



EMPOWERING SCIENCE AND SCIENTISTS

Science and Engineering Research Board (SERB) is empowering scientific community to address challenging issues of national interest and helping them to attain global competitiveness in R&D

The Genesis

The Science and Engineering Research Board (SERB) has its origin in the erstwhile Science and Engineering Research Council (SERC) of the Department of Science and Technology, Government of India which was established more than four decades ago. Though the SERC has consistently and strongly supported extramural research which has benefitted a large number of researchers, it was felt necessary to create a separate funding body with its own administrative and financial power which would accelerate the R&D ecosystem in our country. This desire became reality in the year 2009 when the Parliament passed the bill to institute SERB, under the Department of Science and Technology. Ever since it started functioning in the year 2011, the organisation has put in place systems, structures and processes which have greatly improved the funding decision and timely disbursement of grants without compromising on quality.

The Process

The funding decision on research proposals are taken based on the recommendations of various advisory committees comprising of eminent scientists and technologists derived



Prof Ashutosh Sharma, Secretary, DST and Chairman, SERB is giving opening remarks on the occasion of the Global Research Council meeting hosted by SERB and RC UK in New Delhi

SERB programmes are designed to support all good ideas, individuals and institutions, and do not discriminate between private and public organisations

from diverse fields. The committee members, reviewers and officers are required to follow the 'conflict of interest' policy. Research proposals are submitted online against a pre-announced call with known time schedule for decision and financial disbursement. These processes offer transparency, enhance efficiency and also speed.

Funding Opportunities

SERB has many schemes to cater to the funding needs of different segments of researchers, and it funds across 'disciplines' and 'institutions' without any discrimination. Core research grant scheme (EMR) to individual scientists is the flagship scheme of the Board (popularly called PAC project). Several cutting edge research themes ranging from unfolding the secrets of hadrons to exploring proliferative and differentiation potential of Ayurvedic Rasayanas are funded through this scheme.

SERB is adopting to the changing needs of the country and introduced two new schemes, namely, Industry Relevant R&D and High Risk High Reward Research. While the former attempts to address the gap between public funded

RECENT INITIATIVES

- PM's Fellowship for Doctoral Research
- Women Excellence Award
- EMEQ - Empowerment & Equity Opportunities for Excellence for SC/ ST
- ECR - Early Career Research Award
- NPFD - National Post-Doctoral Fellowship
- IRRD - Industry Relevant R & D
- Partnership Programmes with MoHRD (IMPRINT, UAY), MoFPI (Food Processing), DoT (Cell Tower Radiation)
- HRHR - High Risk High Reward Research
- Overseas Doctoral and Post-Doctoral Fellowships

