

Board Of Research In Fusion Science & Technology



BRFST was set up at the Institute For Plasma Research (IPR) in April 2008 with the vision for formulating and implementing a number of strategies for a long-term programme aimed at developing indigenous competence in all aspects of Fusion Science & Technology in India. It is multi-disciplinary, multi-institutional in character and requires expertise from a verity of fields, ranging from frontiers of fundamental science to sophisticated technologies. The objective of the broad programme would be to develop a strongly interacting community of fusion scientists & technologists. The BRFST was set up to promote this broader scope of activities and to establish linkages with all major academic / research institutions and industry.

The main charter of BRFST being ;

- Oversee all the activities discussed above to ensure wide publicity to the programme and promote participation from all academic /national research institutes and the industry.
- Organize workshops, specialists meetings and talk circuits to discuss topical areas and promote nucleation of research programmes.
- Administer the selection of research proposals, disbursement of funds and review of their progress.
- Organize and support symposia on topics of relevance and interest to fusion, plasma physics and other associated areas of science & technology.
- Co-ordinate human resource development through setting up extension programmes involving students from IIT's, NIT's and other educational institutions in collaboration with Institute For Plasma Research.

BRFST Supports

- Funding of R&D projects in areas related to fusion science & technology to academic as well as industrial establishments.
- Funding of conferences, meetings, workshops in the area of fusion science & technology.
- Internships to masters students in science & technology to carry out their project work.

 <http://nfp.pssi.in> 

Broad Areas Of R&D Interest

Plasma Theory & Simulations

Advanced Material Technologies

First Wall Component Engineering

Cryogenic & Magnet technologies

RF & Microwave Technologies

Charged Particle Beam Technologies

Power Engineering Technologies

High Voltage Engineering

Advanced Data Acquisition & Control Engineering

TBM & Nuclear Technologies

For more details regarding these topics, please refer to the document entitled “NFP Research Opportunities” provided on the BRFST website.

Highlights (2007-2010)

- Since BRFST began functioning, more than 44 projects valued at a total of more than Rs.1,400 Lakhs have been sanctioned to both academic as well as industrial research collaborations in various areas of fusion science & technology.
- More than 22 academic institutions as well as R&D establishments in India have been collaborating with BRFST to undertake various R&D projects.
- More than 20 National/International meetings were partially sponsored by BRFST.
- More than 15 masters students have been recipients of the NFP internship programme.

- Fresh research proposals should be submitted as per format provided on the website to BRFST before June 30 or December 31 each year.
- Reviews will be conducted in August and February each year.
- Projects will be reviewed internally and then by the BRFST board. Sanction of the project will be subject to these reviews.

BRFST-Industry Collaboration

BRFST is the first funding agency in India to directly fund R&D collaborations from the Industry. This offers the industry the flexibility to carry out R&D work on essential areas in fusion science & technology with major spin-off possibilities. This also allows them to become part of a prestigious National R&D programme, i.e, the National Fusion Programme.

From August 2008 onwards, Nine projects were sanctioned to industrial establishments under the purview of the National Fusion Program of BRFST. A total amount of Rs. 75.52 Lakh was sanctioned for the projects awarded to industries.



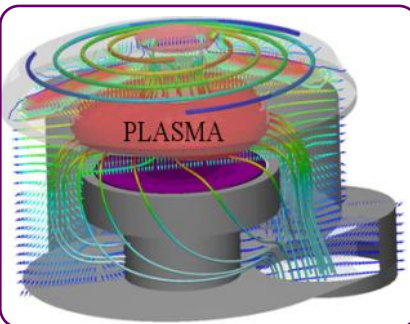
“Development of cryogenic radiation shield prototype panel” awarded to M/s I-Design Engineering solutions, Pune. This project involved design, manufacture and testing of cryogenic shield panels for tokamaks. Based on the work successfully developed and carried out in this project, M/s I-Design were able to procure contracts for similar jobs in competition with other national and international companies.



“Development of high speed mechanical switches as bypass for superconducting magnet or breakdown of wave shaping” awarded to M/s Megawin Switchgear, Salem, Tamilnadu.



“Development of a Microprocessor Controlled Special Purpose Solenoid Magnet Winding Machine” awarded to Patel's Analog & Digital Measurement Co. Pvt. Ltd, Pune



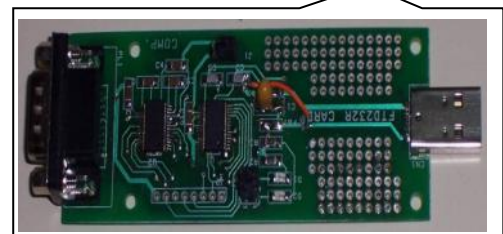
“Investigation on simulation of Plasma Torch for metal spray Applications using Multiphysics modules of ESI-group software” awarded to M/S ESI India Sales & Technical Branch Office, Bangalore.



