

Horizon Europe EU-India

Opportunities for Research and Innovation cooperation



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Regional Tour – Dehradun, Roorkee & Haridwar
23-25 November 2022





Horizon Europe - Opportunities

- **Open to the world**

- Open to the world, which means that participants from all over the world can participate in most calls (open by default).

- **Multidisciplinary**

- Focus on global challenges, cross-cutting missions, partnerships, and open science policy.

- **Funding support for:**

- **Collaborative research & innovation projects:** carried out by consortia of organisations working together on specific research & innovation areas

- **Individual researcher projects:** The **European Research Council (ERC)** and the **Marie Skłodowska-Curie actions (MSCA)** offer unparalleled funding opportunities for individual researchers who want to work in Europe.

Horizon Europe (2021-2027)



Horizon Europe in Nutshell



Pillar I

EXCELLENT SCIENCE

- European Research Council
- Marie Skłodowska-Curie
- Research Infrastructures



Pillar II

GLOBAL CHALLENGES & EUROPEAN INDUSTRIAL COMPETITIVENESS

6 Clusters

- Health
- Culture, Creativity & Inclusive Society
- Civil Security for Society
- Digital, Industry & Space
- Climate, Energy & Mobility
- Food, Bioeconomy, Natural Resources, Agriculture & Environment
- Joint Research Centre



Pillar III

INNOVATIVE EUROPE

- European Innovation Council
- European Innovation Ecosystems
- European Institute of Innovation & Technology



MSCA -Staff Exchanges (SE) Which? Countries

27 EU Member States (MS)

Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, The Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and Sweden

Horizon Europe Associated Countries (AC)* :

Agreements in place: Armenia, Bosnia and Herzegovina, Faroe Islands, Georgia, Iceland, Israel, Kosovo, Moldova, Montenegro, North Macedonia, Norway, Serbia, Tunisia, Turkey and Ukraine

The EU is still in the process of formalising the **United Kingdom's (UK)** association - UK government funds the UK costs under its 'UKRI guarantee scheme'.

Legal entities established in **Switzerland** are currently not covered by the transitional arrangement.

**updated - HE association agreements status as of 15 September 2022*



Horizon Europe - Consortium composition Eligibility

- A consortium must include at least **3 participants from 3 different EU Member States or Associated Countries**
- At least one independent legal entity established in a Member State; and
- At least two other independent legal entities, each established in different Member States or Associated Country
- In addition, entities from other countries (e.g. India) could be included in a consortium

An illustration showing a globe with several stylized human figures in various colors (purple, red, white, orange) interacting with it. One figure is climbing a ladder to reach the top of the globe, another is holding a lightbulb, and others are standing around the base. The background is a light blue sky and green ground.

Participation vs. Funding

- Participants from India in collaborative research projects, just like participants from industrialised countries and the other emerging economies (BRIC countries) and Chile are not automatically eligible for funding under Horizon Europe.
- Therefore:
 - Own funding (at Institutional level; contribution in-kind)
 - Co-funding from Government of India: under discussions
 - Exceptional funding: if required to execute the project.

Pillar 2

Global Challenges & European Industrial Competitiveness





International cooperation in Horizon Europe Work Programme 2023-2024

Cluster 1 - Health

Key figures

15

topics encourage
international cooperation

~€400 million

total EU contribution to these topics

Examples of thematic areas

- **Infectious diseases**
- **Mental health /brain disorders**
- Chronic diseases
- Health impacts of climate change
- Digital solutions for a healthy society
- AI for treatment and care
- Antimicrobial resistance





International cooperation in Horizon Europe Work Programme 2023-2024

Cluster 2 – Culture, Creativity & Inclusive Society

Key figures

10

topics encourage
international cooperation

€100 million

total EU contribution to these topics

Examples of thematic areas

- Politics and governance
- Cultural heritage
- Social and economic transformations
- Indicators for sustainable development
- Gender
- Migration





International cooperation in Horizon Europe Work Programme 2023-2024

Cluster 3 – Civil Security for Society

Key figures

18

topics encourage
international cooperation

€112 million

total EU contribution to these topics

Examples of thematic areas

- Disaster resilience
- Increased Cybersecurity
- Border management
- Infrastructure resilience
- Fighting crime and terrorism





International cooperation in Horizon Europe Work Programme 2023-2024

Cluster 3 – Civil Security for Society

WIHG

Disaster-Resilient Society

- **HORIZON-CL3-2024-DRS-01-02: Harmonised / Standard protocols for the implementation of alert and impact forecasting systems as well as transnational emergency management in the areas of high-impact weather / climatic and geological disasters (IA)**
 - Opening: 27 Jun 2024 | Deadline(s): 20 Nov 2024
 - Budgets: EUR 6 million | contribution per project 3 | 2 projects



International cooperation in Horizon Europe Work Programme 2023-2024

Cluster 4 – Digital, Industry and Space

Key figures

30

topics encourage
international cooperation

€600 million

total EU contribution to these topics



Examples of thematic areas

- Manufacturing, construction, processing
- Raw & advanced materials
- **Data and computing technologies (AI, data and robotics)**
- Next generation internet
- Nanomaterials health and environmental risks
- Quantum



International cooperation in Horizon Europe Work Programme 2023-2024

Cluster 5 – Climate, Energy & Mobility

Key figures

30

topics encourage or require international cooperation

€400 million

total EU contribution to these topics

Examples of thematic areas

- Water-energy-food nexus; energy system modelling
- Connected & Automated Mobility
- **Climate sciences (Ocean/Polar Research)**
- **Renewable energy (Mission Innovation, ...)**
- Road safety
- **Clean transport (Hybrid electric energy storage)**
- Biofuels (Mission Innovation)





Horizon Europe Work Programme 2023-2024

Cluster 5 – Energy and Mobility

CSIR-IIP & UPES

- **HORIZON-CL5-2023-D2-01-05: Hybrid electric energy storage solutions for grid support and charging infrastructure (Batt4EU Partnership) – (IA) - Targeting India**
 - Opening: 23 Dec 2022 | Deadline(s): 18 Apr 2023
- **HORIZON-CL5-2024-D2-01-02: Non-Li Sustainable Batteries with European Supply Chains for Stationary Storage (Batt4EU Partnership) – (IA) Targeting India**
 - Opening: 07 Dec 2023 | Deadline(s): 18 Apr 2024
- **HORIZON-CL5-2023-D3-03-04: Digital tools for enhancing the uptake of digital services in the energy market – (IA) Mission Innovation**
 - Opening: 04 May 2023 | Deadline(s): 10 Oct 2023



Horizon Europe Work Programme 2023-2024

Cluster 5 – Energy and Mobility

- **HORIZON-CL5-2024-D3-02-03: Development of smart concepts of integrated energy driven bio-refineries for co-production of advanced biofuels, bio-chemicals and biomaterials – (RIA) Mission Innovation**
 - Opening: 07 May 2024 | Deadline(s): 05 Sep 2024
- **HORIZON-CL5-2024-D3-02-12: DACCS and BECCS for CO2 removal/negative emissions -(IA) Mission Innovation**
 - Opening: 07 May 2024 | Deadline(s): 05 Sep 2024
- **HORIZON-CL5-2024-D1-01-04: Improved toolbox for evaluating the climate and environmental impacts of trade policies-(RIA)**
 - Opening: 12 Sep 2023 | Deadline(s): 05 Mar 2024



Horizon Europe Work Programme 2023-2024

Cluster 5 – Energy and Mobility

- **HORIZON-CL5-2023-D5-01-03: Frugal zero-emission vehicles concepts for the urban passenger challenge (2ZERO Partnership)-(IA)**
 - **Opening: 23 Dec 2022 | Deadline(s): 20 Apr 2023**

- **HORIZON-CL5-2023-D5-01-04: Circular economy approaches for zero emission vehicles (2ZERO Partnership)-(RIA)**
 - **Opening: 23 Dec 2022 | Deadline(s): 20 Apr 2023**



International cooperation in Horizon Europe Work Programme 2023-2024

Cluster 6 – Food, Bio-econ, Nat Res, Agri & Env.

Key figures

>20

topics encourage or require international cooperation

~€231 million

total EU contribution to these topics

Examples of thematic areas

- Food, Nutrition Security & Sustainable Agriculture
- Biodiversity & ecosystems
- **Circular economy and bioeconomy**
- **Water, oceans, soil**
- Communities
- Pollution





International cooperation in Horizon Europe Work Programme 2023-2024

Cluster 6 – Food, Bio-econ, Nat Res, Agri & Env.

Understanding and addressing the main drivers of biodiversity loss

- **HORIZON-CL6-2023-BIODIV-01-1: Better understanding of routes of exposure and toxicological and ecological impacts of chemical pollution on terrestrial biodiversity (RIA)**
 - Opening: 22 Dec 2022 | Deadline(s): 28 Mar 2023
 - Budgets: EUR 22 million | contribution per project 5.5 | 4 projects
- **HORIZON-CL6-2023-BIODIV-01-2: Impact of light and noise pollution on biodiversity (RIA)**
 - Opening: 22 Dec 2022 | Deadline(s): 28 Mar 2023
 - Budgets: EUR 7 million | contribution per project 3.5 | 2 projects

Biodiversity protection and restoration

- **HORIZON-CL6-2023-BIODIV-01-12: Reinforcing science policy support with IPBES and IPCC for better interconnected biodiversity and climate policies (CSA)**
 - Opening: 22 Dec 2022 | Deadline(s): 28 Mar 2023
 - Budgets: EUR 4 million | contribution per project 4 | 1 projects



International cooperation in Horizon Europe Work Programme 2023-2024

Cluster 6 – Food, Bio-econ, Nat Res, Agri & Env.

