



SJBIT

# SJB Institute of Technology

(Affiliated to Visvesvaraya Technological University, Belagavi and Approved by AICTE and Accredited by NAAC with 'A' Grade, CGPA-3.22 - New Delhi )

#67, BGS Health & Education City, Dr. Vishnuvardhan Road, Kengeri, Bengaluru - 560060.

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**Dr. Ajai Chandran C.K**

Ph.D, MURP, B.Arch, FIIA, AIIP, FIV, AIID, MISTE  
Principal

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## INNOVATION CENTRE

### CIRCULAR

It is hereby informed to all the faculty members of SJBIT to compulsorily attend the Interactive Workshop on **"Research Methodology and Writing Proposal with Case Study"** on **Saturday 06<sup>th</sup> February, 2021** at SJBIT Gallery from 2:00 pm to 4:30 pm by distinguished speakers **Dr. Chandrabhas Narayana**, Director, Rajiv Gandhi Centre for Biotechnology (RGCB), **Prof. N Sundararajan** (Retd.) Nayang Technological University, Singapore, and **Dr. S G Sreekanteshwara Swamy**, Consultant VGST, Bengaluru.

All the faculty members from all the departments must make the best utilization of this workshop.

#### Innovation Centre Coordinators

1. Dr. Banuprakash G
2. Dr. Ajay Prakash B V

  
Dr. Ajai Chandran C.K.

  
Principal

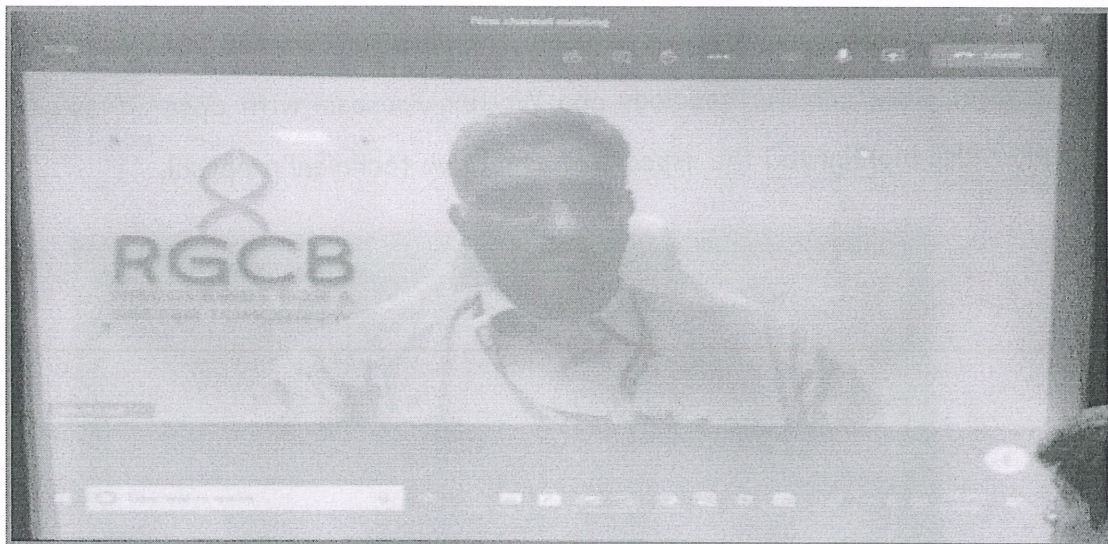
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## 1.0 INTRODUCTION

An interactive workshop is arranged by innovation centre in the college about "Research Methodology & Writing Proposals" in order to bring awareness about nuances of research methodology and effective technical project proposal writing. About 150 faculties have participated in the workshop organised.

