



# *Inspire Science Camp-2020*

January 27 - 31, 2020

Organized by

**Veer Bahadur Singh Purvanchal University**

**Jaunpur-222003, U.P.**



Sponsored by

**Department of Science and Technology**

**Government of India**

# **Souvenir**

**Prof. (Dr.) Raja Ram Yadav**

Patron, Vice-Chancellor

**Prof. B.B. Tiwari**

Chairman

**Dr. Manish Kumar Gupta**

Program Co-ordinator

# *Inspire Science Camp-2020*



## About the Program

**“Innovation in Science Pursuit for Inspire Research (INSPIRE)”** is one of the innovative programs supported by the Department of Science & Technology for attraction of talent in science. The basic objective of the INSPIRE is to communicate to the youth population of the country for the excitements of creative pursuit of science. This will fulfill the need of critical human resource pool for strengthening, and expanding the Science & Technology system with R&D base.

One of the components of “Scheme for Early Attraction of Talent for Science (SEATS)” is INSPIRE Internship program supported by the Department of Science and Technology, New Delhi. Approximately 50,000 students per annum of top 1% performers in class X board examinations pursuing science at the higher secondary level are being given an exposure to experience the joy of innovations by eminent scientists/professors during the Summer/Winter camps. These camps essentially nourish the curiosity of children in science; to help them thinking out of the box and attract the students at their early age (i.e. in XI standard) to enroll in science subjects.

About 200 students will be selected for these 5 days residential camp. The camp will be addressed by 10-12 eminent Scientists/Professors from premier institutions of India. The morning sessions will be devoted to interactions with the mentors who will share their experiences of scientific pursuits, motivation and how they stumbled upon questions of interests. The afternoon sessions will be dedicated to the hands-on experiments where students will perform simple guided experiments in Life Sciences, Physical Sciences, Chemical Sciences, Mathematical Sciences, Earth Sciences and Computer Science. In the evening sessions, students will be engaged in discussions based on the guided experiments they performed. Further, students will also participate in discussions on scientific reasoning, and identifying scientific solutions to global issues.

**Yogi Adityanath**



**CHIEF MINISTER  
UTTAR PRADESH**

No. G-89/CM-2-2020

**Lok Bhawan,  
Lucknow - 226001**

Date : 16 JAN 2020

### Message

I am delighted to know that Veer Bahadur Singh Purvanchal University, Jaunpur is organising 'Inspire Science Camp-2020' from 27<sup>th</sup> to 31<sup>st</sup> January, 2020.

Science is a system of knowledge that is concerned with the physical world and its phenomena. It entails unbiased observations and systematic experimentation. It is heartening to note that the event is being organised with the objective of generating eagerness among students for inventive pursuits and attract them to study Science at an early stage.

I hope that Inspire Science Camp-2020 will ignite the young minds.

My best wishes for the entire endeavour.

  
( Yogi Adityanath )





## About the University

**V**eer Bahadur Singh Purvanchal University adheres to the purpose for an institution that imparts higher education by adding values to human resources and produces wealth creators and leaders in all fields like Education, Entrepreneurship, Research, Sports, Medical, Politics, Administration, Judiciary, Social Reformer and creative pursuits to compete at national and international level. It strives to create knowledge, to open the minds of students and to enable students to take best advantage of their educational opportunities and adopt a rational way of living for catering to the local needs as well. The university offers different important courses notably Ph.D. programs, MCA, M.B.A., M.Sc. program in Physics, Chemistry, Mathematics, Applied Geology, Biotechnology (FIST Supported), Biochemistry, Microbiology, Environmental Science, Applied Psychology, M.A. program in Applied Psychology, Mass Communication, Mathematics and Integrated B.A.-LL.B., B.Com. (Hons.), B.Sc., B. Pharm. BCA and B.Tech in CSE, ME, IT, EE, ECE, EI supported by TEQIP-III. The University also offers Post-Doctoral Fellowship with its own resources. The University also offer M.Tech. programmes in Communication Engineering, Power System, Thermal Engineering, Computer Science & Engineering and Nano Science and Technology.

The University has central training and placement cell, N.S.S., Rovers Rangers, Sports council and other cultural and technical events for overall development of the students. To promote research in the area of Basics and Interdisciplinary sciences, the University has made several the collaboration with premier institute such IIT Kanpur, Allahabad University, IIT-Kharagpur, NPL-Delhi, BHU, IIIT & MNNIT, Allahabad, BBAU Lucknow, Biotech Park Lucknow, etc. The University has made Memorandum of Understanding (MoU) with King George Medical University Lucknow and many more are in pipeline with premier institute of nation. In last two years the university has made remarkable growth in academic social directions like more than 2000 students are placed in different reputed companies/organizations.





सत्यमेव जयते

प्रो. आशुतोष शर्मा  
Prof. Ashutosh Sharma



सचिव  
भारत सरकार  
विज्ञान और प्रौद्योगिकी मंत्रालय  
विज्ञान और प्रौद्योगिकी विभाग  
Secretary  
Government of India  
Ministry of Science and Technology  
Department of Science and Technology

16<sup>th</sup> January, 2020



### MESSAGE

I am glad to know that Veer Bahadur Singh Purvanchal University, Jaunpur, UP is organizing “Inspire Science Camp – 2020” Under Internship Scheme sponsored by Department of Science and Technology, Government of India during 27<sup>th</sup> – 31<sup>th</sup> January 2020.

