

# 6<sup>th</sup> Bharatiya Vigyan Sammelan and Expo

08 - 11 May 2020

CSIR - Indian Institute of Chemical Technology, Hyderabad

## Organizer

Vijnana Bharati

Vijnana Bharati is a nationalistic, patriotic, and humanistic science movement where science involving both engineering and technology is aimed at societal development, social harmony, ecological balance, and environmental sanctity. Vijnana Bharati is the largest people's science movement in India. From its ideological seeds as Swadeshi Science Movement of Bharat, where Swadeshi connotes the Bharatiya world view on Science in which a single framework lead to the development of all three knowledge systems, such as natural sciences, social sciences and spiritual sciences in a holistic, integral and all inclusive manner.

Vijnana Bharati was launched in 1991 and as of the day the network is spread in 30 prant units in India and has its presence in 7 countries abroad.

It has nine initiatives and seven entities. More information on Vijnana Bharati is available on

[www.vibhaindia.org](http://www.vibhaindia.org)

## Host Institute

CSIR - IICT

Indian Institute of Chemical Technology (IICT), Hyderabad, established in 1944, is a constituent laboratory of Council of Scientific and Industrial Research (CSIR), New Delhi. With its expertise in chemistry and chemical technology, it provides solutions to challenges faced by Industry, Government Departments and Entrepreneurs through basic and applied research, and process development. It is internationally recognized for its contributions to chemistry research and is an ideal place for taking ideas to commercialization through state of the art research and development.

Vision: To Serve society by creating an outstanding knowledge base in chemistry and chemical technology.

Mission: CSIR-IICT will strive towards knowledge intensive translational research in chemistry to meet the country's expectations with novel technologies.

[www.iictindia.org](http://www.iictindia.org)

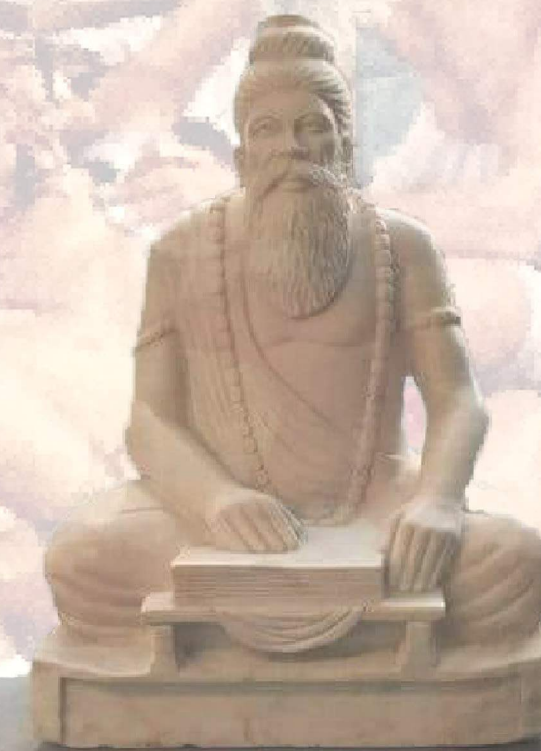
## Fusion of Traditional and Modern Science for Sustainable Development



## Organizer



## Host Institute



### SUSHRUTA (ca 600 BCE) Father of Surgery

Sushruta was an ancient Indian Physician. He is considered to be the Father of Surgery. His text books had 184 chapters, described 1120 illnesses, 700 medicinal plants and 64 mineral preparations. He did many procedures such as incisions, probing, surgery for haemorrhoids and fistulae, as well as cataract surgery. He is also known as the father of plastic surgery. His contributions include the fields of physiology, aetiology, embryology, metabolism and immunity. Sushruta is the pioneer of 300 different types of operation and he described 125 surgical instruments including the endoscope.

