INDO-US Science & Technology Forum

Catalyzing Indo-US S&T Cooperation over the years ...

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The Journey Begins….

Agreement signed by Indian and US Governments in March 2000 to establish Indo-US Science & Technology Forum (IUSSTF)

IUSSTF Established as an Autonomous Bilateral Non-Government Not for Profit Society in India

Funding Resources
- Annual Interest on US Endowment
- Matching grant from DST, GoI
- Program based grants from government and private sources
Objectives

- **CATALYST** to *facilitate, seed and promote* bilateral collaboration in science, technology, engineering and biomedical research through engagement with government, academia and industry.
- Disseminate information and create awareness of scientific potentials.
- Build on scientific and technological synergy to create long term relationships.
- Promote and strengthen strategic inter-governmental partnerships.
- Forge public-private partnership to foster innovation and enterprise through academia-industry connect programs.
- Explore new frontiers by nurturing contacts between young and mid career scientists and researchers including students.
Governing Body

T Ramasami, Secretary, Department of Science & Technology

M K Bhan, Secretary, Department of Bio-Technology

S K Brahmachari, Director General, Council of Scientific & Industrial Research

Sanjay G Dhande, Director, Indian Institute of Technology Kanpur

Murali Sastry, Chief Scientist, Tata Chemicals

R Seshasayee, Managing Director, Ashok Leyland India

Vandana Srivastava, Financial Advisor, DST

Norman P. Neureiter, Senior Advisor, American Association for Advancement of Science

Michael Clegg, Foreign Secretary, National Academy of Science

Subra Suresh, Director, National Science Foundation

Roderic Pettigrew, Director, National Institute of Biological Imaging and Engineering

Phyllis G. Yoshida, Dy Asst Secretary, Department of Energy

Ray O. Johnson, Sr. V.P. and C.T.O., Lockheed Martin Corporation

Venkatesh Narayanamurthy, Foreign Secretary, N.A.E.
Program Portfolio

- Strategic Initiatives
- Industry Programs
- Flagship Programs
- Innovation Programs
- Collaborative Research Networks
- Capacity Building Programs
Programmatic Activities

- Bilateral Workshop/ Symposia / Conferences
- Training / Advanced Schools
- Knowledge R & D Networked Centres
- Public - Private Networked Centres
- Centers for Research Excellence in Science & Engineering
- Visitation Programmes
- Innovation Programmes
R & D Knowledge Networked Center

- R & D labs and academia partnership (at least 2 each from India and US)
- Network focal areas of thematic research
- Provide opportunities for integrating research and education
- Leverage existing infrastructure and funding
- All partners to have stake

IUSSTF Funding (Period - 2 years)
- Exchange travel support and hospitality for faculty and students
- Database development and dissemination/publication
Public-Private Networked Center

- Foster academia - R & D lab - industry partnership (at least 2 each from India and US)
- Promote pre-commercial R & D with application potential
- Frontier areas and bottom of the pyramid technologies
- Leverage existing infrastructure and funding
- All partners to have stake

IUSSTF Funding (Period - 2 years)
- Exchange travel support and hospitality for faculty and students
- Industry to bear their own costs
- Product development and dissemination/publication
Visitation programmes

• Indo-US Research Fellowships with DST
• Research Internship in Science and Engineering
• Khorana Program with DBT
• Viterbi - India Program
• APS- IUSSTF Visiting Professorship & Student Visitation
• ASM - IUSSTF Professorships in Microbiology
• IBM - IUSSTF Visiting Fellowships in Nanotechnology
• Cornell - India Student Exchange Program
Indo-US Research Fellowships

Partners: SERC (DST) - IUSSTF

Objective:
Enable young Indian researchers to carry out research in frontier areas of S & T at premier institution in USA

Fellowship includes
• Monthly stipend
• Return airfare
• Preparatory allowances
• Conference allowances

Fellowship period: 3 months to 12 months

Submission Deadline: 31 December 2011
Eligibility:
- Indian/ American Citizen
- Master and Ph.D. students enrolled in recognized institution

Duration: 3-6 months

Placements:
Laboratories, universities and industries

Submission Deadline:
31 March 2012
Flagship Programmes

Frontiers of Engineering Symposium
with
National Academy of Engineering

Frontiers of Science Symposium
with
National Academy of Sciences

Frontiers Awards
For
Young Scientists/Engineers
About 60 outstanding scientists under the age of 45 met at Agra for an intensive 2-1/2 day symposium to discuss cutting-edge developments in selected areas.

**AREAS**

- Algorithms & Big Data Sets/ Topological Order & Quantum Computation
- Biometric Materials
- Creative Brain
- Extinction- Causes & Consequences
- Hydrological Cycles of Glaciers
- Organic Synthesis & Drug Discovery
- Genetic Basis of Disease
About 60 outstanding engineers under the age of 45 will meet at Bethesda for an intensive 2-1/2 day symposium to discuss cutting-edge developments in selected areas.