The INSPIRE Internship camp is to reveal the joys of innovation to the talented youth of the nation to pursue study in science and career in Research and Development. I am sure this Camp will provide an opportunity on a vibrant and dynamic platform to all the participants to share their views in the poster presentation. The students will also get an opportunity to interact with the renowned scientist of the India. The Camp will nourish the curiosity of children in science and to help them thinking out of the box.

I appreciate the efforts of VBS Purvanchal University, Jaunpur and extend my warm greeting and felicitations to the participants, organizers and around success in all dimensions to “Inspire Science Camp – 2020”.

(Ashutosh Sharma)



## Chief Guest

### MESSAGE

It gives me an immense pleasure that Veer Bahadur Singh Purvanchal University, Jaunpur is organizing “**Inspire Science Camp - 2020**” during 27-31 January 2020.

It is a matter of great satisfaction that the University is doing worthy service to the nation by training young students by organizing such science camp.

The students will have an excellent opportunity to interact with the scientists and clarify the inquiry-based questions that come in the mind. I am confident **Inspire Science Camp - 2020** will provide a glimpse of current innovations in research. The “**Inspire Science Camp – 2020**” would provide opportunities to the young participants to express their innovation idea in the form of poster. I am sure the outcome of the camp will motivate and excite young minds about science.

I applaud the efforts of the Vice Chancellor and organizing committee and give my best wishes to the students participating in the camp.

I profoundly wish the grand success of camp.

**Shri Jayant Sahasrabudhe**

Vijnana Bharti, New Delhi

**Prof. (Dr.) Krishna Misra**

Ph.D., FNASc., FBRSI  
Senior Scientist NASI



Indian Institute of  
Information Technology,  
Allahabad, UP , India



## Message

It is a matter of great pleasure that Veer Bahadur Singh Purvanchal University, Jaunpur is organizing a five-day Innovation in Science Pursuit for Inspired Research (INSPIRE) Internship Camp from January 27-31, 2020 under the aegis of Department of Science & Technology (DST), Government of India. The basic objective of INSPIRE is to communicate to the youth of the country the excitements of science, attract talent to the study of science at an early age and thus build the critical human resource pool for strengthening the Science & Technology system and R&D base. A striking feature of the program is that it does not believe in conducting competitive exams for identification of talent at any level. It believes in and relies on the efficacy of the existing educational structure for identification of talent. I am sure that the invited eminent speakers and mentors will certainly invoke enthusiasm in the young minds. The hands-on training where students will perform simple guided experiments will arise curiosity in their minds to take up Science as a career. I am confident that organizing such a camp will certainly benefit the students of nearby schools.

I congratulate the Vice-Chancellor, Prof. Raja Ram Yadav and the organizer of the program, Dr. Manish Kumar Gupta for their great effort. I wish them success and convey my blessings to all participants.

*Krishna Misra*

*Prof. (Dr.) Krishna Misra*





प्रो. (डॉ.) राजाराम यादव  
कुलपति  
Prof. (Dr.) Raja Ram Yadav  
Vice-Chancellor



वीर बहादुर सिंह पूर्वाञ्चल विश्वविद्यालय  
जौनपुर - 222003 (उ.प्र.)

Veer Bahadur Singh Purvanchal University

Jaunpur - 222003 (U.P.)

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## Message

Greeting to participants

I am glad to know that Veer Bahadur Singh Purvanchal University, Jaunpur is organizing DST “**Inspire Science Camp - 2020**” during January 27-31, 2020 supported by DST, Government of India.

I am hopeful that these five days residential camp will provide a technical and unique platform to young brains participating from various schools of the Purvanchal regions & beyond to interact with top scientists from renowned institutes of India. The young brains will be benefitted by the scientific interaction with the mentors sharing their knowledge and experiences in Physical, Chemical, Biological Sciences, Earth Sciences and Mathematical Sciences. The students will also get exposure of visiting various laboratories of the University and learn experiments performed in the laboratories.

I congratulate the organizers, for their effort and convey my best wishes for the grand success of the “**Inspire Science Camp-2020**”. I extend a warm welcome to all the experts and participants.

Prof. (Dr.) Raja Ram Yadav  
Vice-Chancellor

कुलसचिव  
Registrar



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वीर बहादुर सिंह पूर्वाञ्चल विश्वविद्यालय, जौनपुर (उ०प्र०)

Veer Bahadur Singh Purvanchal University, Jaunpur (U.P.)

Pin - 222003

Ref. : 2472/P.U./R.O./2020

Date : 22.01.2020



### Message

It is a matter of great pleasure for me that Veer Bahadur Singh Purvanchal University, Jaunpur, U.P. is organizing five days residential "**Inspire Science Camp-2020**" during January 27-31, 2020.

Presence of so many experts shall surely enthuse the young participants. I am sure that the in-depth discussion and interactions in the "**Inspire Science Camp-2020**" will prove beneficial to all participants. During these five days residential camp the students will have good time to interact with renowned scientist and opportunity to visit the laboratories of various departments of the campus. They will also learn some exciting hands-on-experiment during the laboratories visit.