DONATED BY MR K.M.CHERIAN, MS, FRACS, DSc (Hon.), DSc (HC), DSc (CHC)  
FELLOWSHIP IN CARDIOTHORACIC SURGERY 1973 BY EXAMINATION  
CHENNAI 600010, INDIA

Statue of Sushruta at the Royal Australasian  
College of Surgeons, Melbourne, Australia

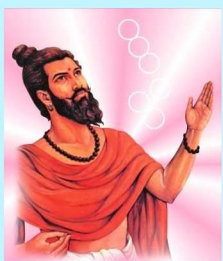




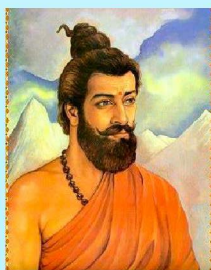
स्वदेशो

भुवनत्रयम्

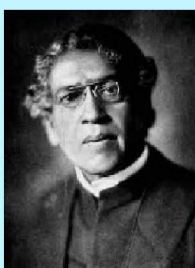
अन्नपूर्णा स्तोत्रम्  
(शङ्कराचार्य)



Kanad



Kapil Muni



J C Bose



C V Raman

Think  
Globally,  
Act  
Locally



**B**haratiya Vigyan Sammelan (BVS) is a flagship program of Vijnana Bharati initiated as a vehicle to reach the masses in the pursuit of popularizing science and technology and to facilitate interactions within common people and scientific fraternity.

BVS is a conglomeration of scientists, artisans, technocrats, traditional innovators, students and common people planned once in two years. It has become an excellent platform to bring together whoever contributes to science and has become a definition and identity in the field of scientific seminars and symposiums. To date, five Bharatiya Vigyan Sammelans have taken place starting from Bhopal (2007), Indore (2009), Jalandhar (2012), Panji (2015), and Pune (2017).

The 6<sup>th</sup> Bharatiya Vigyan Sammelan and Expo is being jointly organized by Vijnana Bharati and CSIR - Indian Institute of Chemical Technology, Hyderabad from 8<sup>th</sup> - 11<sup>th</sup> May 2020.

### Objectives

1. Explore avenues for deeper scientific interaction between traditional practices/ techniques and modern sciences to improve the understanding and effectiveness.
2. Showcase contemporary Indian scientific contributions to the society.
3. Promote development and communication of science through regional languages.
4. Showcase grass-root innovations made by artisans from different domains, farmers, fishermen etc.
5. Explore feasibility of using traditional science and technology to resolve contemporary issues.

### Focal Theme

The focal theme of the *sammelan* is "Fusion of Traditional and Modern Science for Sustainable Development" with an intention to provide an excellent integrating opportunity to showcase people's science in our Indian traditions, grass root innovations as well as the contributions made by researchers and scientists in modern science.

BVS aims to provide a channel of communication between traditional and modern sciences with the prospects of communicating in any regional language and not restricting to only English as the preferred language for scientific expression.

In spite of stupendous accomplishments in Science and Technology today, humanity is facing severe challenges such as climate change, depletion of natural resources, over-population, pollution, hunger, human health, etc. which have posed an existential threat to very life on mother Earth. The only way out of this crisis is a path to Sustainable Development.

Bharatiya traditional scientific knowledge, practices and techniques have eternally evolved to emphasize the human connection with nature, which is a core idea to achieve Sustainable Development. Naturally, interlinking of both - traditional and modern science - will certainly bring out solutions to the current crisis.

### Important Dates

- |                                 |  |
|---------------------------------|--|
| 1. BVS Expo                     | 8 <sup>th</sup> May to 11 <sup>th</sup> May 2020 |
| 2. BVS Conference               | 9 <sup>th</sup> May to 11 <sup>th</sup> May 2020 |
| 3. Abstract Submission deadline | 15 <sup>th</sup> March 2020                      |
| 4. Abstract Acceptance          | 31 <sup>st</sup> March 2020                      |
| 5. Submission of Paper          | 15 <sup>th</sup> April 2020                      |

### Chief Mentor

Dr. Harsh Vardhan, Honorable Union Minister, Ministry of Health and Family Welfare, Ministry of Science & Technology, and Ministry of Earth Sciences, Govt. of India.