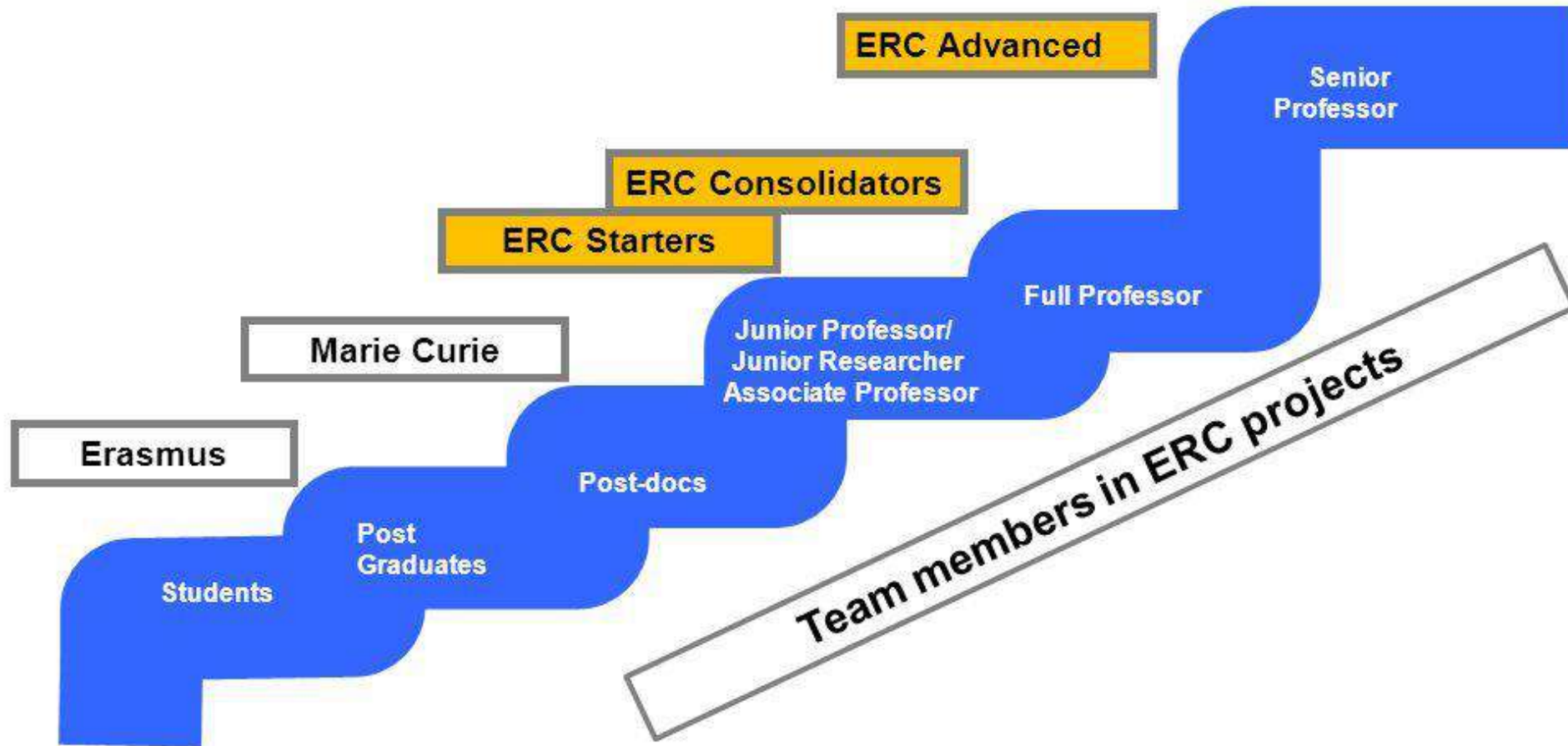
Biodiversity protection and restoration

- **HORIZON-CL6-2023-BIODIV-01-15: Integrative forest management for multiple ecosystem services and enhanced biodiversity (RIA)**
 - Opening: 22 Dec 2022 | Deadline(s): 28 Mar 2023
 - Budgets: EUR 7 million | contribution per project 7 | 1 projects
- **HORIZON-CL6-2023-BIODIV-01-17: Interlinkages between biodiversity loss and degradation of ecosystems and the emergence of zoonotic diseases (RIA)**
 - Opening: 22 Dec 2022 | Deadline(s): 28 Mar 2023
 - Budgets: EUR 12 million | contribution per project 4 | 3 projects
- **HORIZON-CL6-2024-BIODIV-01-2: Digital for nature (IA)**
 - Opening: 17 Oct 2023 | Deadline(s): 22 Feb 2024
 - Budgets: EUR 16 million | contribution per project 8 | 2 projects

Pillar 1: Excellent Science



Career Stages



What is Erasmus+ ?

- The EU's programme to support education, training youth and sports
- Funding for programmes, projects and scholarships
- Fosters EU-EU and EU-International cooperation
- Five different schemes Erasmus+ (2021-2027):
 - 1) Erasmus Mundus Joint Master Degree (EMJD);
 - 2) Erasmus Mundus Design Measures (EMDM)
 - 3) International Credit Mobility (ICM);
 - 4) Capacity Building Higher Education (CBHE) and
 - 5) Jean Monnet

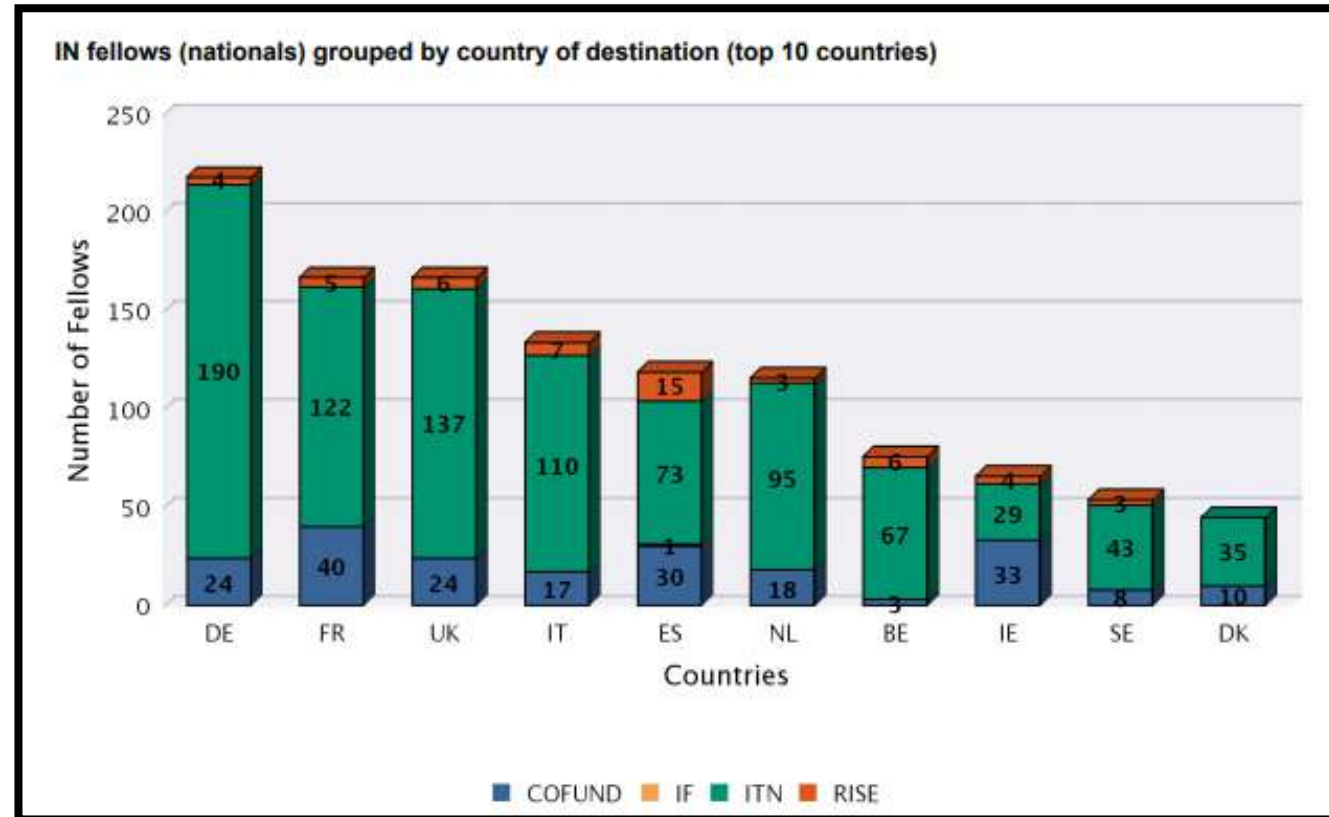
Marie Skłodowska- Curie Actions

Boosting research
careers



MSCA – India Statistic

- **1st** rank among non-European countries
- **2229** Indian researchers (42% are women) funded by H2020 – MSCA
- **>1400 Indian PhD**
- **450 Indian Postdocs (2014-2020)**
- **82 Indian Postdocs in 2021**
- **14%-18%** overall success rate
- **91%** cut-off
- Main destinations of Indians
Germany, France, UK, and Italy



Marie Skłodowska-Curie Actions (MSCA) overview



DN
Doctoral Networks



PF
Postdoctoral Fellowships



COFUND
Co-funding of doctoral or fellowships programmes



Staff Exchange
Research and Innovation Staff Exchange



Research areas

- **All scientific fields: bottom up** (including Euratom areas*)
- Proposals evaluated and ranked in **8 Scientific panels:**
 - 1) Chemistry (CHE)
 - 2) Social Sciences and Humanities (SOC)
 - 3) Economic Sciences (ECO)
 - 4) Information Science and Engineering (ENG)
 - 5) Environment and Geosciences (ENV)
 - 6) Life Sciences (LIF)
 - 7) Mathematics (MAT)
 - 8) Physics (PHY)

*Indian applicants are, however, not eligible for Euratom research





Marie Skłodowska-Curie Actions under Horizon Europe

Doctoral Networks

Doctoral programmes in and
outside academia incl. joint &
industrial doctorates

MSCA Fellowships: What is it?

Individual fellowships to support excellent doctoral/postdoctoral researchers in **all fields of research**.

Equip researchers with **new skills and competences** in order to identify solutions to current and **future challenges**.

Main objectives

- **Foster excellence** through implementation of research project
- Enhance the **creative and innovative potential** of researchers (training on transferable skills & career development)
- Focus on **I3** (international, inter-sectoral, interdisciplinary) mobility
- Bridges and **exposure to the non-academic sector**
- **Career development** of researchers.

Funding for Doctoral Researcher

- Living Allowance is the **GROSS amount**
- All eligible Researcher unit costs can be subjected to taxation
- Candidates strongly advised to check with the host institution how the salary will be calculated (national and internal rules, exchange rate policy, etc.)