I welcome all the participants in the camp. I wish the "**Inspire Science Camp-2020**" a great success and the participants a memorable experience during their stay at campus. I congratulate the organizing committee for their efforts to make this event successful.

  
22/01/20

(Sujit Kumar Jaiswal)

Registrar

## **Veer Bahadur Singh Purvanchal University, Jaunpur-222003, UP, India**

**Department of Electronics Engineering, Faculty of Engineering and Technology, UNSIET**

**Prof. B.B. Tiwari**

M.Sc., M.Tech., Ph.D.



Email : [bbtwari62@gmail.com](mailto:bbtwari62@gmail.com)

M.No. : +91 - 9161368540



### **Message**

I am immensely delighted to share that Veer Bahadur Singh Purvanchal University, Jaunpur will be organizing “Inspire Science Camp -2020” during January 27-31, 2020 and a souvenir is being brought to commemorate this occasion.

This camp will provide a common platform for students from various schools towards discussion and exchange of their innovative thoughts. This will also help the participants to interact with mentors and nourish their curiosity in science. The camp will help them thinking out of the box. The camp will be addressed by dozens of eminent Scientists/Professors from premier institutions of India. I hope that the deliberations of this camp will prove fruitful in stimulating students to take up newer challenges of learning.

I welcome you all in the “Inspire Science Camp-2020” sponsored by DST, Govt. of India and wish for the grand success of the Camp.



**Prof. B.B. Tiwari**

Chairman - Inspire Science Camp-2020

Coordinator- TEQIP-III



## Veer Bahadur Singh Purvanchal University, Jaunpur-222003, UP, India

### Dr. Manish Kumar Gupta

M.Sc., M.Tech., Ph.D.  
Associate Professor  
Department of Biotechnology  
Faculty of Science



Email : manish.kumar.gupta@gmail.com

M.No. : +91 - 9307267812



## Message

Dear Participants,

On behalf of the organizing committee and on our personal behalf, It is a matter of great honor to welcome our Chief Guest, Guest of Honor, Invited speakers cum mentors, the advisory committee members and all the participants in DST “**Inspire Science Camp -2020**” which is being organized by Veer Bahadur Singh Purvanchal University, Jaunpur, Uttar Pradesh for the first time during 27th – 31st January, 2020.

The camp will provide a unique forum for exchange of ideas and opportunities for the participants to interact with renowned scientist of India. This camp will provide us an opportunity to interact with young students participating from various schools of the state. At the same time, the participants will also have opportunities to share their knowledge and strength with the renowned scientists of India. I am sure that we will see many innovative idea taking birth in the young minds in the poster presentation.

Total six hundred twenty-eight students from forty-eight schools for UP have applied for the camp and only two hundred fifteen top merit holder students were screened.

The organizing committee and volunteers are working tirelessly to ensure this would be a fruitful camp. We are thankful to the Department of Science and Technology, Govt of India for their financial assistance without which it is difficult to hold such science camp. We are also Acknowledge our University administration who have come forward for their support to make this event a grand success. I am thankful all the Principals and Teachers of schools who have encourage their students to participate in the “**Inspire Science Camp -2020**”

(Dr. Manish Kumar Gupta)  
Program Coordinator  
(Inspire Science Camp -2020)



**Chief Guest**

**Shree Jayant Sahasrabudhe**

Vijnana Bharti, New Delhi

**Shri Jayant Sahasrabudhe** Ji born and brought up in Mumbai. He has completed his B.Sc. from Mumbai University. He was academically acclaimed student and had interest in nuclear physics. He worked in Bhabha Atomic Research Centre as scientist for short time. The reason to leave the job was his connect with Rashtriya Swayamsevak Sangh. Because of RSS philosophy and ideology, he considered his services are more important for social cause than the other. He left his home as full time Pracharak and served from Shakhapramukh to Prantpracharak of Goa before he has been given the responsibility of National Organizing Secretary of Vijnana Bharati, New Delhi. Vijnana Bharati or VIBHA, previously known as **Swadeshi Science Movement** is a Non-profit organization, working for science popularization & implementation of modern technology & ancient sciences in India. He is great philosopher, speaker and learned personality and asset of Vijnana Bharati.



**Guest of Honor  
&  
Speaker**

**Prof. (Dr.) Krishna Misra**

Ph.D., FNASc, FBRSI  
Senior Scientist NASI  
&  
IIIT Allahabad

**Dr. Krishna Misra** is currently senior scientist in NASI and Honorary professor at IIIT Allahabad. She served the University of Allahabad since 1965 as Post-doctoral fellow, Lecturer, Reader, Professor, Head of Deptt. of Biochemistry; also as Coordinator for Center for Biotechnology. She completed her B.Sc. and M.Sc. from Agra University. Her Ph.D. is awarded in 1964 under the supervision of Prof. T.R. Seshadri, Padma Bhushan and FRS from Delhi University. At present, she is honorary professor, IIIT-Allahabad. She also had been Co-ordinator of Indo-Russian Center for biotechnology, IIIT-Allahabad and honorary Professor at CBMR, SGPGI campus, Lucknow, India. She also had been General Secretary of NASI. She has been awarded NASI honorary scientist Fellowship. She has been member of task force, DBT, New Delhi. At present, she is chairperson of STEMM program of DST, New Delhi. She has supervised 54 Ph.D. theses, and has published more than 250 papers in reputed journals. Prof. Misra visited Japan, U.K. and USA to deliver invited talks. She was awarded UNESCO fellowship to work at Tokyo Institute of Technology, Tokyo and British Council grant to work in Cambridge, UK. She has completed many research projects funded by UGC, CSIR, UP State CSIR, ICMR, DST and DBT. She holds some important positions like President, Bio-informatics Welfare Society of India; Society for Biotechnology Research and Rural development and Chairperson, Chemistry Advisory Committee of UPCST and some others.



