSHIP PROGRAMME PARTNERS



The National Council for Scientific and Technological Development (CNPq), Brasilia, Brazil – www.cnpq.br – is a foundation linked to the Brazilian Ministry of Science and Technology. CNPq is one of the major public institutions supporting science, technology and innovation in Brazil and contributes directly to the training of researchers – masters, doctors and specialists – in the various fields of knowledge.



The Chinese Academy of Sciences (CAS), Beijing, China – www.cas.ac.cn – is the highest academic institution and national comprehensive research and development centre in natural sciences and high-tech innovation in China. CAS also serves as the supreme national advisory body on science and technology. CAS has more than 80 research institutes and one university and one graduate school distributed throughout the country.



The Council of Scientific and Industrial Research (CSIR), India – www.csir.res.in – is the Indian government's main research and development organization. It consists of a network of 38 institutes and laboratories and 39 outreach centres covering most areas of science and technology.



The Department of Biotechnology (DBT) of the Ministry of Science and Technology, India – www.dbt.gov.in – sponsors research in biotechnology at a number of centres of excellence in India, including university departments and CSIR institutes and laboratories.



The S.N. Bose National Centre for Basic Sciences, India – www.bose.res.in – was established in Kolkata in 1986 as an autonomous institution by the Department of Science and Technology of the government of India. It has some 36 faculty and scientists active in many areas of physics.



The Indian Association for the Cultivation of Science (IACS), India – www.iacs.res.in – established in 1876 in Kolkata, is the oldest institute in India devoted to the pursuit of fundamental research in the frontier areas of basic sciences (chemistry and physics).



The International Centre of Insect Physiology and Ecology (*icipe*), Kenya – www.icipe.org – based in Nairobi, is a research institute focused on integrated control methodologies for crop and livestock insect pests and other related arthropods, and insect vectors of tropical diseases.



The Universiti Sains Malaysia (USM) – www.ips.usm.my– is a worldwide renowned institution of higher education that offers courses at undergraduate and postgraduate levels to approximately 20,000 students at 24 schools and 33 centres located in three university campuses.



The National Centre of Excellence in Molecular Biology (CEMB), Pakistan – www.cemb.edu.pk – based in Lahore, has expertise in plant and medical molecular biology and molecular genetics.



The International Center for Chemical and Biological Sciences (ICCBS), Pakistan – www.iccs.edu – based in Karachi, comprises the H.E.J. Research Institute of Chemistry and the Dr. Panjwani Center for Molecular and Drug Research.



The World Meteorological Organization, in accordance with an agreement recently signed with TWAS, will cover transportation costs for up to 10 full-time postgraduate fellows each year studying in fields of interest to WMO, such as climate change, climate services, multi- hazard early warning and disaster risk reduction. Applicants who are going through the WMO Permanent Representatives still need to compete for the award through TWAS and the conditions laid out by the prospective host institutions. Beneficiaries will be expected to develop strong links with the National Meteorological Service and their national Permanent Representative to WMO. Further information on the activities of WMO can be accessed through www.wmo.int



The administration and financial operation of TWAS is undertaken by UNESCO in accordance with an agreement between UNESCO and the Italian Government for TWAS.