Contributions for recruited researchers Per person-month					Institutional unit contributions Per person-month	
Living allowance	Mobility allowance	Family allowance (if applicable)	Long-term leave allowance (if applicable)	Special needs allowance (if applicable)	Research, training and networking contribution	Management and indirect contribution
EUR 3 400	EUR 600	EUR 660	EUR 4 000 x % covered by the beneficiary	Requested unit ¹ x (1/number of months)	EUR 1 600	EUR 1 200

* Living allowance is adapted with the country correction coefficient listed in the WP
EF= 1 coefficient for the country of the beneficiary



Horizon Europe Marie Skłodowska-Curie Actions

Postdoctoral Fellowships



Two Schemes

> European Fellowship



> European Fellowship:

Fellow goes to host organisation in Europe

> Employed by EU host

> **Duration: 1-2 years**

> Global Fellowship



> Global Fellowship: Fellow goes to partner org. outside Europe and comes back to host org. in Europe

> Employed by EU host

> **Duration: 2-3 years**

Funding

Contributions for recruited researchers Per person-month					Institutional unit contributions Per person-month	
Living allowance	Mobility allowance	Family allowance (if applicable)	Long-term leave allowance (if applicable)	Special needs allowance (if applicable)	Research, training and networking contribution	Management and indirect contribution
EUR 5 080	EUR 600	EUR 660	EUR 5 680 x % covered by the beneficiary	Requested unit ¹ x (1/number of months)	EUR 1 000	EUR 650

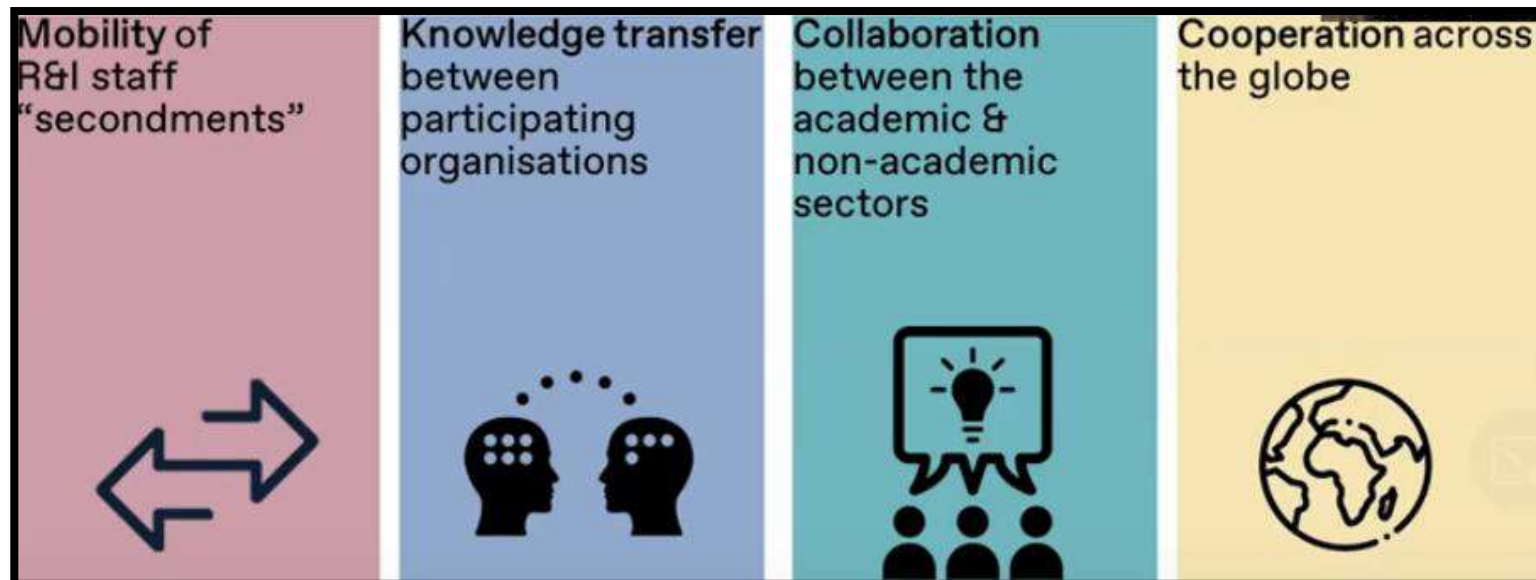
** A country correction coefficient applies to the living allowance in order to ensure equal treatment and purchasing power parity for all researchers*



MSCA -Staff Exchanges (SE)

Skills Exchange Across Borders

- Most international action based on **secondments of staff**
- Projects built on **joint R&I activities** – open to **all type of staff** contributing to research activities
- Emphasis on the added value of the collaboration itself





MSCA -Staff Exchanges (SE)

Features

- Lean & flexible tool to support **collaborative R&I projects**
- No recruitment foreseen
- Staff members seconded for **1-12 months**
- Staff: research students, postdocs, PIs, technical, research admin & managerial staff
- Secondments complemented by networking/training events/workshops
- Max. duration: **4 years**



MSCA -Staff Exchanges (SE)

Who? Can participate

Academic sector

- ✓ public or private higher education establishments
- ✓ public or private non-profit research organisations
- ✓ International European Research Organisations



Non-academic sector

- ✓ any socio-economic actor not included in the academic sector

Staff: research students, postdocs, PIs, technical, research admin & managerial staff



India → Participation vs. Funding

- Participants from India in collaborative research project, just like participants from industrialised countries and emerging economies (*BRIC countries-Brazil, Russia, India and China*), are not automatically eligible for funding under Horizon Europe.
- Therefore:
 - Own funding (intramural grant)
 - Exceptional funding
 - Co-funding from Government of India: discussions on Co-Funding Mechanism ongoing

Call 2023: September/October 2023

ERC basics



European Research Council
Established by the European Commission



European Research Council
Established by the European Commission

INDIVIDUAL RESEARCHERS
FROM ALL OVER THE WORLD
**LONG TERM
GRANTS**
TO HIGH-RISK/HIGH-GAIN PIONEERING PROJECTS
IN ANY FIELD OF FRONTIER RESEARCH



Life Sciences



Physical Sciences and Engineering



Social Sciences and Humanities

1. ERC granting schemes

Starting Grant

starters
(2-7 years after PhD)

up to M€ 1.5
for 5 years

Consolidator Grant

consolidators
(7-12 years after PhD)

up to M€ 2
for 5 years

Advanced Grant

significant track-record
in the last 10 years

up to M€ 2.5
for 5 years

Proof-of-Concept

verify potential
for marketable innovation
up to €150,000 for ERC grant holders

Synergy Grant

2-4 Principal Investigators
up to M€ 10 for 6 years

Calls Calendar



European Research Council
Established by the European Commission

	Starting Grant	Consolidator Grant	Advanced Grant	Synergy Grant
Call identifier	ERC-2023-StG	ERC-2023-CoG	ERC-2023-AdG	ERC-2023-SyG
Call opens	12/07/2022	28/09/2022	08/12/2022	13/07/2022
Call deadline	25/10/2022	02/02/2023	23/05/2023	08/11/2022



Research infrastructure: make science happen

When scientists **share knowledge and resources** their results improve people's lives.

BIG RESULTS

Improvements in **medical scanners**



Better understanding of **climate change** by linking up Arctic research stations



Better vaccines
80% are produced
In Europe



Building a community of researchers to **improve and sustain healthy oceans**



Scientists need **easy access** to state-of-the-art infrastructures to test their ideas

SOLUTION

Pooling resources for better science

The European Union helps to develop shared European Research Infrastructures by:



opening national **research infrastructures** to top scientists from around Europe through EU funding



pooling research data for easy access and analysis



connecting national **scientific communities**



avoiding unnecessary **duplication of effort** as EU countries jointly plan ahead



granting key facilities the status of **European Research Infrastructure Consortium (ERIC)** – a stable legal structure with administrative advantages enjoyed by international organisations

- currently **20 research consortia** have ERIC status
- ERICs cover many areas, ranging from marine and structural biology to biodiversity, climate change and social sciences



Evaluation Criteria

Excellence	Impact	Quality and efficiency of the implementation
<p>Quality and pertinence of the project's research and innovation objectives (and the extent to which they are ambitious, and go beyond the state of the art)</p>	<p>Developing new and lasting research collaborations, achieving transfer of knowledge between participating organisations and contributing to improving research and innovation potential at the European and global level</p>	<p>Quality and effectiveness of the work plan, assessment of risks, and appropriateness of the effort assigned to work packages</p>
<p>Soundness of the proposed methodology (including i3 approaches, consideration of the gender dimension and other diversity aspects, and the quality of open science practices)</p>	<p>Credibility of the measures to enhance the career perspectives of staff members and contribution to their skills development</p>	<p>Quality, capacity and role of each participant, including hosting arrangements and extent to which the consortium as a whole brings together the necessary expertise</p>
<p>Quality of the proposed interaction between the participating organisations in light of the research and innovation objectives</p>	<p>Suitability and quality of the measures to maximise expected outcomes and impacts, as set out in the dissemination and exploitation plan, including communication activities</p> <p>The magnitude and importance of the project's contribution to the expected scientific, societal and economic impacts</p>	
<p>50%</p>	<p>30%</p>	<p>20%</p>

Work as an expert?



In particular, experts assist in:

- **Evaluation** of proposals, prize applications and tenders
- **Monitoring** of actions, grant agreements, public procurement contracts

In addition, experts provide opinion and advise on:

- **Preparation, implementation and evaluation of EU programmes and design of policies.**

In order to select experts, the European Union Institutions publish regularly calls for expression of interest (see list below) detailing the selection criteria, the required expertise, the description of the tasks, their duration and the conditions of remuneration.

Interested? Please join the database of external experts!

[Register as expert](#)

As **new expert**, you will be first requested to create your EU login account and register your profile.

Registered experts can update the profile via the My Expert Area after **login**.

A colorful illustration showing several stylized human figures interacting with a globe. One person is climbing a ladder to reach the top of the globe, another is holding a lightbulb, and others are standing around the base of the globe. The background is a gradient of light blue and green.

How to find Calls and Partners?