**Patron**

**Prof. (Dr.) Raja Ram Yadav**

Honorable Vice-Chancellor,  
VBS Purvanchal University  
Jaunpur

**Prof. (Dr.) Raja Ram Yadav** completed his B.Sc., M.Sc. and Ph.D. from University of Allahabad. He served over 36 years in teaching and research. He contributed as the Professor of Physics, Department of Physics (UGC Centre of Advanced Studies) University of Allahabad, Prayagraj, U.P. He also served the country as a Geophysicist (wells) in ONGC during 1983 to 1988. He devoted his life towards the society as a whole-time social worker during 1988 to 1992. He has published more than 140 research papers in reputed journals. Prof. Yadav supervised 16 Ph.D. theses. Prof. Yadav completed several research projects of costing around Rs. 5 crores funded by DST, DRDO, UGC etc. He has delivered more than 110 invited talks on Ultrasonics, Nanoscience and Technology. Dr. Yadav is a recipient of numerous prestigious awards notably INSA- Teacher Award-2012 by Indian National Science Academy, New Delhi; Prof. S. Bhagavantam Award, 2017-2018 by Acoustical Society of India, New Delhi; M.S. Narayanan Memorial Lecture Award-2011; Dr. M. Pancholi Award; Dr. S. Parthasarathi Award-2012; Swadesi Vigyan Puruskaar-2002; Prayag Gaurav Samman (2010) for outstanding contribution in the field of education; Poorva Samman-2019 by Poorvapost, Lucknow and some others. He has been honoured by Vishwa Ayurved Parishad (2009) for delivering a popular lecture as a Chief Guest on Gold Nanoparticles in Ayurvedic Sciences. He has visited Canada, USA, Germany, Japan, Sweden, Italy, France and Spain etc for academic purposes. Apart from a renowned scientist, social worker and distinguished popular Professor, he is a great classical singer. He has performed vocal-classical Indian music in many public programmes at different places such as Dehradun, Nazira (Assam), Delhi, Jaunpur, Jhansi and Hamirpur etc.



**Speaker**

**Prof. Daya Shankar Pandey**

Ph.D., FNASc, FIASc, FIAPSc.  
Department of Chemistry  
BHU, Varanasi

**Prof. Pandey** did his B.Sc. and M.Sc. from Avadh University, Faizabad, U.P. He received his Ph.D. from IIT Kanpur in 1989. His area of research is Coordination and Organo-metallic Chemistry. He has published more than 141 research articles. He received some prestigious awards/medals like Professor Priyadarshan Ray Memorial Award (2016), American Chemical Society Membership Award (2015), Bronze Medal, Chemical Research Society of India (2005), Young Scientist Award and some others. He is elected fellow of some research academy like International academy of Physical Sciences in 2017, Indian Academy of Sciences in 2016 and National Academy of Sciences India in 2009. He has been member of various committees at National Level such as DST FIST Committee in Chemical Sciences, SERB Fast Track Young Scientist Committee, SAP Interface Committee, UGC.





### Speaker

#### **Prof. P.P. Mathur**

Ph.D., FNASc., FAMS, FISC  
Professor & Head  
Department of Biochemistry  
&  
Molecular Biology and  
Dean, School of Life Sciences,  
Pondicherry University,  
Puducherry

**Prof. Mathur**, former Vice-Chancellor, KIIT University, Bhubaneswar is presently a Professor & Head of the Department of Biochemistry & Molecular Biology as well as Dean, School of Life Sciences at Pondicherry University. He is elected Fellow of some reputed academy like National Academy of Medical Sciences (India), NASI and Indian Science Congress Association. He served as General Secretary (Scientific Activities) of the Indian Science Congress Association, Kolkata (2016-19). Currently, he is Vice-President, Asian Association of Andrology (China). He is founder head, Center of Excellence in Bioinformatics at Pondicherry University. He received his B.Sc., M.Sc. and Ph.D. degrees from Banaras Hindu University, Varanasi. He has more than 43 years of research and teaching experience. He has published over 180 scientific papers/ reviews in various high impact journals and books. He is recipient of many prestigious awards such as Asutosh Mukherjee Memorial Award, Young Scientist Award, Lifetime Achievement Award, Rockefeller Foundation Special Postdoctoral Fellowship Award, Rockefeller Foundation Biotechnology Career Award, INSA-German Academy (DFG) Exchange Programme, Dr. P.N. Shah Memorial US Vitamin (India) Oration Award, ICMR International Fellowship Award for Senior Indian Biomedical Scientist, Subhash Mukherjee Memorial Infar India Oration Award, Dr. K.K. Iya Memorial Oration (NDRI), Vidyasagar Award (Indian Institute of Oriental Heritage, Kolkata) and Re:think India Visionary Eduleader of India Award. He has been Visiting Professor/ Scientist at The Population Council, Rockefeller University, New York, Cleveland Clinic, USA, Westfalische-Wilhelms University, Muenster, Germany and Hamad Medical Centre, Qatar. He has been Chairman/ Member/ Member-coordinator of NAAC peer teams to around 60 institutions and has been Chairman/ Member of many national/ International academic and scientific committees such as Indian Science Congress Association.



