

Implementing Agreement

between

The Commissariat à l'énergie atomique et aux énergies alternatives

and

Homi Bhabha National Institute

**of The Department of Atomic Energy, Government of the Republic
of India**

in the field of PhD education within common scientific programs

The Commissariat à l'énergie atomique et aux énergies alternatives, a French state-owned research entity with a scientific, technical or industrial activity duly organised under the laws of France and having its registered office located at Bâtiment Le Ponant D-25, rue Leblanc- Paris 15^{ème} (France) - and declared at the Paris Register of Commerce and Trade ("*Registre du Commerce et des Sociétés de Paris*") under the following registration number: R.C.S. PARIS B 775 685 019,

Represented by Mr Daniel Verwaerde, acting as "Administrateur général",
Hereafter referred to as "**CEA**",

On the one hand

**Homi Bhabha National Institute of the Department of Atomic Energy (DAE) of
the Government of the Republic of India**, headquartered at Training School Complex
Anushaktinagar, Mumbai 400 094, India,

Represented by acting as

Hereafter referred to as "**HBNI**",

On the other hand

Hereunder referred to collectively as "Parties" or individually as "Party",

WHEREAS CEA and DAE have signed on December 6, 2010 a Cooperation Agreement in the field of nuclear science and technology for peaceful uses of nuclear energy (hereinafter referred to as "the CEA-DAE Cooperation Agreement");

WHEREAS the Government of the French Republic and the Government of the Republic of India have signed on December 6, 2010 an agreement concerning intellectual property rights on the development of the peaceful uses of nuclear energy (hereinafter referred to as "IP Agreement");

WHEREAS the Government of the French Republic and the Government of the Republic of India have signed on December 6, 2010 an agreement concerning the protection of classified information and material in the framework of their civil nuclear cooperation;

WHEREAS the Homi Bhabha National Institute (hereinafter referred to as "HBNI") is established under DAE's authority with a deemed to be university status with the following units of DAE as the Constituent Institutions (CIs) of HBNI:

1. Bhabha Atomic Research Centre (BARC), Mumbai
2. Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam
3. Raja Ramanna Centre for Advanced Technology (RRCAT), Indore
4. Variable Energy Cyclotron Centre (VECC), Kolkata
5. Saha Institute of Nuclear Physics (SINP), Kolkata
6. Institute of Plasma Research (IPR), Gandhinagar
7. Institute of Physics (IOP), Bhubaneswar
8. Harish-Chandra Research Institute (HRI), Allahabad
9. Tata Memorial Centre (TMC), Mumbai
10. Institute of Mathematical Science (IMSc), Chennai

WHEREAS CEA and HBNI have signed on December 6, 2010 an Implementing Agreement in the field of PhD education within common scientific programs which expires in December 6, 2015.

WHEREAS this Agreement established a PhD Collaboration Program for Indian and French students with a view of creating a long term cooperation between the various laboratories and institutes from both Parties.

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WHEREAS the exchange of students started in 2015, CEA and HBNI are willing to renew this Agreement in order to pursue the ongoing exchanges and to foster the future ones.

ARTICLE 1. AIMS, SCOPE AND FORMS OF THE PhD COLLABORATION PROGRAM

The objective of PhD Collaboration Program established under this Implementing Agreement is to increase close cooperation in research and education of Scientists in the laboratories and/or institutes under the aegis of the Parties and to exchange scientific results on an organized basis.

This Implementing Agreement shall cover the topics related to nuclear science and technology for peaceful uses of nuclear energy.

The Parties will agree, through a secondment agreement on the conditions and time schedule of each visit. The visiting Party would inform the other party about the identity of each visitor sufficiently in advance to enable the welcoming party to make timely arrangements for hosting the visitor and for processing the administrative formalities.

Scientists of one Party who stay at the research institutes of the other Party during the duration of this Implementing Agreement are subjected to the operating instructions of the other Party. Each Party commits to comply with all the regulations concerning operational safety in the installation of the other Party.