- **Call topic and deadlines:** see [Funding & Tenders Portal](#)
- **Find partners for consortia:**
 - Use your network
 - Funding & Tenders Portal – [Partner Search](#)
 - Use Partner search – [National Contact Points](#) for Horizon Europe
 - Search previously funded project - [CORDIS](#)



For more info:

- Horizon Europe:
https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en
- See EU Global Approach on R&I
https://ec.europa.eu/commission/presscorner/detail/en/ip_21_2465
- European Commission's website on international R&I cooperation:
https://ec.europa.eu/info/research-and-innovation/strategy/international-cooperation_en
- EURAXESS India
<https://euraxess.ec.europa.eu/worldwide/india>



Thank you!

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india@euraxess.net

The Indo-French scientific cooperation

Opportunities for research & mobility

5 reasons for doing research in / with France

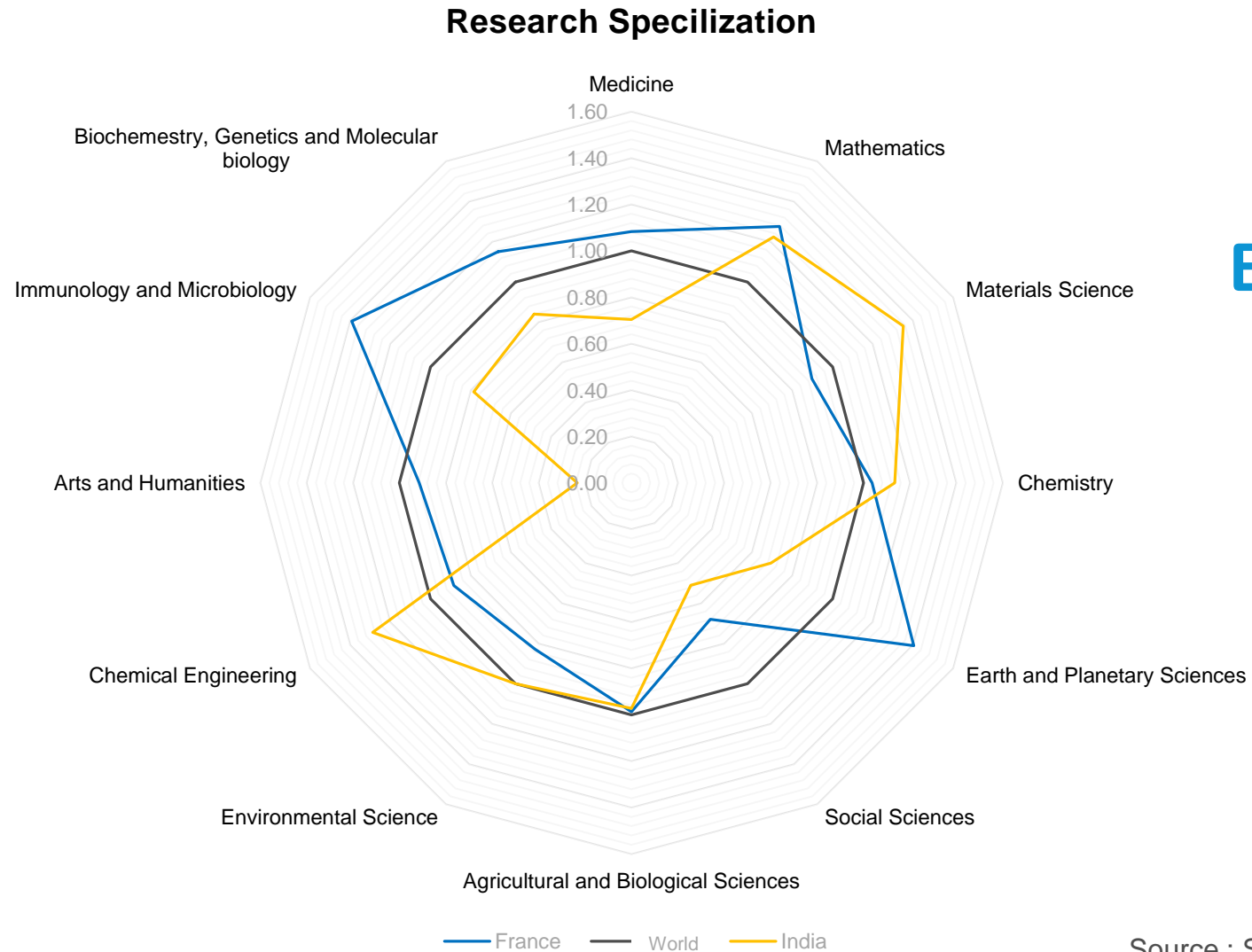
- 72 Nobel prizes (#4) & 12 Fields Medals (#2)
- High impact : #6 in the world (#2 CNRS) ; copublications with higher impact
- 42% PhD student from abroad (29,000 / 70,000)
- Close link public & private (40/60) & 25 unicorns & 2.25% of GDP on R&D (2021)
- Join Research Unit : universities and research institutes closely linked



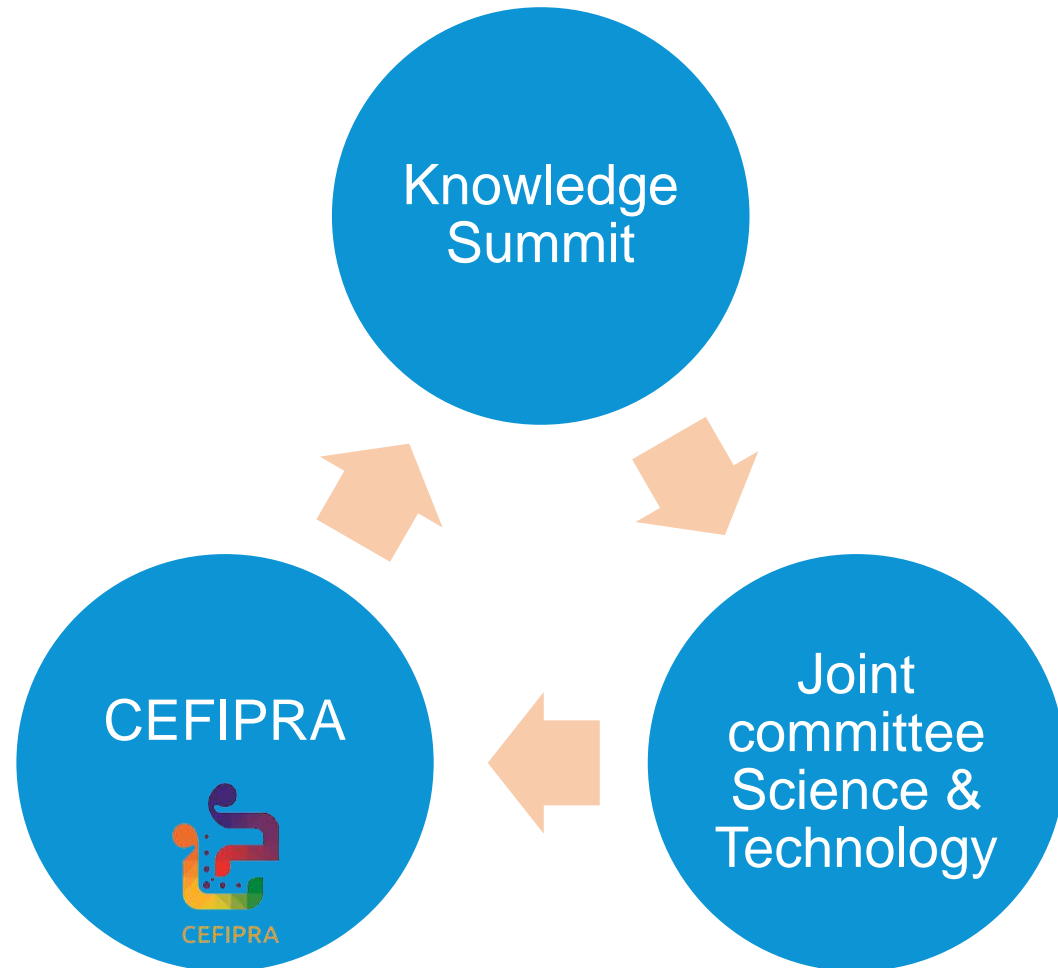
Research specialization in France

Biology & Health

Maths & Engineering



French scientific ecosystem in India



60 on-going projects

2 French Institutes of Research:

- Centre de Sciences Humaines
- Institut Français de Pondichéry



4 International Research Laboratories (CNRS)

14 International joint structural projects

600 active agreements between French and Indian HEI

28 private R&D Centers from French companies

1 000 French companies

350,000+ people in India

10 tools for Indo-French scientific cooperation

Mobility

1

Bach/
Msc



2

PhD



3

Post-doc



4

Researchers
Lecturers



Research and staff

5

1+1 : Collaborative Science
2+2 : Industry-Academia
Salary included (PhD & post-doc)

6



7

Salary included
(PhD & post-doc)