**Speaker**

**Prof. Neeraj Khare**

Department of Physics  
IIT Delhi

**Prof. Neeraj Khare** is currently Professor in Physics Department, IIT Delhi. He received his Ph.D. (Physics) from Banaras Hindu University, Varanasi in 1986 and MSc (Physics) from Allahabad University, Allahabad. After his Ph.D., he visited Department of Chemical Physics Application, Polytechnic of Milan, Italy as ICTP fellow (1988). Subsequently, he joined National Physical Laboratory, New Delhi in Superconductivity Group as Scientist in 1988. He joined IIT Delhi in 2005. He had various visiting positions at Department of Materials Science & Metallurgy, University of Cambridge, UK, IBM, T. J. Watson Research Center, Yorktown Heights, NY, USA, Department of Physics and Applied Physics, University of Strathclyde, Glasgow, UK, Department of Inorganic Chemistry, Novosibirsk, Russia, Pohang University, South Korea and National University of Singapore. Prof. Khare is internationally known for his research contributions in the area of Superconductivity and nanostructure materials. He has published over 200 research papers in refereed journals. He was awarded five patents and written 3 edited books. He is recipient of some awards/prizes notably MRSI-ICSC Award, Platinum Jubilee lecture award; Rajib Goyal prize for young Scientist in the area of Physics, MRSI Medal award, Council of Scientific and Industrial Research Young Scientist award and Indian Science Congress Association Young Scientist award. Prof. Khare is a fellow of some reputed academies like Institute of Physics (IOP), UK; NASI and Asia Pacific Academy of Materials. He is a member of MRSI, editorial board of Superconductor Science and Technology (2005-2008) and editorial board of Current Physics application since 2017.



**Speaker**

**Shri Sushil Kumar Dwivedi**

State Coordinator,  
Vidyarthi Vigyan Manthan,  
Lucknow

**Shri Sushil Kumar** did his M.Sc. in Biotechnology. Presently, he is working at Kendriya Vidyalaya, Lucknow as PGT in Biology. He is also state coordinator, Vidyarthi Vigyan Manthan, Uttar Pradesh. He received some awards like National Best Science Teacher Award-2017 by National Academy of Science for outstanding efforts in Science communication, Paryavaran Ratna Award- 2018 by Vigyan Bharti (VIBHA) and Excellence Award for popularization of Science at grass root level in 2019. He has delivered about 250 popular science lectures at various educational institutions, invited talks on Science and Environment in Prasar Bharti (Doordarshan - Uttar Pradesh and All India Radio, Lucknow) for live as well as recorded show on various burning issues of Science and Environment.



**Speaker**

**Prof. Satya Deo Tripathi**

Ph.D., FNASc.  
Senior Scientist,  
HRI Allahabad  
Formerly Vice-Chancellor  
APS University, Rewa  
and  
RD University, Jabalpur

**Professor S.D. Tripathi**, former Vice-Chancellor of Awadhesh Pratap Singh University, Rewa and Rani Durgawati University, Jabalpur, is currently a NASI Senior Scientist and Visiting Professor at Harish-Chandra Research Institute Allahabad, Prayagraj. He is also the General Secretary, NASI and Indian Mathematical Society. He got his B.Sc. and M.Sc. degrees from the University of Allahabad and Ph.D. in Mathematics from the University of Arkansas, USA in 1973 as a Fulbright Scholar. He served at Ewing Christian College, Allahabad, University of Allahabad; University of Jammu; University of Delhi and Rani Durgawati University, Jabalpur in various capacity from lecturer to professor. He was elected Fellow of the National Academy of Sciences (FNASc), India in 1991 and President of the Indian Mathematical Society in 2000. He received “Distinguished Service Award-2006” by the Mathematical Association of India and Indian Science Congress Association Gold Medal by the Prime Minister of India in 2010. He has visited USA, Canada, Germany, France, New Zealand as Visiting Professors in prestigious universities. He has given several invited talks, published more than 60 research papers in reputed journals of Mathematics and written a book on *Algebraic Topology*. He has supervised 16 Ph.D. and D.Sc. scholars. He has been a member of the prestigious boards / societies in India and abroad.



**Speaker**

**Dr. Manmohan Singh Marwaha**

Ph.D.  
Principal (Retired)  
Sri Guru Gobind Singh College,  
Panjab University, Chandigarh

**Dr. M.S. Marwaha** has a big teaching experience of 39 Years. He has established an Innovative experiments laboratory named ANVESHKA (Chandigarh) at S.G.G.S. College, Chandigarh in 2005. He conducted more than 48 teachers' training workshops based on the use of low-cost classroom demonstrations to make the teaching learning easy and interesting. He has organised more than 200 workshops on Innovative Physics Experiments for teachers and students in a number of institutes in Punjab, Haryana, Himachal Pradesh, Bengal, Sikkim, Uttar Pradesh and New Delhi etc. He has been Secretary (2006-2009), Executive member (2009-15) and President, Indian Association of Physics Teachers RC-3 (JAN2016- Dec 2019). He has been Academic committee member for INTERNATIONAL PHYSICS OLYMPIAD (2015) and Asian PHYSICS OLYMPIAD (2012). He has conducted 11 teacher training workshops at 11 districts of Madhya Pradesh organised by an NGO (ASTRONOMICA) sponsored by DST.