**AREAS**

- Intelligent Transportation Systems,
- Engineering at the Interface of Science,
- Technology Enablers for Advances in Aerospace Materials, and
- Engineering Large Infrastructure for Disaster/Hazards.
Two awards are given every year to encourage continued interactions between Indian and US Scientists/Engineers participating in IFOE/IFOS.

Scientists/Engineers participating in an IFOE/IFOS symposium are invited to develop a joint proposal involving one Indian and one US scientist.

Award covers mobility support for exchange visits of concerned scientists for two years.
Programs in Partnership with Industry

**DST- Lockheed Martin - FICCI - Univ of Texas, Austin- IUSSTF**

India Innovation Growth Program

**Lockheed Martin – IUSSTF**

Academia Connect Program

**IBM - IUSSTF Visiting Fellowship in Nanotechnology**

- spintronics
- nanoelctronics
- nanophotonics
- materials and devices for energy conversion
- materials for memory devices
Events have led to interaction of about 11,000 US and Indian scientists.

<table>
<thead>
<tr>
<th>Programmatic Activities</th>
<th>2000-2010</th>
<th>2011</th>
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<tr>
<td>Workshops / Roundtables</td>
<td>276</td>
<td>31</td>
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<tr>
<td>Training Schools</td>
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<td>Flagship and Special Initiatives</td>
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<td>Joint Centres</td>
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<td>6</td>
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<tr>
<td>Innovation Programs</td>
<td>10</td>
<td>2</td>
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<td><strong>Total</strong></td>
<td><strong>407</strong></td>
<td><strong>46</strong></td>
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Cutting across disciplines

- Chem Sci: 22
- Comp & Math Sci: 50
- Engg & Tech: 33
- Earth System Sci: 32
- Med and Life Sci: 56
- Phy & Mat Sci: 67
- Sci Policy & Edu: 6
- Other: 6

Total: 141
Outcome of Workshop/ Symposia

65% events have resulted into various outcomes

- Continued Interaction (25%)
- Publications (20%)
- Follow up Visits (15%)
- Joint Projects (10%)
- New Fundings (9%)
- Training (6%)
- Student Exchange (5%)
- MoU (4%)
- Joint Centres (3%)
- Fellowships (3%)

Source: NISTADS Report 2007
Recognized at Highest Level

U.S.-India Joint Statement on Higher Education Cooperation

Washington, DC, October 13, 2011

“The two leaders also expressed their support for the Indo-U.S. Science and Technology Forum, which provides fresh impetus to academic collaboration in the cutting-edge areas of scientific research and technology development.”

India’s Human Resource Development Minister Kapil Sibal and U.S. Secretary of State Hillary Rodham Clinton
“The U.S.-India Science & Technology Forum, now in its tenth year, has convened activities that have led to the interaction of nearly 10,000 Indian and U.S. scientists and technologists.”

U.S. Secretary of State Hillary Rodham Clinton and India’s Minister of External Affairs S.M. Krishna
Joint Clean Energy Research & Development Center

(To facilitate joint R & D aimed towards deployment for clean energy technologies)

US-India S&T Endowment Board

(To facilitate joint R & D aimed towards innovation, entrepreneurship and commercialization activities in S&T)
**Indo-US Clean Energy R & D Center (JCERDC)**

**Partners**: Indian Ministry of Science & Technology and US Department of Energy.  
*Program administered in India through IUSSTF.*

**Objective**: To facilitate joint R & D aimed towards deployment for clean energy technologies.

**Funding**: US $ 5 million each year for 5 years from GOI and DoE with matching funding from participating industries.

**Request for Proposals**: RFP issued with submission deadline of 16 August 2011. 21 proposals received. 3 may be funded after reviewing.

**Priority Areas**
- Solar Energy
- Second generation biofuels
- Energy efficiency of buildings

[http://www.indousstf.org/JCERDC.html](http://www.indousstf.org/JCERDC.html)
US-India Endowment Fund

**Partners:** Government of US and Government of India through Department of Science & Technology. 
*Program administered through IUSSTF.*

**Objective:** To facilitate joint R & D aimed towards innovation, entrepreneurship and commercialization activities in S&T

**Funding:** Annual Interest from US Endowment Fund with matching contribution from DST (Total Rs. 135 Mn/ $ 2.7 Mn in 2011-12)

**First Request for Proposals:** First RFP Issued with submission deadline of 31 May 2011. Over 380 LoI received. After reviews, 32 were shortlisted for submission of detailed proposals. 3 have been shortlisted for funding.

**Priority Areas for First RFP**
- Healthy Individual
- Empowered Citizen

http://www.indousstf.org/US-India-Endowment-Board.html
IUSSTF Regular Requests for Proposals

Bilateral Indo-US Workshop/ Symposia

Indo-US Training / Advanced Schools

Indo-US Knowledge R & D Networked Centres

Indo-US Public – Private Networked Centres

Submission Deadlines

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Contacts

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IUSSTF values your interactions and partnerships

Thank You