Shri. Ramesh Pokhriyal, Honorable Union Minister, Minister of Human Resource Development, Govt. of India

### Mentors

- Dr. V K Saraswat, Member, Niti Aayog
- Dr. Vijay P Bhatkar, President, Vijnana Bharati
- Dr. Anil Kakodkar, Former Chairman, Atomic Energy Commission
- Dr. R A Mashelkar, Former Director General, CSIR and Secretary, DSIR
- Dr. G Madhavan Nair, Former Chairman, Indian Space Research Organisation

### Advisors

- Dr. K VijayRaghavan, Principal Scientific Advisor, Govt. of India
- Dr. Shekhar C Mande, Director General, CSIR and Secretary, DSIR
- Prof. Ashutosh Sharma, Secretary, Department of Science and Technology
- Dr. Renu Swarup, Secretary, Department of Biotechnology
- Dr. G Satheesh Reddy, Chairman, Defence Research and Development Organisation
- Dr. Balram Bhargava, Director General, Indian Council of Medical Research
- Dr. Trilochan Mohapatra, Director General, Indian Council of Agricultural Research

### Organizing Committee

- Dr. S Chandrasekhar, Director, CSIR - IICT, Hyderabad
- Prof. Appa Rao Podile, Vice-Chancellor, University of Hyderabad, Hyderabad
- Dr. V M Tiwari, Director, CSIR - NGRI, Hyderabad
- Dr. Debashis Mitra, Director, CDFD, Hyderabad
- Dr. Rakesh Mishra, Director, CSIR - CCMB, Hyderabad
- Dr. R Hemalatha, Director, NIN, Hyderabad
- Shri. BHVS Narayana Murthy, Director, RCI, Hyderabad
- Dr. Anil Kumar Singh, Director, DLRL, Hyderabad

### Academic Committee

- Chairperson: Dr. Satheesh C Sheno, Director, INCOIS, Hyderabad
- Co-chairperson: Dr. Subeer S Majumdar, Director, NIAB, Hyderabad
- Convenor: Dr. G Bhanuprakash Reddy, NIN, Hyderabad
- Member: Prof. Amba Kulkarni, University of Hyderabad, Hyderabad
- Prof. Sharmistha Banerjee, University of Hyderabad, Hyderabad
- Prof. Jayant Kulkarni, Vignana Bharathi Inst. of Tech., Hyderabad
- Prof. P Laxminarayana, Osmania University, Hyderabad
- Prof. Ch Venkata Ramana Reddy, JNTU, Hyderabad
- Dr. Prathama S Mainkar, CSIR - IICT, Hyderabad

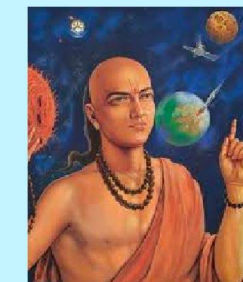
### Convenors

- Dr. Sanjay Tiwari, Pandit Ravishankar Shukla University, Raipur
- Dr. Ramanuj Narayan, CSIR - IICT, Hyderabad

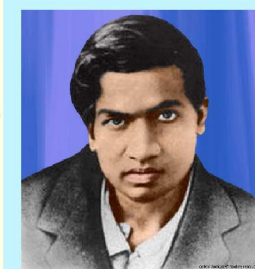
6<sup>th</sup>  
BVS  
and Expo  
2020



Aryabhat



Bhaskaracharya



Ramanujan



Meghnad Saha

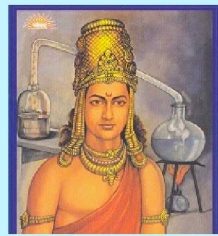
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2020



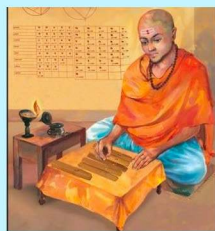


माता भूमिः  
पुत्रोऽहं पृथिव्याः

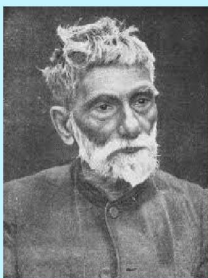
अथर्ववेद १२.१.१२



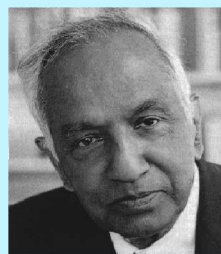
Nagarjuna



Brahmagupta



P C Ray



S Chandrasekhar

Save  
Mother  
Earth



## Theme Subjects of BVS 2020

The organizers of BVS 2020 seek presentations and brain storming discussions on the following topics of relevance and their role in making sustainable scientific approach through the fusion of traditional and modern science.