**Speaker**

**Prof. B.P. Singh**

Department of Geology  
Banaras Hindu University  
Varanasi

**Prof. Singh** received his B.Sc., M.Sc. and Ph.D. degrees from the Deptt. of Geology, Banaras Hindu University, Varanasi. His area of research is Sedimentology and Paleopedology. His career started from University of Jammu in 1986 as a lecturer and elevated as a reader in 2001. After that he joined in 2005 as a Professor at BHU. He has supervised 13 Ph.D. theses, 9 M.Phil dissertations and several M. Sc. dissertations. He has published around 90 research papers in refereed journals. He is mainly contributing on the Paleogene sequences of the Himalayan foreland basin and several other coeval basins of India, for the last 33 years. His current focus is to establish the paleoclimates of the Paleogene times on the Indian subcontinent. He has availed two fellowships, SERC Visiting Fellowship of the DST, New Delhi in 2000-2001 and INSA-KOSEF Scientific Exchange Fellowship to work in Seoul National University in South Korea during 2004-2005. He is recipient of Dr. S. M. Naqvi Gold Medal -2017 of the Geological Society of India. He has been Associate Editor, Journal of Geology and Mining Research, Academic Press-2010-2012. Currently, he is a Member of Editorial Board Journal of Indian Association of Sedimentologists and Global Journal of Earth Science and Engineering. He has successfully organised 33rd Convention of the Indian Association of Sedimentologists in November 2016. He was Coordinator of Petroleum Geoscience between May 2014 and July 2014.



**Speaker**

**Dr. Yashveer Singh**

Associate Professor,  
Department of Chemistry,  
Associate Faculty,  
Centre for Biomedical Engg.  
IIT-Ropar

**Dr. Yashveer Singh** is an Associate Professor in the Department of Chemistry, IIT Ropar. He also serves as an associate faculty at the Center for Biomedical Engineering (CBME) at the institute. He received his Ph.D. degree from the University of Allahabad. He has post doctoral research experience at IISc., Bangalore; Joseph Fourier University, France and Rutgers University, USA. Prior to joining IIT Ropar, he was an Assistant Research Professor at the Department of Pharmaceutics, Ernest Mario School of Pharmacy, Rutgers University (USA). His research interests are in broad areas of polymeric biomaterials, drug delivery, and tissue engineering. He has published 36 papers/reviews in peer-reviewed journals. He was awarded 4 patents and authored 4 book chapters. He is an assistant editor of the sixth edition of Martins Physical Pharmacy and Pharmaceutical Sciences, a major textbook for pharmacy schools worldwide.



**Speaker**

**Dr. Alok Kumar Gupta**

Regional Director  
National Institute of  
Open Schooling,  
Kochi (Kerala)

**Dr. Gupta** is serving as Regional Director of NIOS, Ministry of HRD, Govt. of India Regional Centre, Kochi (Kerala). He did excellent services towards the education through Open and Distance Learning Mode (ODL). He received his B.Sc., M.Sc. & Ph.D. degrees from University of Allahabad. He has published more than 50 research papers and articles in the repute of international/national journals in the field of Ultrasonics/Materials Science/Nano-Science. He has supervised 15 M.Phil. dissertations. He is Executive Council Member of ASI, USI & IAPT of New Delhi. He is a recipient of “Young Scientist Award” by “Acoustical Society of America” (India Chapter) and “Special Award” by Cabinet Minister, Government of India. He is a Lesson Writer & Editor of Physics, Science and Technology & Mathematics subjects in NIOS curriculum. He has worked as National Expert and Jury Member in various program as INPIRE, India International Science Festival (IISF) for DST, Ministry of Science and Technology, New Delhi, NCERT, New Delhi & Vigyan Prasar, NOIDA. He delivered many lectures in the field of Physics, Science and Technology and other academic programmes on Gyan Darshan (An Educational Channel of Government of India) and Web Radio worldwide through i-radio in public and learners' interest. He is popular for his simplicity and practical approach to vital issues of academics and administration.



**Speaker**

**Prof. Maithili Saran**

Ph.D. FNASc, FINSA, FINAE  
IIT Delhi

**Prof. Maithili Saran** did his B.Sc. (1972) and M.Sc. (1974) from Rajasthan University and Ph.D. from IIT Delhi in 1982. He was Post-Doctoral Fellow at Johns Hopkins University, Baltimore USA during 1986-87. He joined IIT Delhi as a capacity of Assistant Professor in 1990 and served in the capacity of Professor, Head Centre for Atmospheric Sciences (2004-2007), Chief Vigilance Officer (2015-2017) and now Emeritus Professor. He is recipient of Prestigious Shanti Swaroop Bhatnagar awardee in Mathematical Sciences (1992), Meghnad Saha award in Theoretical Sciences (2004), Indira Gandhi Priyadarishini Award (1995) and INSA Young Scientist award (1984). He is recipient of JC Bose Fellowship (2015). He is elected fellow of Indian National Science Academy (1995), Elected Fellow, National Academy of Sciences, India (1999) and Indian National Academy of Engineering (2005). He has guided 16 Ph.D. scholars. For his research work, He has visited many countries such as USA, Japan, France. He is having an international collaboration with prestigious institute such as University of Technology, Compiegne, France; Johns Hopkins University, Baltimore; University of Alabama, Huntsville; NCSU, Raleigh and University of California, Livermore, USA; NIRE, Tsukuba, Japan and University of Evry (Paris) France.