8



Other International calls

Networking

10

IFIN – Indo French
innovation network

9

Workshops / Seminars



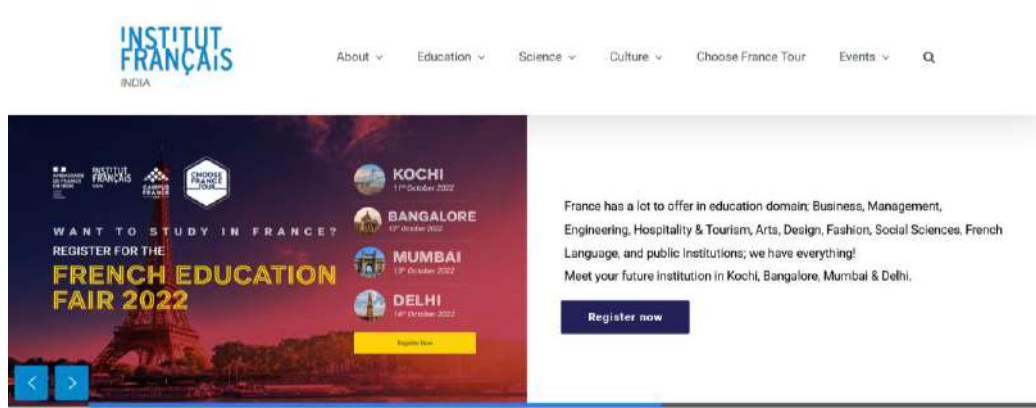
Useful links

<http://www.cefipra.org/>



<https://taughtie.campusfrance.org/tiesearch/#/catalog>

<http://www.ifindia.in/>



<https://doctorat.campusfrance.org/en/phd/dschools/main>

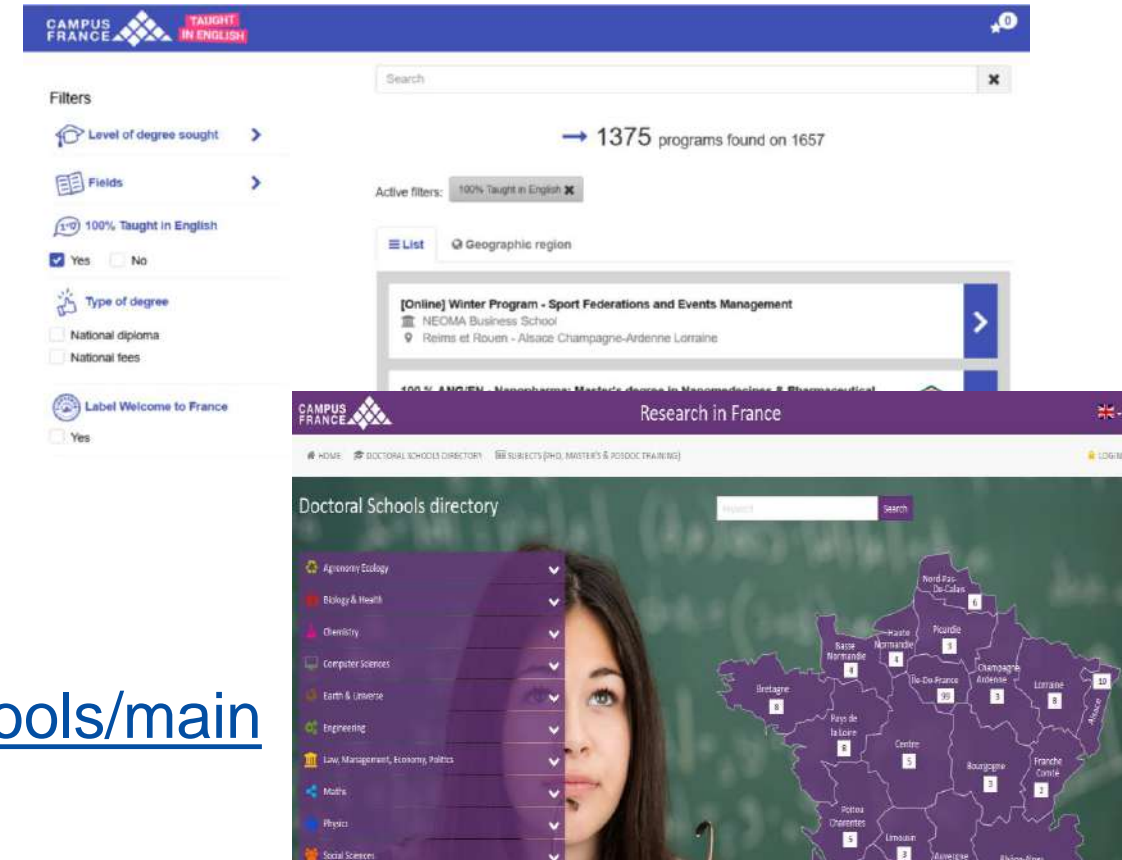




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-  [French Institute in India](https://www.youtube.com/channel/UC...)


**AMBASSADE
DE FRANCE
EN INDE**
*Liberté
Égalité
Fraternité*

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Liberté • Égalité • Fraternité

RÉPUBLIQUE FRANÇAISE

AMBASSADE DE FRANCE EN INDE



Indo-French cooperation : Different mechanisms

Srini Kaveri

CNRS

New Delhi

srini.kaveri@cnrs.fr



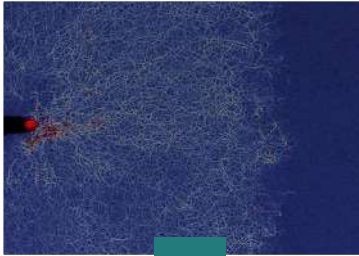
CNRS was created on 19 October 1939

"Il n'est pas de science possible où la pensée n'est pas libre, et la pensée ne peut pas être libre sans que la conscience soit également libre. Chacun de nous peut bien mourir, mais nous voulons que notre idéal vive".

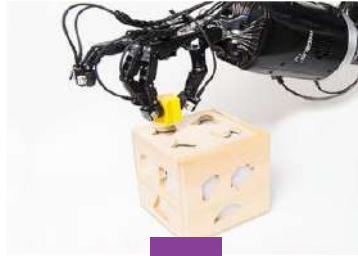
Jean Perrin, 23 septembre 1939, extrait du discours
"...the mobilization of French laboratories through CNRS amounted to the creation of a new regiment.."

CNRS: [la naissance](http://www.cnrs.fr/paris-michel-ange/CNRSnaissance/), c'est aussi une exposition virtuelle
www.cnrs.fr/paris-michel-ange/CNRSnaissance/

Our 10 scientific DEPARTMENTS (*Instituts*)



**Mathematical Sciences
& their Interactions**



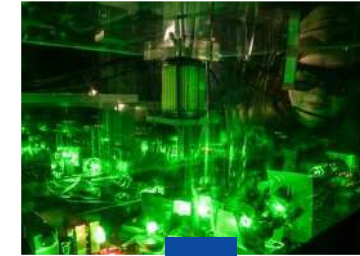
**Information
Sciences &
Technologies**



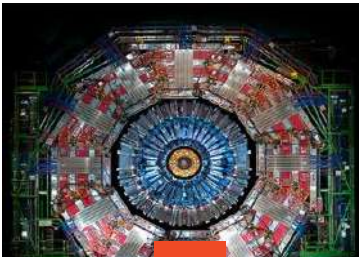
**Engineering
& Systems
Sciences**



Chemistry



Physics



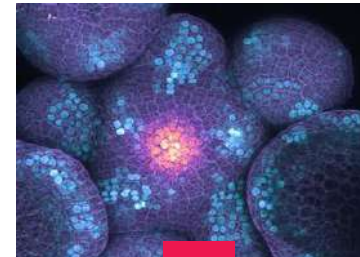
**Nuclear & Particle
Physics**



**Earth Sciences and
Astronomy**



**Ecology
& Environment**



Biological Sciences



**Humanities &
Social Sciences**



CNRS - French National Centre for Scientific Research

- Interdisciplinary public research organisation
- Internationally recognised for the excellence of its scientific research

Research fields :

- Biology
- Chemistry
- Ecology and environment
- Humanities and social sciences
- Engineering and systems
- Mathematics
- Nuclear and particles
- Physics
- Information sciences
- Earth sciences and astronomy

3.3 billion
A budget of

33,000
people dedicated
to research

1,144
research
laboratories in
France and
abroad

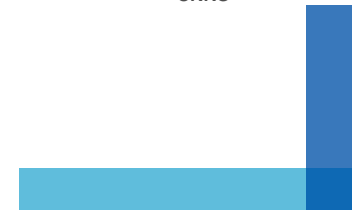
CNRS participation in Horizon 2020 (2014-2020)

- Participation in 1728 H2020 projects (~18% success rate) including 507 MSCA projects (all actions incl.)
- 324 MSCA Individual Fellowships funded (17,3% success rate)

<https://www.cnrs.fr/en>



CNRS



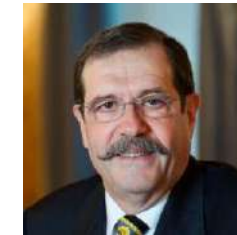
CNRS in Numbers

- **Research**
 - Over 55 000 publications per year, 60 % of which with international collaboration
 - 6th in patent filing
- **Ressources**
 - Budget 2021 : 3,7 Billion €
 - Over 32 000 staff at CNRS

- 12 Fields Medal winners

- 23 Nobel Laureates

Alain Aspect
Physics 2022



Implantations

- Over 1100 research units
- 80 International Res Labs
- 10 offices all over the world

P 57

India's top 10 scientific partner countries in 2019-21 (N= 112,800 international co-publications)



Source : Web of Science, Incites ; traitement CNRS-Derci

CNRS in India

Scientific cooperation agreements

- **Council of Scientific and Industrial Research (CSIR)**

signed in 1975, renewed in 1990, 1997, 2004 , 2012 and 2019



- **Department of Science and Technology (DST)**

Ministry of Science & Technology: 2004, 2012 and 2015



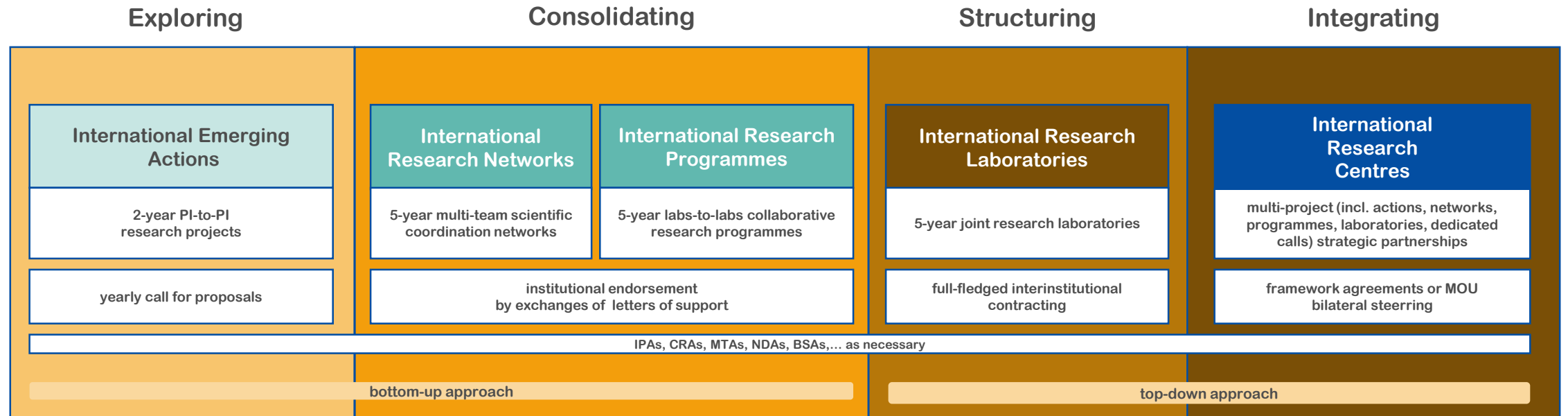
- **Department of Biotechnology (DBT) (2015)**
Centre of Excellence in Marine Biotechnology (Goa)