- Health** : Primary concerns in today's health sector, strengthening of existing knowledge base in the field, and how to promote access to the state-of-the-art health care to common man, Traditional practices, Ayurveda.
- Food and life-style disorders** : Traditionally evolved food habits in various parts of India, gradual loss of local produce, altered food habits and life-style disorders.
- Metallurgy/Dyes/Natural pigments** : The ancient knowledge base of chemistry in India, understanding of dyes and natural pigments and strategies to reinstate nature-friendly dyes and pigments.
- Building, Materials and Architecture** : Can we evolve strategies to have environmental friendly buildings and revival of ancient Indian architectural skills?
- Animal Husbandary** : Today's problems associated with animal husbandary sectors, solutions to farmers and cattle breeders, biotechnology breakthroughs.
- Defense and Space** : The success of research in defense and space sector in independent India is breath taking. To further enhance technological niche and to be the world leaders in these sectors.
- Grass root innovation** : To provide platform for the creativity of an individual who is not professionally trained but is an ardent observer. Provide platform and support a creative mind at the grass root level.
- Bhasha Vijnana** : The evolution of languages is a very complex process and has been a subject of active of research. A platform will be provided to present development and challenges in this subject.

## Scope of the Sammelan and Call for Abstract

We invite scientists, researchers, academicians, technocrats, grass root innovators, farmers, artisans, post-doctoral scholars, and students who wish to publicly share their scientific innovations which have potential to provide sustainable solutions for our country's problems.

BVS 2020 invites abstracts for presentation on the following broad areas and sub themes:

- Life Sciences**: Forestry, Environment, Biodiversity, Conservation Biology, Traditional Medicine, Health, Agriculture, Plant and Animal Science.
- Earth Sciences**: Water, Atmospheric Science, Geology, Geophysics, Marine chemistry and biology, and Oceanography.
- Astronomy**: Modern Astronomy and Astrophysics, Ancient Astronomy.
- Archaeology**: Ancient technologies, Languages.

5. **Technology**: Grass root, Traditional, Applications, Defense, Architecture and Civil Engineering, All branches of Engineering.

6. **Physics**: Ancient knowledge of Indian societies in physics, Marine physics, Time Keeping, Algorithms, Metrology, Modern Physics.

7. **Chemistry**: Modern Chemistry, Ancient findings in Chemistry, Natural dyes, Pigments and Ancient knowledge of metallurgy.

8. **Mathematics**: Indian knowledge base in Mathematics, Ancient discoveries of trigonometry, Calculus, Number Theories, Binary Numbers, Series, Fractions and Vedic Mathematics, Modern Mathematics.

9. **Performing Arts**: Traditional knowledge and science behind all forms of art.

## BVS Expo

BVS Expo will be held during 8<sup>th</sup> - 11<sup>th</sup> May 2020 at CSIR - Indian Institute of Chemical Technology, Hyderabad.

The BVS expo is planned to be a unique exhibition which will be a major attraction of the proposed Bharatiya Vigyan Sammelan. This exhibition intends to showcase the innovations and achievements of India in the area of science and technology, traditional arts, crafts, practices and contemporary grass root innovations from different parts of India.

Organisations expected to participate in the mega expo are:

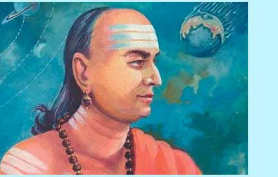
- Department of Atomic Energy (DAE),
- Department of Science and Technology (DST),
- Department of Biotechnology (DBT),
- Council of Scientific and Industrial Research (CSIR),
- Defence Research and Development Organisation (DRDO),
- Indian Council of Agricultural Research (ICAR),
- Indian Council of Medical Research (ICMR),
- Ministry of New and Renewable Energy (MNRE),
- Ministry of Earth Sciences (MoES),
- Indian Space Research Organization (ISRO).
- Universities, IITs, NITs, IISERs etc.
- A large number of industries and innovators.