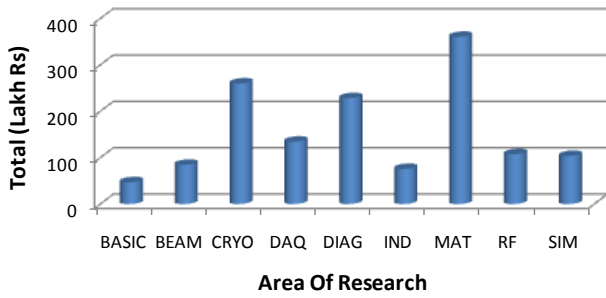
“Development of Laser welding Technique for dissimilar as well as similar materials in different forms” awarded to M/s Magod Laser, Bangalore.



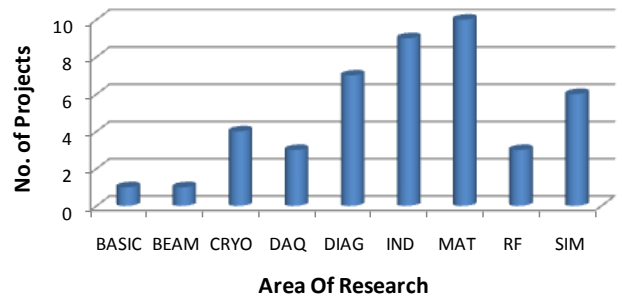
“Development of a Universal Interface Device (UID)”, awarded to M/s V B Tech Automation, Pvt. Ltd, Ahmedabad.



Aug 2007 - Feb 2010



Aug 2007-Feb 2010



Academic

IIT Madras

IIT Kanpur

IIT Kharagpur

NIT Rourkela

Guwahati University

IIT Guwahati

Univ. Of Mumbai

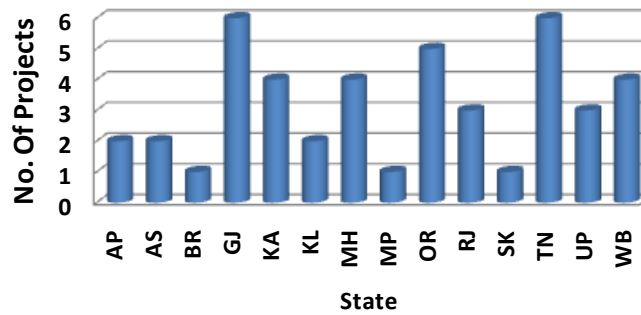
Univ. of Hyderabad

CUSAT, Cochin

S P Univ., Anand

PDPU, Gandhinagar

Aug 2007-Feb 2010



Industry Collaborators

Patel's Analog & Digital Measurement Co. Pvt. Ltd, Pune

Megawin Switchgear, Salem, TN

V. B. Tech Automation Pvt.Ltd, Ahmedabad

Magod Laser, Bangalore

I-DESIGN Engineering Solutions Ltd., Pune

HEG R&D Centre, Mandideep (M P)

ESI India Sales & Technical Branch Office, Bangalore

Sandeepani - School of VLSI Design, Bangalore

Academic

NIT Rourkela

IMMT, Bhubhaneshwar

SMIT, Sikkim

BIT, Jaipur

BIT, Patna

NIIST, Trivandrum

BHU, Varanasi

CEERI, Pilani

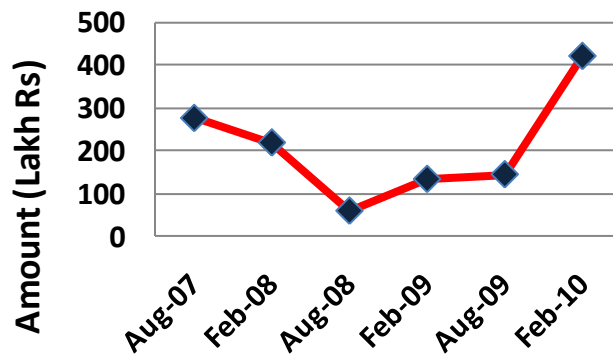
DAIICT Gandhinagar

Rawenshaw Univ.

IISc, Bangalore

For information on NFP R&D activities

Dr. Ravi A.V. Kumar
Ph: 079-2396 2181
Mob : 98253 66039



For information on NFP Internship

Dr. N. Ramasubramanian
Ph: 079-2396 2182
Mob : 98793 01053

Board Of Research In Fusion Science & Technology

Institute For Plasma Research, Bhat, Near Indira Bridge,
Gandhinagar 382 428 (Gujarat)

Tel : 079-2396 2181 / 2182 ; Fax : 079-2396 2285

E-mail : nfp.projects@gmail.com

Web : <http://nfp.pssi.in>