## 2.0 INAUGURATION FUNCTION

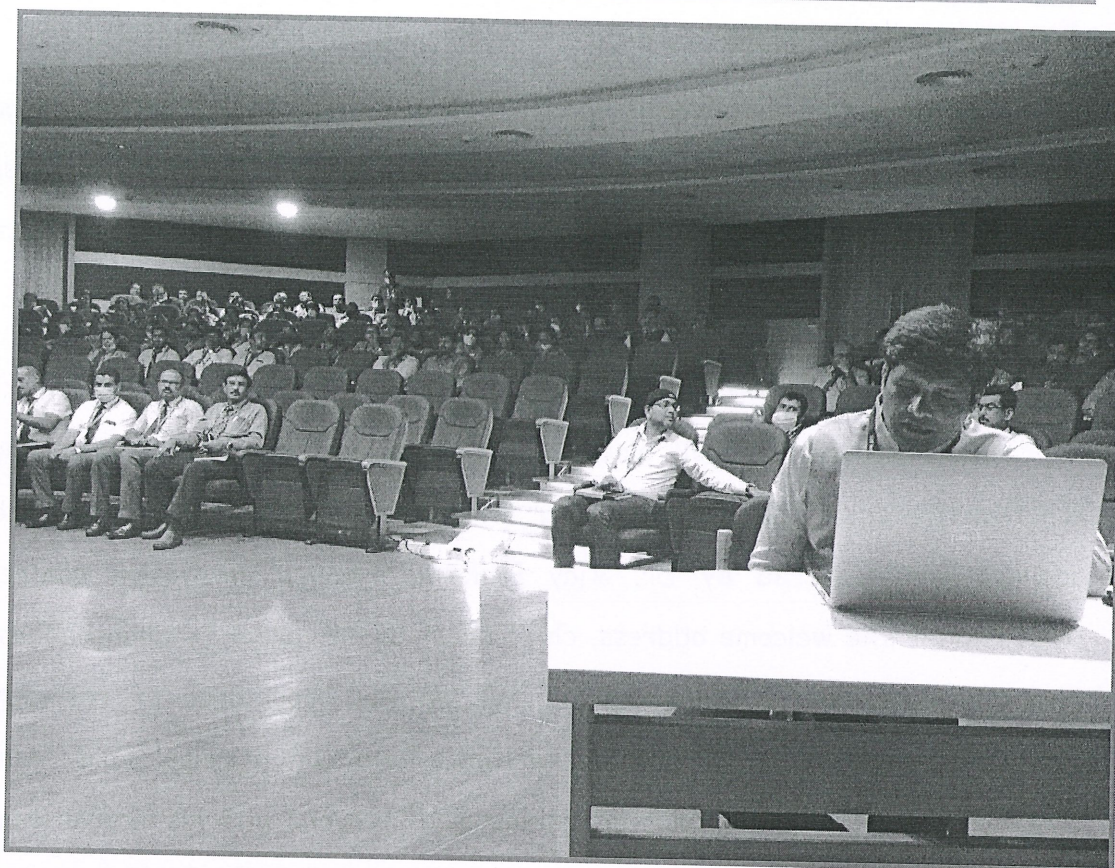
The inauguration took place on 06<sup>th</sup> February at SJBIT gallery. The function started with an invocation song, followed by lighting of lamp. Welcome address was delivered by Dr. Ajay Prakash, member, innovation centre, SJBIT. After the welcome address, chief guest of the event Dr. Chandrabhas, Director, RGCB, Biotechnology, gave a talk on the importance of research methodology and technical proposal writing. Then our principal Prof. Ajai Chandran gave presidential address and inspired everyone with his motivational speech. Finally Prof. Bhanu Prakash presented the vote of thanks for the event.