## Awards

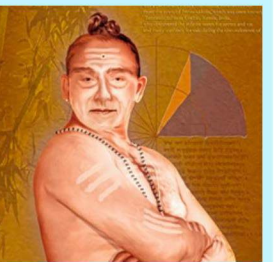
Suitable awards will be considered in deserving cases for :

1. Best rural / indigenous technological development
2. Best scientific innovation making impact on societal issues
3. Best oral presentation
4. Best poster presentation
5. Best exhibit

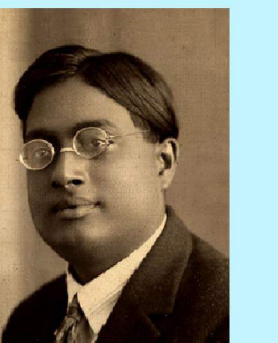
6<sup>th</sup>  
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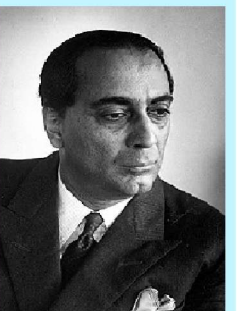
Varāhamihira



Madhava



S N Bose



Homi Bhabha

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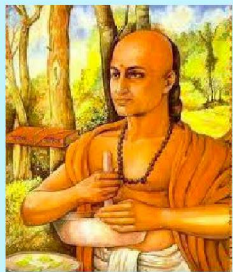
Lander — Vikram Rover — Pragyan



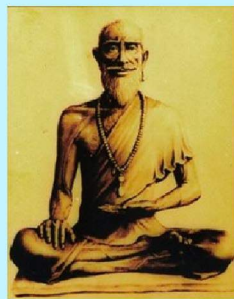


यावन्तः पुरुषे  
तावन्तः लोके।

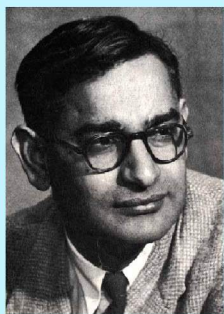
चरक संहिता



Charaka



Jeevaka



Har Gobind Khorana



G N Ramachandran

Live in  
Harmony  
with Nature



### Submission of Abstract:

Abstracts in compliance to these themes are requested for oral or poster presentation during the conference. Abstracts should be written in clear and concise format, so that reviewers can focus solely on the scientific merits of the submission. Each abstract may only be submitted once and under one theme and topic. Failure to answer questions on the submission form or the submission of the same abstract under multiple themes could result in the abstract being declined. The abstracts should preferably be uploaded on the website of BVS 2020 on or before 15<sup>th</sup> March, 2020.

### Format:

Name(s) of the author(s):

Name of the Presenting and corresponding Author:

Title of the abstract:

Abstract: (Maximum 500 words, without any images)

Presenter submitting the abstracts in any other language other than English are requested to send the .pdf version due to compatibility issues.

### Language Specifications:

The presentations can be in any regional language / National language or in English. We encourage non-English-speaking authors to have their abstracts checked for grammar and spelling prior to the submission. The presenter who will be submitting the abstract in any regional language will have to provide the same abstract either in Hindi or English for non-biased evaluation. If the presenter has any problem in translating the abstract, then he/she can take help of our Regional coordinators.

### Poster Presentations:

The objective of poster presentation is to showcase innovations, success stories, problems needing scientific and technical solutions etc. to leading scientists, NGOs, innovators, research institutes, funding agencies and many more on one to one basis during the conference. Such interaction is expected to provide better opportunity of personal discussion. Topics should be related to the sub themes specified for the nine broad areas selected for deliberations during the 6<sup>th</sup> Bharatiya Vigyan Sammelan and Expo (BVS 2020).

- Posters with a predominant Research and Innovation component will be given preference.
- Academic committee will evaluate the posters and advise the organizers about their acceptance/improvement/ rejection. Organizers will convey the results to the concerned author by 1<sup>st</sup> April 2020.
- Name, designation and contact details of the authors shall be written on the Poster.

### Registration

Interested participants may choose on the three categories for registration

1. Individual registration - Rs. 2000
2. Student registration - Rs. 500
3. Vijnana Bharati members - Rs. 1000

Participants are encouraged to register through the web portal located at: <http://www.bvs2020.in>

### Accommodation

A limited number of dormitory type accommodation can be offered to the out-station participants and delegates from 1800 hrs of 8<sup>th</sup> May till 0800 hrs of 12<sup>th</sup> May 2020 on payment of additional Rs. 1500 per delegate. Accommodation request along with the payment must be done during the registration process on the online portal.