**Speaker**

**Dr. Devesh K. Sinha**

Department of Geology,  
University of Delhi

**Dr. Devesh K. Sinha** is Professor of Oceanography and Marine Geology in the Department of Geology, Centre of Advanced Studies at University of Delhi. He obtained his graduate, post-graduate and doctoral degrees from Banaras Hindu University, Varanasi. He did post-doctoral studies from GEOMAR centre for Marine Geoscience of Keil, Germany. He has served during 1991-2007 a lecturer, senior lecturer, reader and associate professor in the Department of Geology, Banaras Hindu University, Varanasi. His research interest includes, Referment of Cenozoic Geological Time Scale; Paleoceangraphy of the last 6 million years; Understanding teleconnection in Earth-Ocean-Climate system on geological time scale; Effect of plate tectonics-closing and opening ocean gate ways and their effect on ocean circulation and climate. He has significantly contributed all the above aspects by publishing paper in national and international journals. Prof. Sinha has been member of several important and academic expert committees including CSIR, ISRO, DST, MOES, UGC. He supervised 4 Ph.D. theses. He has been frequent speaker at the DST inspire programmes.



**Speaker**

**Dr. Ramasubbu  
Sankararamakrishnan**

Head, Department of  
Biological Sciences and  
Bioengineering, IIT Kanpur

**Dr. R. Sankararamakrishnan** obtained his Ph.D. from Molecular Biophysics Unit at Indian Institute of Science, Bangalore. Dr. Sankar received his post-doctoral training at the University of Oxford, U.K and at the University of Illinois, Urbana-Champaign in U.S.A. He then joined as a faculty in Mount Sinai School of Medicine, New York where he was Assistant Professor (Research) before he joined the Department of Biological Sciences and Bioengineering (BSBE) at IIT-Kanpur in April 2002. At BSBE, he has established an active computational biology group. Dr. Sankar's research work involves using computational techniques to answer some of the basic biology questions. His group has been investigating the interactions between the proteins that are targets for anti-cancer drugs. His lab is also working on the pharmaceutically important membrane proteins in explicit bilayers to find out the mechanism of their function. His group has contributed to the understanding of certain unusual non-covalent interactions in biomolecular structures. Dr. Sankar was the first occupant of Joy Gill Chair at IIT-Kanpur. Later, he was awarded USV Chair Professorship. Dr. Sankar received National Bioscience Award for Career Development from the Department of Biotechnology (DBT), Government of India in 2008. Dr. Sankar is currently the Head of BSBE department and Pradeep Sindhu Chair Professor at IIT-Kanpur.

## Theme for Poster Presentation on Innovative Idea

- Second Green Revolution
- Renewable and Non-Renewable energy
- Clean energy
- Natural resources utilization for sustainability
- Make in India
- Swachh Bharat & Ganga Rejuvenation
- Energy conservation efficiency and sustainability
- Harnessing Modern Technology for second green revolution
- Dairy and Livestock Sector
- Solid & Liquid Waste Management
- Recycling & processing of waste to conserve resources



## Schedule of Event

DAY - I : January 27, 2020

<b>08:00 - 09:45</b>	<b>REGISTRATION</b> (Mahanth Avaidyanath Sangosthi Bhawan)
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### SESSION-I : Inauguration

(Mahanth Avaidyanath Sangosthi Bhawan)

<b>10:00 - 11:15</b>	<p><b>Chief Guest :</b> Shree Jayant Sahasrabudhe, Vijnana Bharti, New Delhi</p> <p><b>Guest of Honour :</b> Prof. (Dr.) Krishna Misra, IIIT Allahabad</p> <p><b>Patron :</b> Prof. (Dr.) Raja Ram Yadav, Honorable, Vice-Chancellor</p>
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<b>11:15 - 11:30</b>	TEA
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### SESSION-II : Technical

<b>11:30 - 12:15</b>	<p><b>SPEAKER</b>     <b>Prof. (Dr.) Krishna Misra</b></p> <p><b>Title of Talk :</b>   Why Study Science? Challenges and Fascinations</p>
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<b>12:15 - 13:00</b>	<p><b>SPEAKER</b>     <b>Prof Neeraj Khare</b></p> <p><b>Title of Talk :</b>   Scientific Attitude &amp; Superconductivity</p>
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<b>13:00 - 13:45</b>	<p><b>SPEAKER</b>     <b>Prof. P.P. Mathur</b></p> <p><b>Title of Talk :</b>   Advances in Life Sciences from Biochemistry to Molecular Biology and Bioinformatics.</p>
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<b>13:45 - 14:45</b>	<b>Group Photo/ Lunch</b>
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<b>14:45 - 17:30</b>	<ul style="list-style-type: none"> <li>● Laboratory Innovative Experiments/Visit/Demonstration.</li> <li>● Discussions based on the guided experiments, scientific reasoning and identifying scientific solutions to global issues.</li> </ul>
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January 28 - 31, 2020