  
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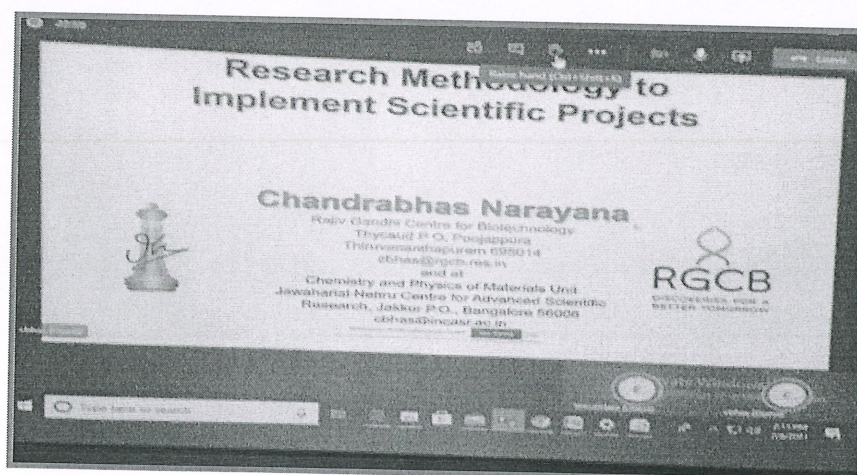
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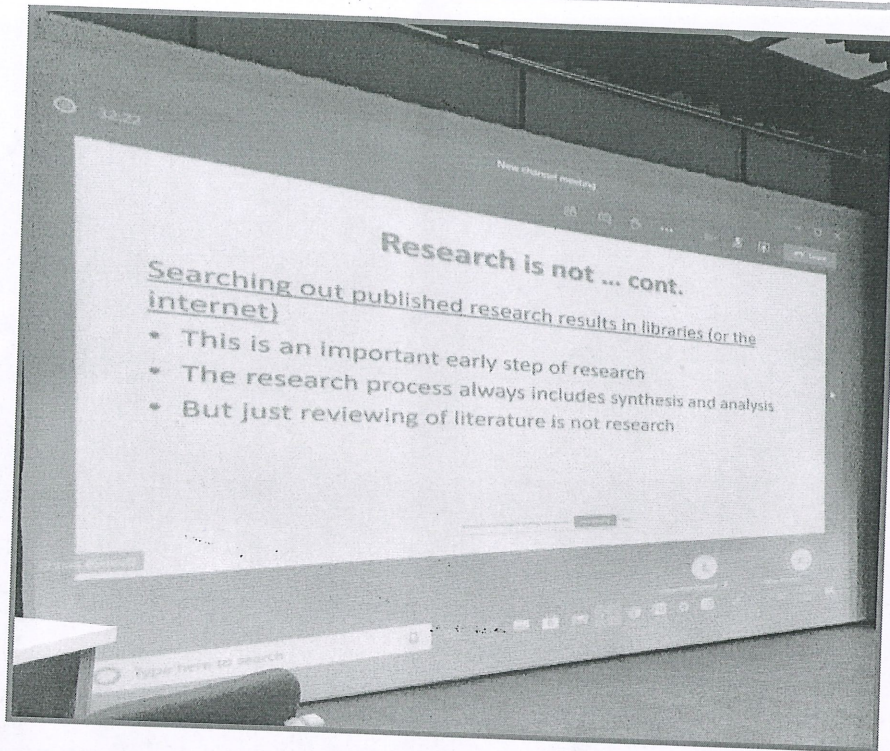


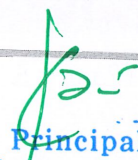
### 3.0 TECHNICAL SESSIONS

The first technical session was delivered by Dr.Chandrabhas, Director, RGCB, Biotechnology. During the session, the speaker threw light on various aspects of Research Methodology and Writing Proposal with Case Study. The speaker also highlighted the aspects of effective technical proposal.