ARTICLE 2. IMPLEMENTATION OF THE PhD COLLABORATION PROGRAM

The Parties hereby agree to take advantage of the annual meeting of the Franco-Indian Joint Committee for Atomic Energy in order to :

- i) review and approve the proposed common scientific sub-programs within the scope of the PhD Collaboration Program proposed by one of the Parties;
- ii) for each of the selected Common scientific sub-programs, select PhD students, one from each Party. The French and Indian PhD Students may work on Common scientific sub-programs, but on different aspects; and

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- iii) for each selected Common scientific sub-program, designate two PhD related Project Managers, one from each Party.

ARTICLE 3. COMMON SCIENTIFIC SUB-PROGRAM

The details of a Common scientific sub-program agreed within the PhD Collaboration Program are specified in Annex A which forms an integral part of this Implementing Agreement.

ARTICLE 4. REVIEW OF THE PhD COLLABORATION PROGRAM- DEFENSE

The PhD related Project Managers shall jointly review the work performed by the PhD Student and meet at the meetings of the Franco-Indian Joint Committee for Atomic Energy or alternatively at other dedicated joint meetings. They shall jointly attend the defense by the PhD Student, conducted at the end of his/her PhD.

The appointment of examiners and conduct of defense shall be as per the rules governing the PhD program of the institute in which the PhD Student is enrolled. Thus, a PhD Student enrolled in the French institute shall be governed by the French rules and the one enrolled in the Indian institute shall be governed by the Indian rules.

ARTICLE 5. FINANCE

In accordance with article 8 of the CEA-DAE Cooperation Agreement, the Party assigning its PhD Student shall be responsible for the salaries and expenses related to international travel incurred on that PhD Student. Living expenses, accommodation and internal travel if any, undertaken in connection with the work related with the research topic of the PhD Student whilst on attachment shall be borne by the receiving Party in accordance with the rules in the hosting country applicable, as the case may be, to doctoral students/ post-docs/scientific visitors of the category in which the scientist is visiting. These terms and conditions may be specified in the secondment agreement.

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ARTICLE 6. INTELLECTUAL PROPERTY / PATENTS

The general provisions provided for in the IP Agreement are applicable also to this Implementing Agreement.

Parties shall exchange technical information and knowledge obtained by the Parties under this Implementing Agreement or have been obtained prior to it or independently of it to the extent that they are necessary for the performance of the Implementing Agreement, except for the technical information and knowledge that the Parties are prohibited from disclosing under an agreement with a third party.

Any information and technology which is held by one Party prior to the conclusion of this Implementing Agreement or, acquired in parallel with it, or acquired solely by one Party, shall remain the sole property of that Party and shall be treated as confidential information pursuant to Article 8 of this Implementing Agreement.

The exploitation rights of own information and technology and/or Joint Results, as defined in the IP Agreement, generated under the PhD Collaboration Programs as well as the details of the preparation, filing, prosecution and maintenance of patent applications within these programs shall be governed by the provisions of the IP Agreement or otherwise agreed in a separate agreement on a case to case basis. Parties grant each other a non-exclusive, non-transferable, royalty-free license without the right to sublicense, for the duration of this Implementing Agreement, on its own information and technology and/or Joint Results generated under the PhD Collaboration Programs for their own internal research activities.

No Party shall assign or otherwise transfer to any third party in whole or in part any of its right or obligation under this Implementing Agreement, without the prior consent of the other Party.

ARTICLE 7. CONFIDENTIALITY

Confidentiality shall be governed by the provisions of the CEA-DAE Cooperation Agreement.

ARTICLE 8. PUBLICATION

Each Party may freely publish its own information and technology generated by its PhD Students.

Each Party may publish the own information and technology generated by the PhD Students assigned by the other Party and/or Joint Results only after giving a copy of the publication to the other Party at least thirty (30) days prior to the intended submission for publication to allow the other Party to review the materials for any inadvertent disclosure of patentable materials and/or for any inadvertent disclosure of the other Party's Confidential Information as defined in the CEA-DAE Cooperation Agreement. The Party that intends to publish will refrain from publication of the other Party's Confidential Information, provided the Party has raised an objection within the above thirty (30) days period.