### Account Details for Bank Transfer

Name of the Bank: Indian Bank  
Account Name: BVS  
Bank A/c No: 6853721869  
Bank Branch: Defence Colony, New Delhi  
IFSC Code: IDIB000D008  
MICR Code: 110019003

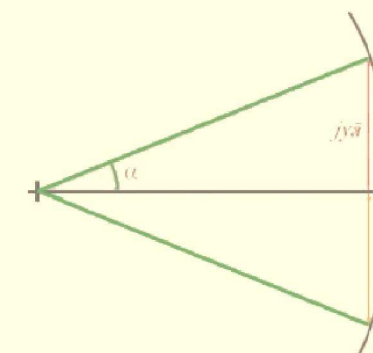
### Contact

Organizers,  
6<sup>th</sup> Bharatiya Vigyan Sammelan,  
CSIR - Indian Institute of Chemical Technology,  
Tarnaka, Hyderabad - 500007, Telangana, India  
Phone: +91-40-2716 0512  
Email: [bvs2020@gmail.com](mailto:bvs2020@gmail.com)  
Web: <http://www.bvs2020.in>

### Regional coordinators of Vijnana Bharati

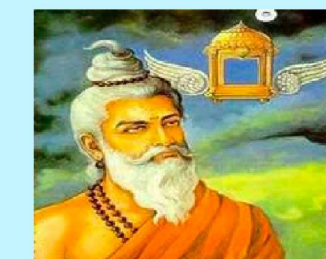
Andhra Pradesh:	Dr. Satyakamal	Madhya Pradesh:	Dr. Anil Kothari
Bihar:	Dr. Ramkumar	Maharashtra:	Dr. Manasi Malgaonkar
Chandigarh:	Shri. Arvind Garg	North-Eastern States:	Shri. Rajeeb Sarma
Chhattisgarh:	Dr. Santosh Dubey	Orissa:	Dr. Bikash Jena
Delhi:	Dr. Krishnakumar	Punjab:	Dr. Sanjeev Chauhan
Goa :	Shri. Manohar Pednekar	Rajasthan:	Dr. Umesh Gupta & Shri. Vishnu Prakash Sharma
Gujarat:	Shri. Vidyadhar Vaidya	Tamilnadu:	Shri. Sabanayaham
Haryana:	Dr. H D Kaushik	Telangana:	Shri. G L N Murthy
Himachal Pradesh:	Dr. Vikram Singh	Uttar Pradesh:	Dr. Aniruddha & Dr. Rajesh Kumar
Jammu - Kashmir & Ladakh:	Dr. Pawanesh Abrol	Uttarakhand:	Dr. Hemwatinandan
Jharkhand:	Dr. J K Pandey	West Bengal:	Shri. Arthatran Patra
Karnataka:	Shri. Chandrasekhar		
Kerala:	Dr. A R S Menon		

(Contact details of the regional coordinators are available on the BVS2020 website)

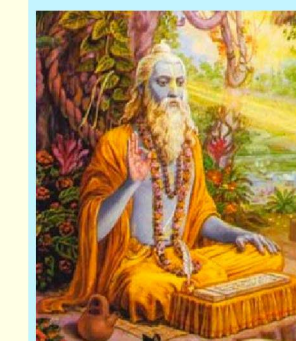


मखि भखि फखि धखि णखि जखि  
डखि हम्झा म्ककि किष्ण श्चकि किष्वा  
घनकि किष्ण हक्व्य धकि किच  
स्मा श्छ ड्व क्ल प्त फ छ कलार्धज्याः ॥

6<sup>th</sup>  
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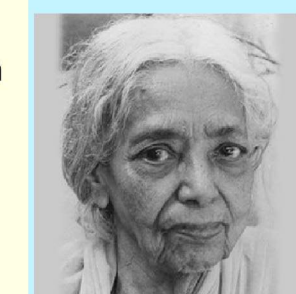
Maharshi Bharadwaj



Parashar Muni



A P J Abdul Kalam



Janaki Ammal

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