  
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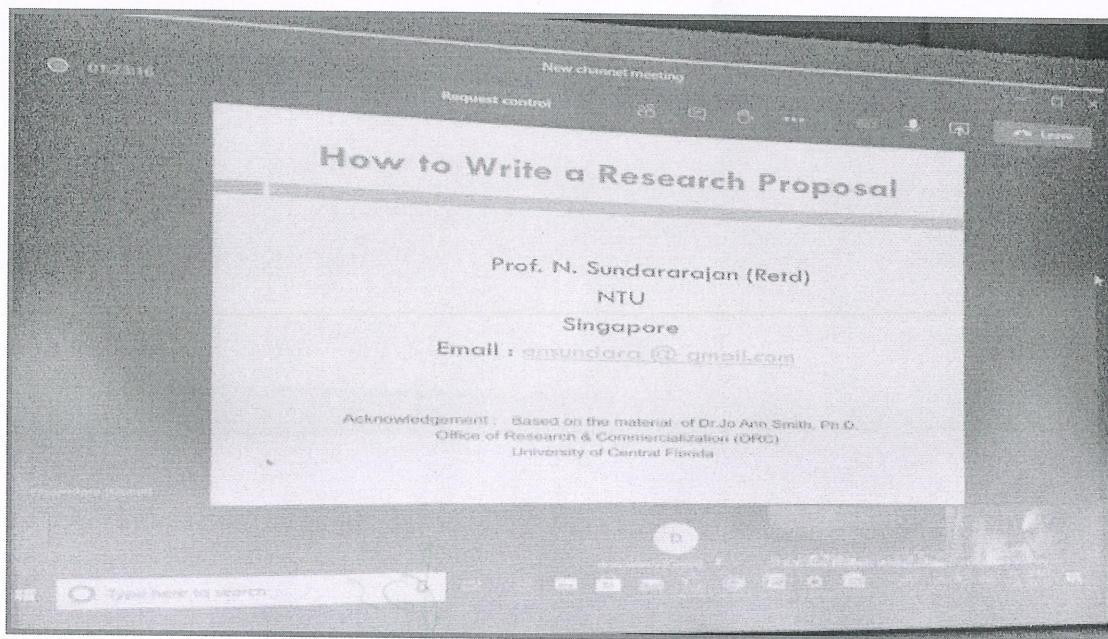
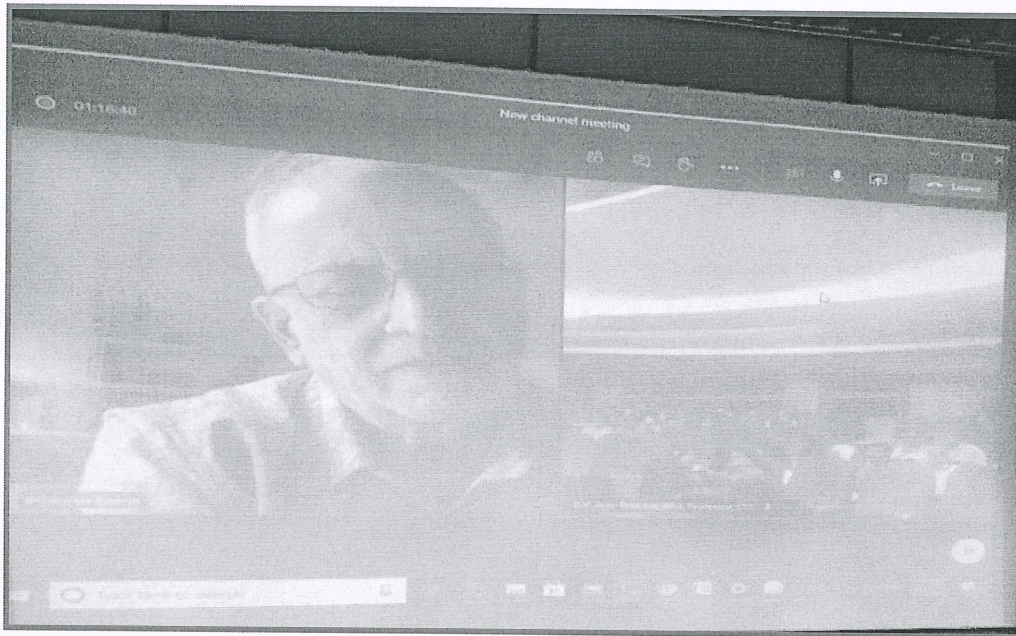