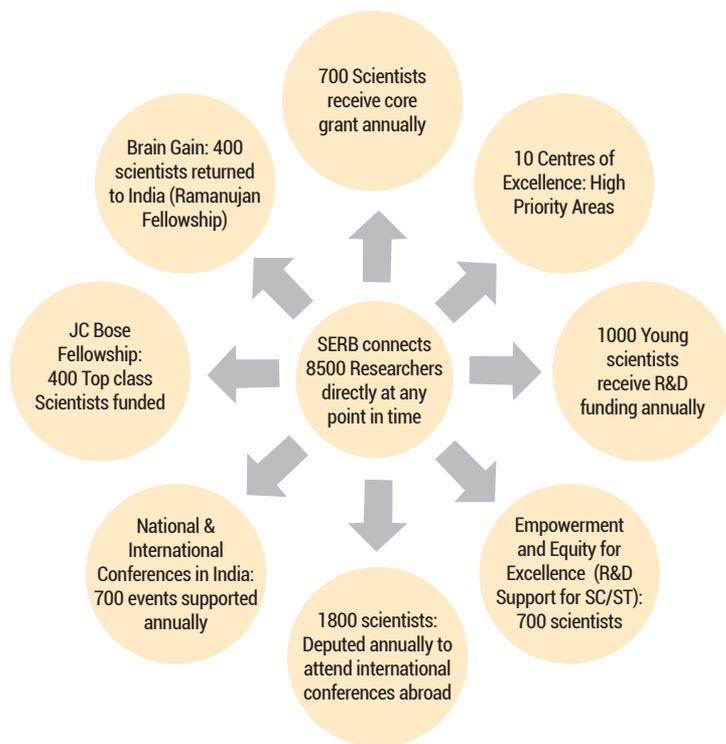


Dr. R. Brakaspathy
Secretary, SERB

“It's been an interesting journey for the SERB, wherein we are ensuring that the rich legacy of erstwhile SERC is carried forward and the new organisation is enriched with infused energy and vigour. We have revamped several existing schemes and launched many innovative schemes to cater to the diverse needs of scientific community. We aspire to deliver performance par excellence across all parameters.

ADDRESSING THE TWIN CHALLENGES OF ALTERNATE ENERGY AND ENVIRONMENTAL PROTECTION

To predicate on effective utilisation of combustion as a means of thermo-chemical energy conversion in India, SERB established the National Centre for Combustion Research & Development (NCCRD) at IIT, Madras and IISc, Bengaluru. This is the largest grouping of academic combustion researchers globally with the research interests in three major application sectors - automotive, thermal power, and aerospace propulsion, besides fire research and microgravity combustion. The NCCRD pursues key innovative R&D in various fields including gasoline direct injection (GDI), flame stabilization, lowering emissions and mitigating combustion instability in gas turbines and improved fuel-air mixing in supersonic combustors.



SERB is able to connect around 8500 researchers directly through its various schemes

research and industry related research with an involvement of industry partner, the latter focusses at supporting proposals that are conceptually new and risky, and if successful, expected to have a paradigm shifting influence on the S&T. SERB also have special window for supporting high priority areas in research through establishment of centres of excellence and facilities.

SERB recognises human resource as an important component in S&T, and offers many fellowship and awards. National Post-Doctoral fellowships (NPDF) and Early Career Research Award (ECRA) are two popular programmes for young researchers. JC Bose fellowship is awarded to recognise the performance of scientist whereas Ramanujan Fellowship enables the researchers

working in overseas institutions to return to India. The Board has also introduced programmes to train PhD students and Postdoctorates in identified overseas institutions of repute. SERB is also partnering with different departments and organisations both within the country and abroad for addressing sector specific research issues. Prime Minister's Doctoral Fellowship Scheme (a PPP venture between SERB and CII) and the Cell Tower Radiation, (in collaboration with the Ministry of Telecommunications) are few examples of national partnership. The International Partnership Programme includes Graduate Research Opportunities Worldwide (GROW) and SERB Newton-Bhabha International Fellowships.

SERB: Targeted Schemes for Young Researchers

- A National Post-Doctoral Fellowship**- Identifies motivated young researchers and provides them support for doing research in frontier areas of science and engineering.
- B Early Career Research Award**- Provides quick research support to the researchers in their early career for pursuing innovative research in frontier areas of science and engineering.
- C Overseas Doctoral Fellowship**- Fellowship to students registered for PhD in Indian universities/institutes to train in academic institutions of international repute.
- D Overseas Post-Doctoral Fellowship**- Build national capacity in frontier areas of Science by providing fellowships to carry out postdoctoral research in overseas institutions of repute.
- E Prime Minister's Fellowship Scheme for Doctoral Research**- Instituted to engage industry participation in research and development.
- F SN Bose Scholars Program** A dynamic student exchange with US and Indian universities to undertake research internship for 10-12 weeks.

Way forward

SERB is attempting to take Indian science and engineering research funding to the next level in keeping pace with the challenges of the modern era and meeting the expectations of researchers. It aspires to transform India into a significant player in S&T in the global setting.