ARTICLE 9. NUCLEAR LIABILITY

Each secondment agreement shall deal with the compensation of nuclear damage resulting from a nuclear incident during the implementation of this collaboration program.

ARTICLE 10. MISCELLANEOUS

This Implementing Agreement and each action related thereto shall be ruled by the terms and conditions of the CEA-DAE Cooperation Agreement, unless otherwise specified therein.

ARTICLE 11. DURATION, TERMINATION

This Implementing Agreement shall enter into force upon signature by both Parties and remain valid for 10 (ten) years. Six (6) months before its expiration, the Parties shall consult each other in order to envisage the possible extension of this Implementing Agreement.

Ancillary agreements, amendments and additions hereto must be made in writing.

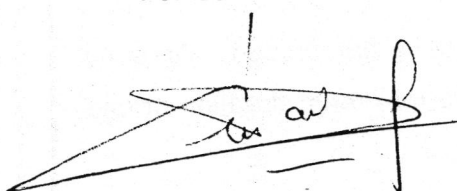
This Implementing Agreement may be terminated at any time at the discretion of either Party upon one year's advance written notification. In any case, all relevant provisions related to the PhD projects shall remain valid upon defense of the PhD initiated under this Implementing Agreement.

For the ongoing PhD projects, this Implementing Agreement supersedes the Implemented Agreement concluded in 2010.

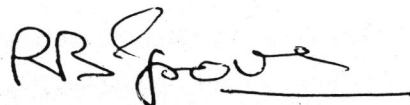
Settlement of disputes shall be governed by the provisions of the CEA-DAE Cooperation Agreement.

In witness whereof, the Parties have caused this Implementing Agreement to be executed and signed in duplicate in English by their respective duly authorised representatives.

For CEA

A handwritten signature in black ink, appearing to be 'A. A. P.', written over a horizontal line.

For HBNI

A handwritten signature in black ink, appearing to be 'R. R. S.', written over a horizontal line.

Date : February 10th, 2016

Place : Paris

ANNEX A

Details of a Common scientific sub-program

1. Involved institutes:

In India: Bhabha Atomic Research Centre (BARC), Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam, Raja Ramanna Centre for Advanced Technology (RRCAT), Indore and other constituent institutions of HBNI

In France: Divisions of CEA (DEN, DRF, DRT)

2. Details

As first step, a PhD thesis work assigned to an Indian or French student is formulated within a Common scientific sub-program. This will be organized in the following way:

- The Indian or French institute nominates a PhD Student for the Common scientific sub-program after verifying that the PhD Student fulfills the conditions for a PhD education in their respective countries, i.e in connection with the Homi Bhabha National Institute (HBNI) or the French university involved.
- The experimental and theoretical background of the work has to be determined. An early personal contact is desired by way of short exchange visits of a maximum duration of one week to the institutes in India and the CEA centre in France.
- A time schedule has to be fixed:

1. For Indian PhD students: As the standard PhD time in India is between 3 to 5 years which are financially covered by a contract at the Indian institute, the following time table is possible:

- First Year (India): Introduction by the Indian supervisor into the PhD topic: This must cover theory and experimental techniques which are planned to use in the laboratories in France. The scientist, either a student or a DAE employee, gets financial support by the Indian institute.

- Second to third Year (France): Experimental work of the PhD thesis is conducted under the guidance of the French supervisor with continuing contacts with the home institute. The scientist is incorporated into a centre of CEA.

- Fourth to Fifth Year (India): Return to the Indian home institute, evaluation of the experimental information and technology and writing up the PhD thesis. This time is financially covered by the Indian side.

2. For French PhD students: The French PhD Student concludes with the CEA a three year PhD contract which guarantees a salary during the whole contract period. The following time table is possible:

- First Year (France): Introduction by the French supervisor into the PhD topic: This must cover theory and experimental techniques which are planned to be used in the laboratories in India.
- Second Year (India): Theoretical or Experimental work of the PhD thesis is conducted under the co-guidance of the Indian supervisor with continuing contacts with CEA. The French PhD Student is incorporated into an Institute of DAE.
- Third Year (France): Return to CEA, to continue research and write up the PhD thesis.