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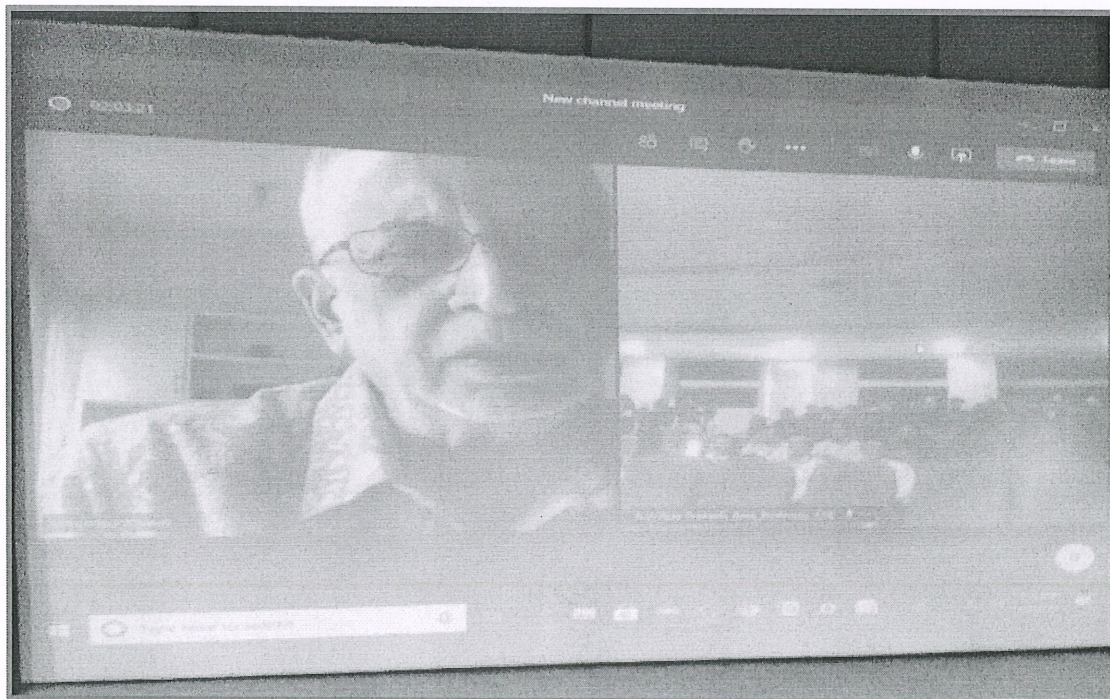
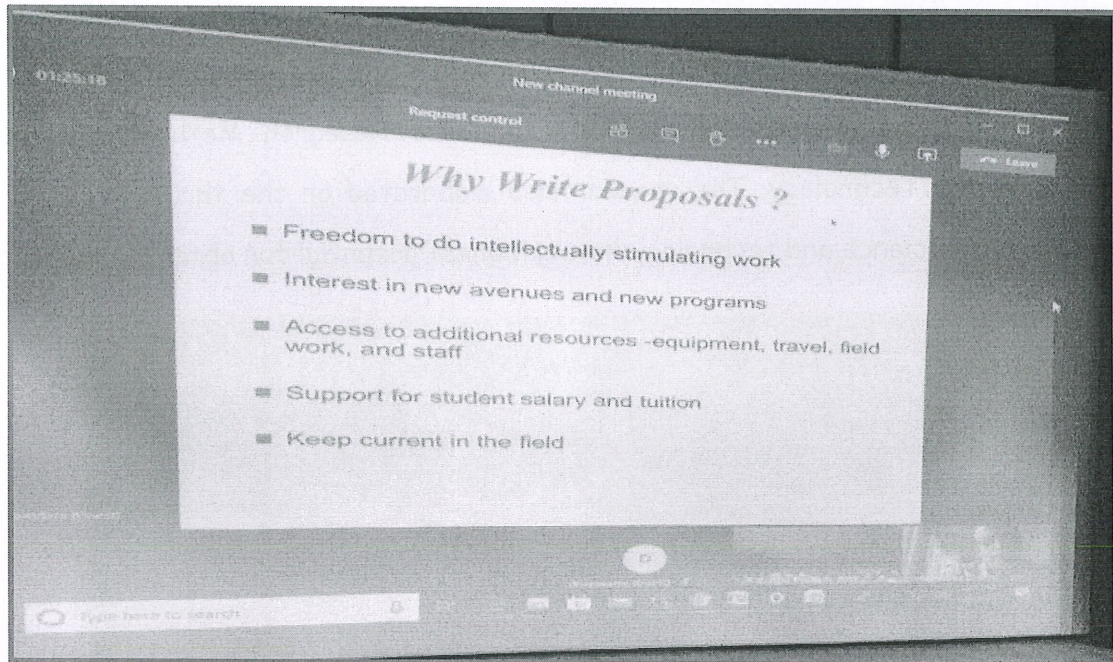