- **Indian Institute of Science Education and Research (2016)**



Tools of cooperation with CNRS



Instruments for International Collaboration

www.cnrs.fr



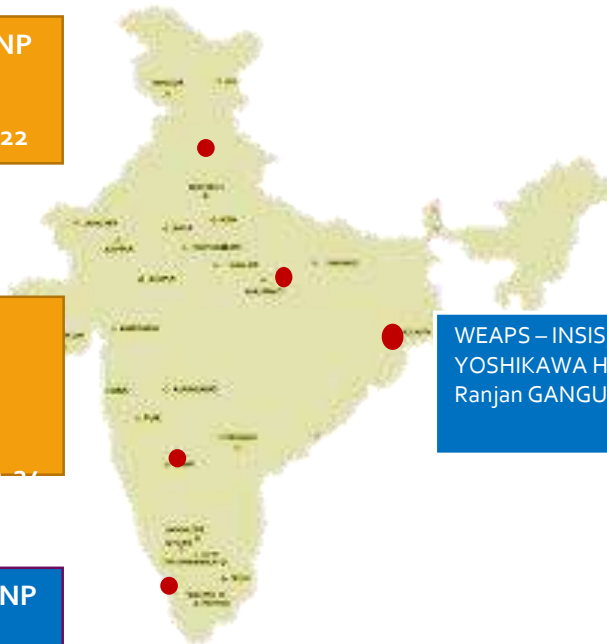
International Emerging Actions



ORACLe INP
 ENOCH Stefan, Institut Fresnel, Marseille
 MONDAL Sameer, CSIR-CSIO, Chandigarh
2021-22

FLUOROCATSIL
INC
 MICHON Christophe, Laboratoire d'Innovation Moléculaire et Applications (LIMA), Strasbourg
 Vanka Kumar, CSIR-NCL, Pune
2022-23

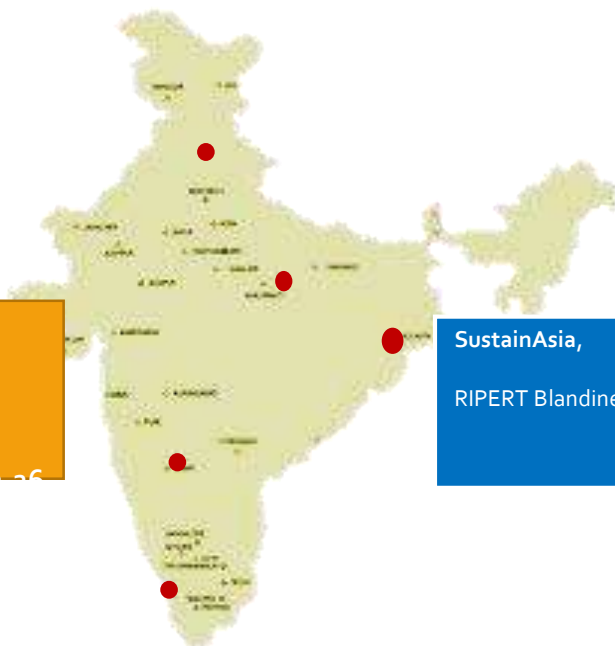
GREENMONACO INP
 ANTOINE Rodolphe, Institut Lumière Matière (ILM), Lyon
 Sabu THOMAS, Mahatma Gandhi University, Kottayam,
2021-22



WEAPS – INSIS, INP
 YOSHIKAWA Harunori, Institut de physique de Nice (INPHYNI), Nice
 Ranjan GANGULY, Jadavpur University, Kolkata
2021-22



International Research Networks

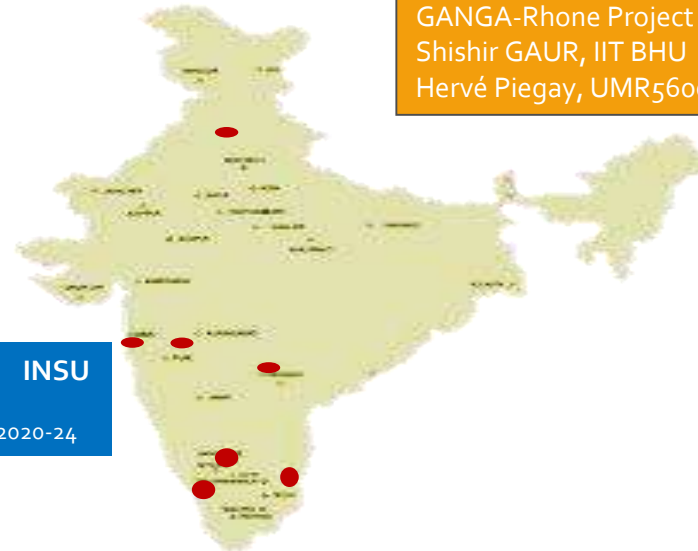


HYDRO-MMBI
INSIS
AMIROUDINE Sakirhoussen,,
Institut de Mécanique et d'Ingénierie de Bordeaux (I2M)
CHAKRABORTY Suman, IIT Kharagpur

SustainAsia,
RIPERT Blandine (ex LANDY Frédéric), IFP Pondicherry

INSHS
2019-23

International Research Programmes



GANGA-Rhone Project
Shishir GAUR, IIT BHU
Hervé Piegay, UMR5600 EVS, ENS de Lyon

INSU

2021-25

Indo-French Cell for Water Sciences (CEFIRSE)
IRD/INRAe/CNRS (J Riotte/ L Ruiz)
IISc: B'lore (Sekhar Muddu)

INSU

2020-24



International Research Programmes



Indo-French Lab of Solid State Chemistry (LAFICS)
ICMCB, UPR9048 (MH Delville, Bordeaux)
IISc – SSCU, B'lore (Satish Patil/Abhishake Mondal)

INC

2022-26

NextGen
Jean-François LUTZ, Institut Charles Sadron, Strasbourg;
S. Ramakrishnan, Dept Inorg & Phy Chemistry, IISc, Bangalore

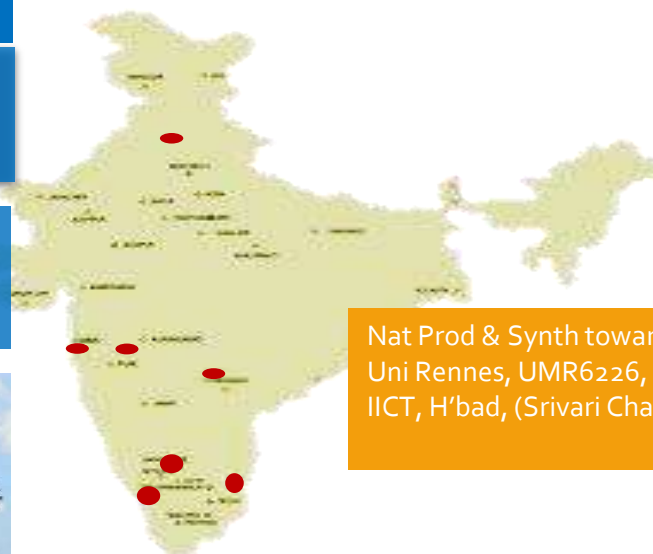
INC

2020-2024

APONAMA
Inst Jean Lamour Nancy (Didier ROUXEL)
International and Inter University Centre for Nanoscience and
Nanotechnology (Sabu THOMAS / Nandu)

INC

2022-26



Nat Prod & Synth towards Affordable Health (NPSAH)
Uni Rennes, UMR6226, Rennes (J Boustie)
IICT, H'bad, (Srivari Chandra Sekhar /Raji REDDY)

INC

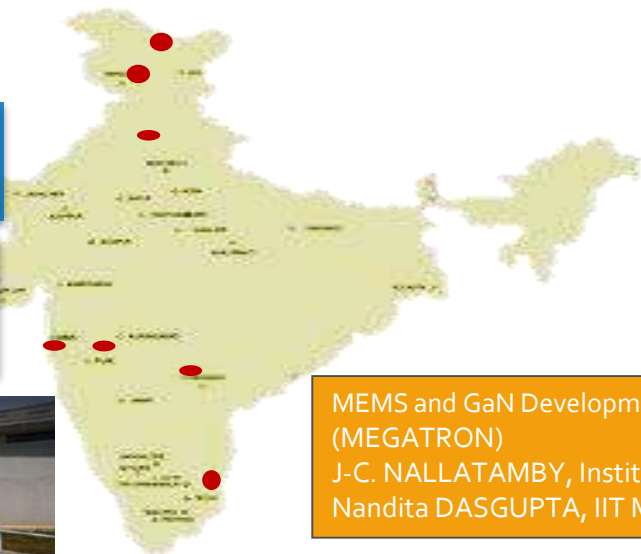
2021-25

International Research Programmes



SySTIM
Thomas LECUIT, Institut de Biologie du Développement de Marseille (IBDM)
Jitu MAYOR, National Centre for Biological Sciences (NCBS)
2019-2022

CALIM
Angela GIANGRANDE, IGBMC, Strasbourg
Gaiti HASAN, National Centre for Biological Sciences (NCBS),
Bangalore
2019-2022