The second technical session was delivered by Prof. N Sundararajan (Retd.) Nayang, Technological University, Singapore. Research Methodologies in Science and Technological university, Singapore. During the session, the speaker enlightened the audience on various aspects of Research Methodologies in Science and Technology. The speaker also elaborated on the thrust areas of research in science and technology having highest potential for obtaining grant.










## BIODATA OF PROF. CHANDRABHAS NARAYANA

Prof. Chandrabhas Narayana a Bangalorean by birth did his Ph.D. from the Department of Physics, Indian Institute of Science, Bangalore after completion of his Bachelor and master's in science education from Regional Institute of Education, Mysore (Mysore University). Before joining as a faculty at the Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), he went to Cornell University, Ithaca, New York for his Post Doctoral Research. He is currently the Director of Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram. He was the Dean, Research and Development, the Chairman, Chemistry and Physics of Materials Unit and the Dean, Fellowships and Extension Programmes at Jawaharlal Nehru Centre for Advanced Scientific Research. Prof. Narayana specializes in **Raman Spectroscopy** and **Ultra High-Pressure Research**. After Joining JNCASR, he has started working on another spectroscopic technique, namely, **Brillouin Spectroscopy**. During his research career, Prof. Narayana has developed a lot of techniques which has helped his research in Ultra High-Pressure Research, Raman and Brillouin Spectroscopy. In the process, he holds **three international patents**, a couple of these are on the verge of commercialization. He is coordinator for the two major Synchrotron projects for India, namely, The Indian beamline at the Photon Factory, KEK, Tsukuba, Japan and the PETRA III, Hamburg, Germany. These program permits researchers in India to perform various experiments using synchrotron, fully funded by Department of Science and Technology, Government of India. His Light Scattering Laboratory at JNCASR is interested in looking at Physical properties of Materials using Raman spectroscopy, Brillouin Spectroscopy, x-ray diffraction under high pressures and temperatures. The research problems encompass Condense Matter, Chemistry, and Biology. He has been awarded the **Material Research Society of India bronze medal** in 2007, **Sir C.V. Raman Young Scientist Award (Karnataka Government)** in 2008, **C.N.R. Rao Oration award** in 2009, **Sheikh Saqr RAK-CAM Senior Fellow** in 2016, **MRSI-ICSC Super Conductivity and Materials Science Senior Award** in 2017, **Mizushima-Raman Lecture Award** in 2018, **Platinum Jubilee Lecture Award of the Indian Science Congress** in 2020, for his research contributions. He is a **Fellow of National Academy of Science, India, Fellow of Royal Society of Chemistry and Fellow of Indian Academy of Sciences**. He has published over **175 research papers** in International Journals and **4 Chapters in Books** and has an **H-index of 35**. His publications includes **Nature, Proceedings of National Academy of Sciences (USA), Physical Review Letters, Angewandte Chemie, Chemistry and Biology, Physical Review B, Journal of Physical Chemistry Letters**, etc. This suggests the inter-disciplinary nature of his Research a must for every research in the current situation. He was a visiting Professor at **Cornell University, Ithaca, New York, USA** from 2001 to 2007 and at **Institute of Mineralogy and Physics of Dense Matter, University of Pierre and Marie Curie, Paris, France** from 2008 to 2016. He is also one of the editors of the International Journals: **Journal of Applied Physics (American Institute of Physics), High-Pressure Research (Taylor and Francis Publishers), The Journal of Biomaterials and Nanobiotechnology**. He is the member of the **Corporate Advisory Board of REVA University, Bangalore, Governing Body of The Government Science College, Bengaluru** and is the member of the **Board of Studies for Department of Chemistry, St. Joseph's College of Arts and Science, Department of Chemistry, Christ University, Department of Physics, M.S. Ramaiah Institute of Technology, Department of Physics, REVA University** and was a member of the **Board of Studies for Department of Nanotechnology at Calicut University**.

  
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Professor Chandrabhas Narayana, PhD

Director

Rajiv Gandhi Centre for Biotechnology

Professor Narayana specializes in Raman Spectroscopy. Though a trained condensed matter physicist, Prof. Narayan, developed a keen interest in Biology within a few years at JNCASR. His group is a pioneer in the use of Raman spectroscopy in a) drug-protein interaction, for drug screening applications and b) diagnostic applications. Many of his work in these areas are trendsetters in the inter-disciplinary research. Along with his interest in Biology, he also follows his interest in physics and chemistry. Overall, his group has been one of the well-known groups in the country for use of Raman spectroscopy in the areas of Physics, Chemistry, and Biology.

## Education

- PhD Physics 1995  
Indian Institute of Science (IISc), Bangalore
- MScEd Physics 1988  
Mysore University
- BScEd 1986  
Mysore University

## Academic Positions

- Director  
Rajiv Gandhi Centre for Biotechnology
- Dean, Research and Development  
Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR)
- Professor, Chemistry and Physics of Materials Unit  
Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR)
- Chairman  
Chemistry and Physics of Materials Unit (JNCASR)
- Dean  
Fellowships and Extensions Programmes (JNCASR)
- Associate Professor  
Chemistry and Physics of Materials Unit (JNCASR)

  
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- **Assistant Professor**  
Chemistry and Physics of Materials Unit (JNCASR)
- **Post-Doctoral Associate**  
Materials Science and Engineering Department, Cornell University, Ithaca, NY, USA
- **Visiting Scientist**  
Materials Science and Engineering Department, Cornell University, Ithaca, NY, USA
- **Visiting Professor**  
Institut de Minéralogie et de Physique des Milieux Condensés, CNRS, Université Pierre et Marie Curie, Paris
- **Visiting Professor**  
Institut de Minéralogie et de Physique des Milieux Condensés, CNRS, Université Pierre et Marie Curie, Paris

## Academic Honors

- Fellow, *Indian Academy of Sciences (FASc)*, 2018
- Fellow, *Royal Society of Chemistry (FRSC)*, 2017
- Fellow, *India National Academy of Sciences (FNASc)*, 2012

## Awards

- 2020 - Platinum Jubilee Lecture Award of the Indian Science Congress, Indian Science Congress
- 2018 - Mizushima-Raman Lectureship, Chemical Research Society of India
- 2017- MRSI-ICSC Super Conductivity and Material Science Senior Award, Materials Research Society of India
- 2016- Sheikh Saqr RAK-CAM Senior Fellow, Jawaharlal Nehru Centre for Advanced Scientific Research
- 2009- Prof. C.N.R. Rao Oration Award, Jawaharlal Nehru Centre for Advanced Scientific Research

  
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- 2008- Sir C.V. Raman Young Scientist Award, Government of  
Karnataka
- 2007- MRSI Medal, Material Research Society of India, Materials  
Research Society of India

## Patents

- Mirror adapted in microscope to perform SERS, a microscope and methods thereof -Inventors: Chandrabhas Narayana and G.V. Pavan Kumar -patented granted by: USPTO -US Patent Number 8,179,525 B2 in 2012.
- A high sensitivity assay for molecular typing of biological sample, probes and a kit thereof - Inventors: Ranga Udaykumar, Chandrabhas Narayana and N. Jayasuryan - patent granted by patent office of Republic of South Africa - Patent Number 2009/03128 in 2009, USPTO- US Patent Number 8,227,590 B2 in 2012, Indian Patent Number 295700 in 2018.
- Nanoparticle Composition and Process thereof - Inventor: Chandrabhas Narayana - PCT Application NO.: PCT/IN2008/000771.

## Memberships

- Member, *Royal Society of Chemistry (Member since 2014)*
- Member, *Society of Biological Chemists (India) (Life Member since 2012)*
- Member, *American Chemical Society (Member since 2005)*
- Member, *Material Research Society of India (Life Member since 1999)*

  
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# How to write good Research Proposals?

By

Prof. N Sundararajan (Retd.)

Nanyang Technological University, Singapore.

Email: ensundara@gmail.com

## Objectives:

While India is considered a knowledge power, the research output is very low, according to worldwide surveys. It is a welcome note that now there is increasing awareness and interest to take up research. Even though funding for research has been slowly increasing, many are not aware on how to write good proposals and be successful in getting the funding. This talk will try to address this area and give suggestions on how to write good research proposals. The aim is to put the researchers in the proper track when submitting their proposals for funding.

## Brief CV:

**Narasimhan Sundararajan** received the B. E in Electrical Engineering with First Class Honors from the University of Madras in 1966, M.Tech from the Indian Institute of Technology, Madras in 1968 and Ph.D. In Electrical Engineering from the University of Illinois, Urbana-Champaign in 1971.