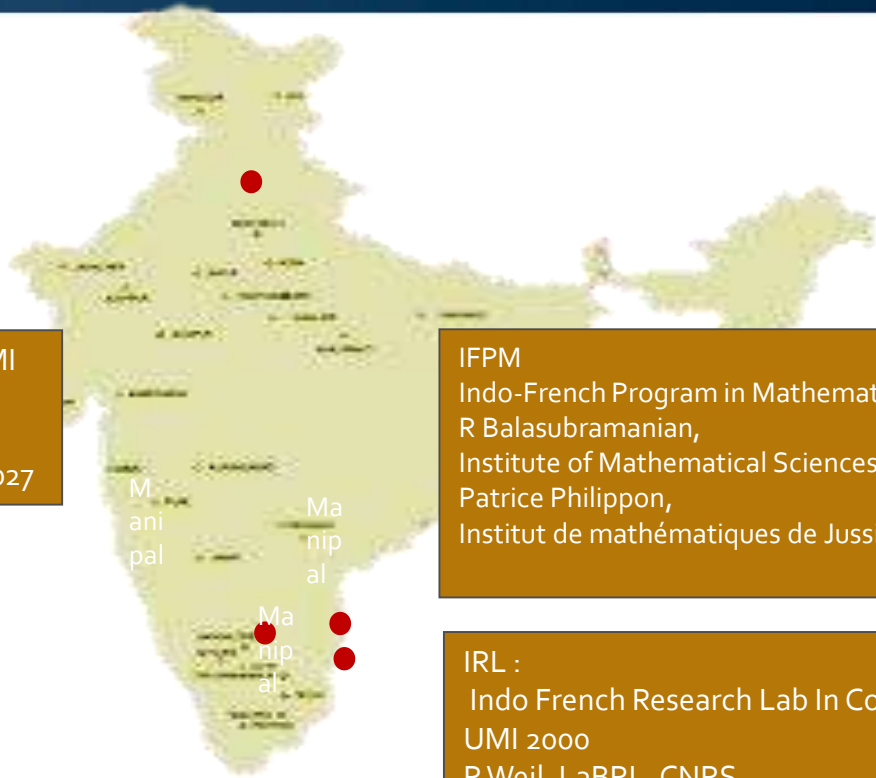


MEMS and GaN Development ThRough COmplementary CollaboratiON (MEGATRON)
J-C. NALLATAMBY, Institute of Mathematical Sciences, Chennai
Nandita DASGUPTA, IIT Madras
2022-26





International Research Laboratories



IRL : Indo-French Centre for Applied Mathematics (FCAM) INSMI
 UMI 3494
 Jacques Giacomoni, Uni Paul Sabatier, Toulouse
 G Rangarajan, IISc, Bangalore, 2023-2027

IFPM INSMI
 Indo-French Program in Mathematics
 R Balasubramanian,
 Institute of Mathematical Sciences, Chennai
 Patrice Philippon,
 Institut de mathématiques de Jussieu - Paris Rive Gauche
 2019-22



IRL : INS2I
 Indo French Research Lab In Computer Science (RELAX)
 UMI 2000
 P Weil, LaBRI - CNRS
 M Mukundan, Chennai Mathematical Institute, Siruseri 2022-26

CNRS | DERCI



The Netherlands and India 15 Years of Science Technology & Innovation Cooperation



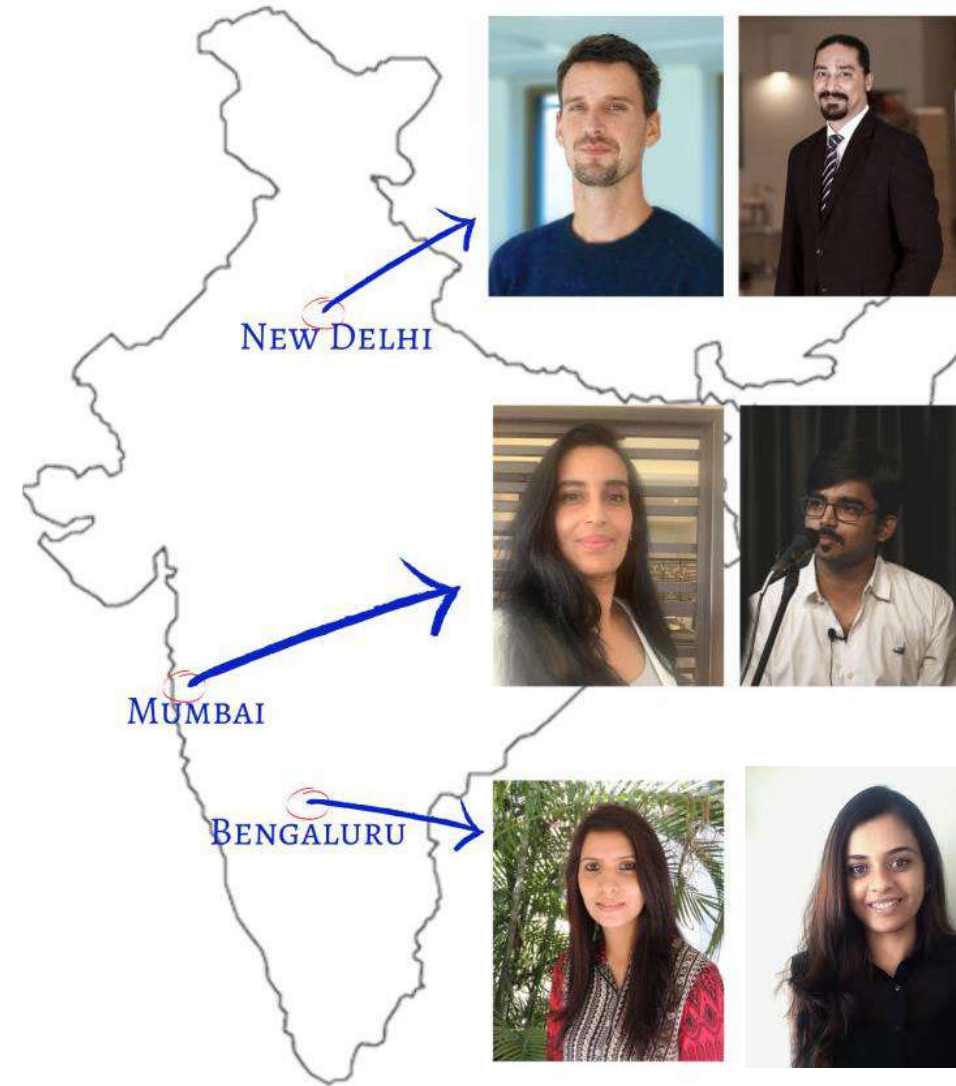
Netherlands Innovation Network



São Paulo / Guangzhou / Peking / Shanghai / Tokio / Taipei / Mumbai / Bangalore / New Delhi / Singapore / Seel / Tel Aviv / Istanbul / Moskou
/ Boston / San Francisco / Washington / Berlijn / München / Parijs / Stockholm / Londen

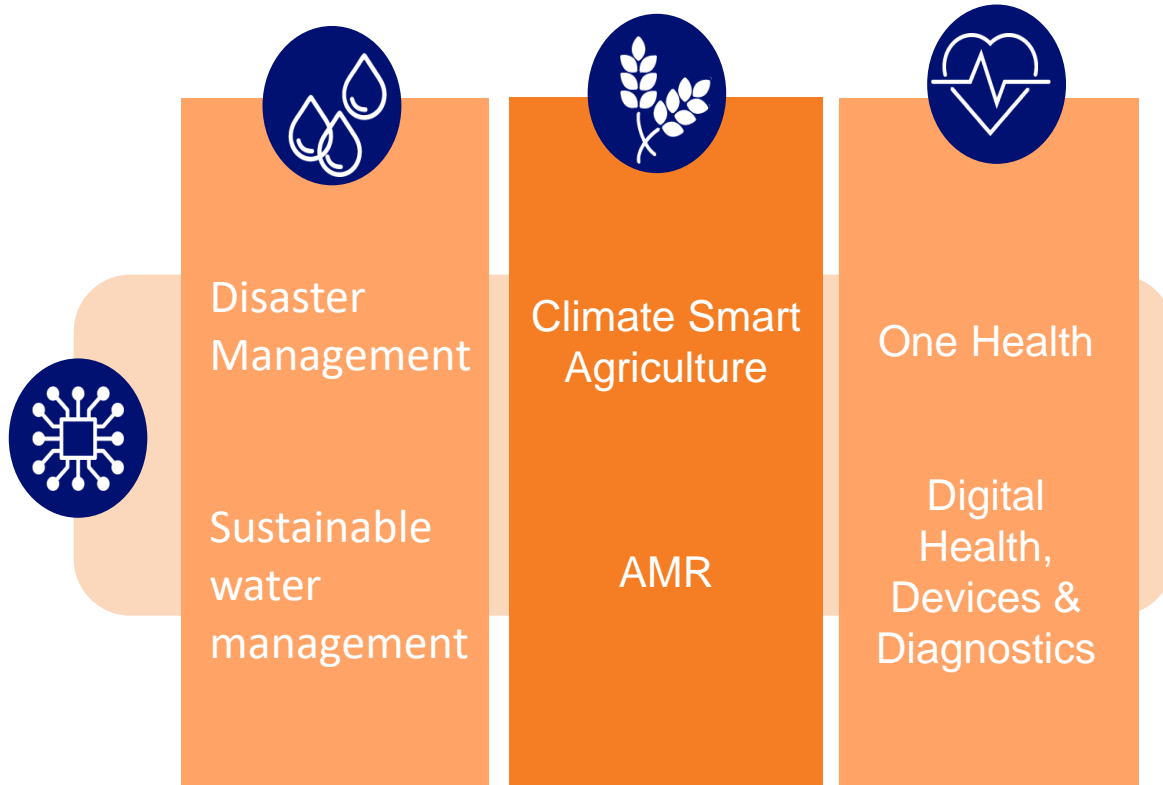
Netherlands Innovation Network India

NETHERLANDS INNOVATION NETWORK
INDIA



WAH! Knowledge and Innovation Agenda

Water, Agriculture, Health & KETs

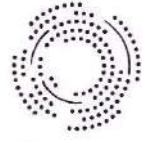




The Netherlands - Public Private Partnerships with exciting research opportunities