From 1972 to 1991, he was working in the Indian Space Research Organization, Trivandrum, India starting as a Control System Designer to Director, Launch Vehicle Design Group contributing to the design and development of the Indian satellite launch vehicles SLV3, ASLV, PSLV and GSLV. He worked as the Project Engineer (Mission) for the first Indian Satellite Launch Vehicle project SLV3 team working directly under Dr. Kalam. He was also a NRC Research Associate at NASA - Ames in 1974 and a Senior NRC Research Associate at NASA Langley in 1981-86 under the National Academy of Sciences, USA program. From February 1991, he was working in the School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore, as a Professor and has retired from that position in July 2010. He is also an emeritus visiting professor at the Indian Institute of Space Science and Technology, Trivandrum, India. Presently, he is a senior research fellow in the School of Computer Science and Engineering, NTU, Singapore. He was also a "Prof. I.G.Sarma Memorial ARDB Professor (an endowed visiting professor) during Nov.2002 – Feb 2003, at the School of Computer Science and Automation, Indian Institute of Science, Bangalore, India.

His research interests are in the areas of aerospace control, machine learning, computational intelligence specifically in the area of neural networks, their applications and optimization and have more than 250 papers and five books in this area.

Dr. Sundararajan is a Fellow of IEEE, an Associate Fellow of AIAA and also a Fellow of the Institution of Engineers, (IES) Singapore. He was an Associate Editor for IEEE Trans. on Control Systems Technology, IFAC Journal on Control Engineering Practice (CEP), IEEE Robotics and Automation Magazine and for Control -Theory and Advanced Technology (C-TAT), Japan. He was also a member of the Board of Governors (BoG) for the IEEE Control System Society (CSS) for 2005. He was the General Chairman for the Sixth Intl. Conf. On Automation, Robotics, Control and Computer Vision - ICARCV2000 held in Singapore on Dec. 2000 and has contributed as a program committee member in a number of international conferences.

  
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**Dr. S. G. Sreekanteswara Swamy**

Former Executive Secretary

Karnataka State Council for Science and Technology

Indian Institute of Science, Bengaluru – 560 012.


Email: swamysgs@gmail.com

Mob: 09448515976



At Present: Consultant, Vision Group on Science and Technology,  
Department of Science and Technology, Government of Karnataka.

- Obtained PhD in 'Geo Environmental Study of Mining Engineering in Western Ghats Regions of Karnataka', from Bangalore University.
- Worked as a Project Scientist, in Karnataka Rajya Vijana Parishath, Bangalore, and as Executive Secretary and Director, Belgaum Science Centre, Belgaum.
- Took professional training from Indian Institute of Science, Bangalore, Space Application Centre, Ahmedabad and Institute for Social Economic Change, Bangalore and other organizations.
- Joined, Karnataka State Council for Science and Technology (KSCST), Bangalore as Fellow in 1992 and superannuated as the Executive Secretary of KSCST in February 2019.
- Written, edited, translated and Authored books
  - Halley's Comet
  - Renewable Energy Sources
  - Water Resources of Tumkur District,
  - *Grameena Jeevana Thantragnanagala Baleke* (on Rural Technologies)
  - *Kasavendare Kasu* (on Solid Waste Management)
  - Technical Records were edited on Engineering Student's Projects – 20 volumes
  - Vidhyarthi Vijnaniya Dinachari (Translated from English to Kannada)
- Joint Author for the following reports and submitted to Karnataka State Pollution Control Board, Government of Karnataka
  - Status Report on Municipal Solid Waste Management
  - Status Report on Biomedical Waste
  - Status Report on Plastic Recycling in Karnataka
- Written more than 50 articles in Kannada on Science and Technology for various journals and magazines. Delivered more than 50 talks on various topics in Science and Technology in radio, television and at various institutions.
- Involved in research and development projects and programmes of the Council in areas of Education, IPR issues, Waste Management and Water Quality Assessment etc.
- Published 8 Research Papers in technical journals of national repute.
- The Principal Investigator for the establishment of "Virtual Laboratory" concept in Government High Schools of backward Talukas in Karnataka sanctioned by the Department of Science and Technology, Government of Karnataka.
- The Principal Investigator of Engineering Student Project Programme of KSCST from 1997 to 2019.
- Encouraging and supporting educational institutions to carry out research activities and infrastructure development.

  
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