Regenerative
medicine



Oncode
Institute

Outsmarting
Cancer

Human
disease model
technologies



Cardio Vascular
Alliance

High tech
to feed
the world

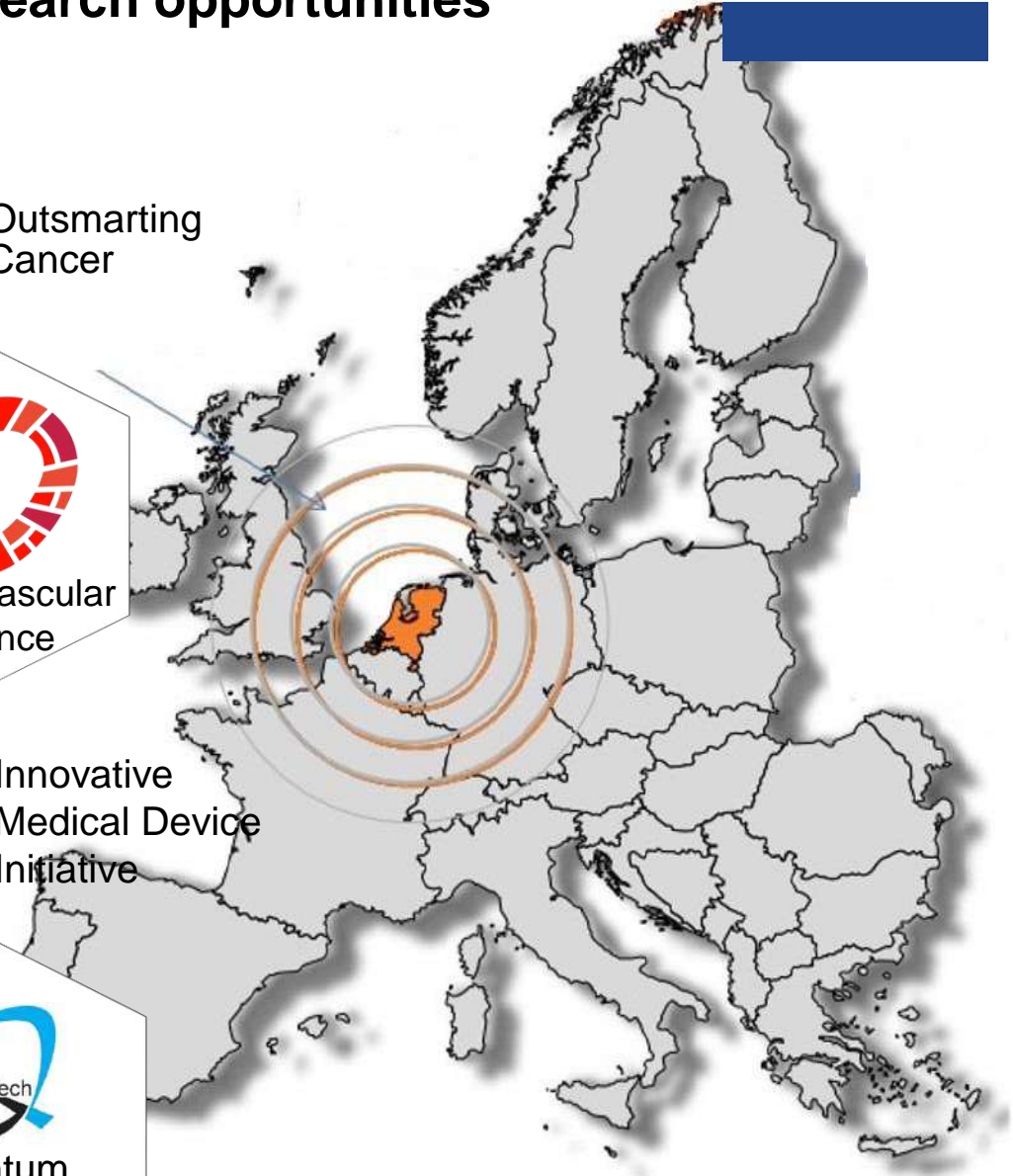


Innovative
Medical Device
Initiative

Chemical Building Blocks
For a sustainable future

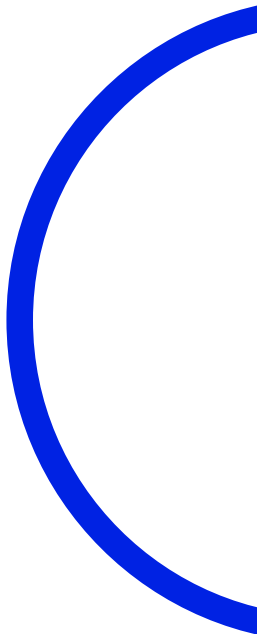


Quantum
Computing



THEMATIC FOCUS 2022

- ▶ Space Technology
- ▶ AMR
- ▶ Digital Health
- ▶ Clean Hydrogen
- ▶ Semicon
- ▶ Cybersecurity
- ▶ E-mobility / advanced battery technology





Thank you!

Netherlands
Innovation
Network



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Embassy of Switzerland in India



Research and Education Opportunities in Switzerland

Indraneel Ghose *Ph.D.*

Embassy of Switzerland, New Delhi / Swissnex in India

EU Regional Tour to Dehradun and Haridwar, 23-25 November 2022

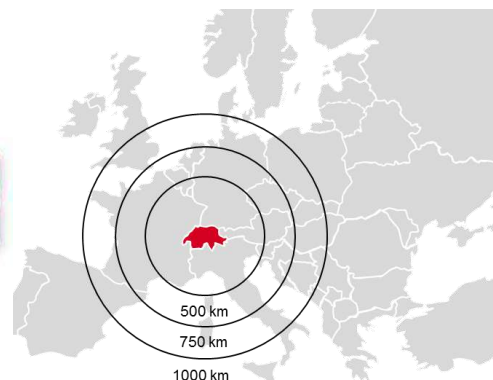
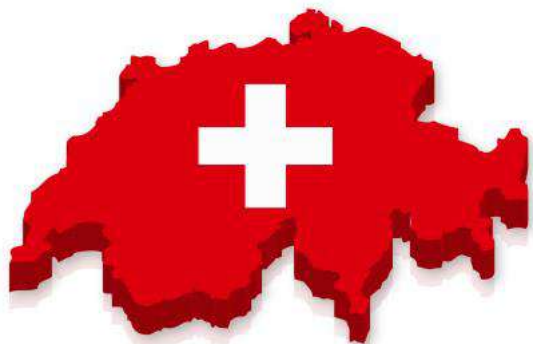


Schweizerische Eidgenossenschaft
 Confédération suisse
 Confederazione Svizzera
 Confederaziun svizra

Why Switzerland



Embassy of Switzerland in India



Much more than



... excellent universities

50% of students in the Swiss University system study in one of the top 200 universities in the world

... home of international companies



... international environment

25% of residents, and 50% of PhD candidates in Switzerland are foreigners

... innovation powerhouse

Top 10 in the Global Innovation Index every year (2007 – 2022) # 1 since 2011



Switzerland and India



- **Indo-Swiss Joint Research Programme**
- **Swissnex in India**
- **Zurich University of Applied Sciences, the Leading House for India**
- **Swiss National Science Foundation**
- **Swiss Agency for Development and Cooperation**



Swiss National Science Foundation



- **Project Funding – Indian partners funding possible**
- **Sinergia – Interdisciplinary collaboration**
- **Prima – Aimed at excellent female researchers**
- **Ambizone – Aimed at young researchers**
- **Scientific Exchanges – For short term visits**
- **For more information: <http://www.snf.ch/en/Pages/default.aspx> **rg****



12 doctoral universities

	EPFL	ETHZ	Basel	Bern	Fribourg	Geneva	Lausanne	Neuchatel	St. Gallen	USI	Zurich
Shanghai 2022	101-150	20	83	101-150	501-600	62	101-150			501-600	59
QS 2023	16	9	136	120	571-580	125	203		501-510	240	83
THE 2023	41	11	101	94	401-450	201-250	135	501-600	301-350	201-250	82
Leiden 2021	9	19	73	180	356	113	105				91

Not appearing in the table, the University of Lucerne

Focus: Fundamental research
50% of students in the Swiss University system study in one of the top 200 universities in the world!

9 Universities of Applied Sciences and Arts

applied research, as well as the development of research findings into marketable innovations. No doctoral programmes

16 Universities of Teacher Education

Training of teachers, research and development, continuing education



Swiss Government Excellence Scholarships



- These scholarships can be availed for study at the **10 Swiss universities**, the **2 Federal Institutes of Technology**, as well as **9 universities of applied sciences**
- Scholarships available:
 - **PhD** scholarships
 - **Postdoctoral** Scholarships
 - **Research** Scholarships
- Next call for applications:
 - **Expected in August 2023**
- Write to ndh.scholarship@eda.admin.ch
to get the application package
- More information at: http://www.sbfi.admin.ch/scholarships_eng



Swiss Government Excellence Scholarships for Foreign Scholars and Artists

Seize the opportunity to fulfill your PhD studies or Post-Doc research in Switzerland.

More than 50% of students in Switzerland study at a Top-200 university according to the Shanghai ranking – by far the highest percentage worldwide. Choose your academic host institution in one of the Swiss Universities, Federal Institutes of Technology or Universities of Applied Sciences.



ThinkSwiss Research Scholarships 2023



- **Where?**
 - In a **publicly funded university** or **research institution** in **Switzerland**
- **Who?**
 - **Master's** student enrolled in an Indian university of institution
 - **Undergraduate (completed 2nd year)** student enrolled in an India university of institution
- **Call for applications currently open**
 - **Application deadline: 15 January 2023**
- **Duration?**
 - **3 months**, between 1 April and 1 December 2023
- **More information at: <https://swissnex.org/india/thinkswiss/>**

ThinkSwiss
Research
Scholarships
2023

Studying abroad opens up a world of opportunities for Indian students. But it is often accompanied by challenges such as the high cost of education and living expenses. Our ThinkSwiss Research Scholarships can help unlock exciting opportunities for you in Switzerland - a globe hub for quality research and innovation. Come explore what is in store in Swiss academia for students from India, Australia and Singapore in this 3-month research stint!

For whom?	Master's students or undergraduate students who have completed 2 nd year, currently enrolled in an Indian university or institute. Open to students from all fields, with an acceptance letter from a professor at a Swiss university for a research stay in his / her group.
When?	Between April 1, 2023 - December 1, 2023 (3 months' duration)
Where?	In a public-funded Swiss research university or public-funded Swiss research institution. Apply by January 15, 2023!

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swissnex

For more details, visit www.swissnex.org/india/thinkswiss



To know more ...



study in switzerl and+



<https://www.studyinswitzerland.plus/>



Other funding possibilities



- **Scholarships offered by Swiss Universities**

<https://www.studyinswitzerland.plus/scholarships/>



The job platform for talent
made in Switzerland

- <https://eth-gethired.ch/> (choose EN for English and then *jobs* for offers of funded positions in academia and jobs in industry)



- <https://www.myscience.ch/jobs>



Your contacts in India



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Adviser for Education, Research and Innovation
Swiss Embassy, New Delhi

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www.eda.admin.ch/eda/en/home/reps/asia/vind/embnd/ste.html



Swissnex in India

Connecting people and ideas from Switzerland and India
to foster exchange in education, research and innovation.

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