Venue : Aryabhata Auditorium

	January 28, 2020	January 29, 2020	January 30, 2020	January 31, 2020
10:00 - 11:00	<b>Prof. Satya Deo</b> (Mathematical Science)  <b>Title of Talk :</b> Mathematics of Ancient India	<b>Prof. Manmohan Singh Marwaha</b> (Physical Sciences)  <b>Title of Talk :</b> Joy of Learning through Experiments	<b>Prof. Devesh Sinha</b> (Earth Sciences)  <b>Title of Talk :</b> Ocean-Climate Connection, Climate Change through Geological Past : Lessons for future	<b>Prof. R. Sankararamakrishnan</b> (Life Sciences)  <b>Title of Talk :</b> Education and Research in Modern Biology in 21 <sup>st</sup> Century : Promises and Challenges
11:00 - 12:00	<b>Prof. Manmohan Singh Marwaha</b> (Physical Science)  <b>Title of Talk :</b> Joy of Learning through Experiments	<b>Shri. Sushil Kumar Dwivedi</b> (Life Sciences)  <b>Title of Talk :</b> - Bionics-Learning Science from Nature - Climate change Mitigation and Adaptation	<b>Dr. Yashveer Singh</b> (Chemistry)  <b>Title of Talk :</b> A story of Drug Development	<b>Prof. Maithili Saran</b> (Applied Mathematics)  <b>Title of Talk :</b> Mathematical Applications to the Problems of Societal Relevance
12:00 - 13:00	<b>Dr. Alok Kumar Gupta</b> (Physical Science)  <b>Title of Talk :</b> Paradigm Shift in Science and Technology : New India	<b>Prof. B.P. Singh</b> (Earth Sciences)  <b>Title of Talk :</b> Geology : Present is the key to the Past	<b>Dr. Yashveer Singh</b> (Chemistry)  <b>Title of Talk :</b> Role of Biomolecules in our daily lives	<b>Prof. Daya Shankar Pandey</b> (Chemistry)  <b>Title of Talk :</b> Metal Toxicity : A case study on metal poisoning
	<b>13:00 - 14:00 LUNCH BREAK</b>			
14:00 - 17:30	<ul style="list-style-type: none"> <li>Laboratory Innovative Experiments / Visit / Demonstration.</li> <li>Discussions based on the guided experiments, scientific reasoning and identifying scientific solutions to global issues.</li> </ul>	<ul style="list-style-type: none"> <li>Laboratory Innovative Experiments / Visit / Demonstration.</li> <li>Discussions based on the guided experiments, scientific reasoning and identifying scientific solutions to global issues.</li> </ul>	<ul style="list-style-type: none"> <li>Laboratory Innovative Experiments / Visit / Demonstration.</li> <li>Discussions based on the guided experiments, scientific reasoning and identifying scientific solutions to global issues.</li> </ul>	Mushroom Training and Research Centre Visit / Feed Back Valedictory Session / Certificate Distribution



## List of Schools Participating in Inspire Science Camp -2020

S.No.	Name of School	Place
1-	Abhay Raj National Senior Secondary	Molanaapur, Jaunpur
2-	Adarsh Janta Balika Inter College	Fattupatti, Tanda, Ambedkar Nagar
3-	Adarsh Janta Inter College	Fattupatti, Tanda, Ambedkar Nagar
4-	Adarsh Sitaram Inter College	Durauttam, Jamalapur, Jaunpur
5-	Aditya Birla Intermediate College	Renukoot, Sonbhadra
6-	B.N.B. Inter College	Mariahu, Jaunpur
7-	B.R.P. Inter College	Jaunpur
8-	Bayalasi Inter College	Jalalpur, Jaunpur
9-	Brajesh Inter College	Gulalapur, Jaunpur
10-	Dayawanti Punj Model School	Sitamarhi, Bhadohi
11-	Dr. Bhagvan Das Inter College	Hindi Baghaila, Jaunpur
12-	Dr. Rizvi Learners Academy	Jaunpur
13-	Furqania Higher Secondary School	Shahi Talab, Khetasarai, Jaunpur
14-	Ganesh Shankar Vidyarthi Smarak Inter College	Maharajganj
15-	G.D. Global School	Kartalpur Bypass, Azamgarh
16-	Gram Vikas Inter College	Khuthan, Jaunpur
17-	H.R. Inter College	Khalilabad, Sant Kabir Nagar
18-	Indra Public Senior Secondary School	Mominpur, Karanjakala, Jaunpur
19-	Janhit Inter College	Molanaapur, Jaunpur
20-	Jay Kisan Inter College	Sarai Khwaja, Jaunpur
21-	M.G. Inter College, Churavanpur	Churavanpur, Buxa, Jaunpur
22-	M.I. Purvanchal Public Inter College	Bharaura, Malhani, Jaunpur
23-	M.P. Birla Shiksha Bhawan & Inter College	Chhatnag, Jhusi, Prayagraj
24-	Maa Durga Ji Sr. Sec. Vidyalaya	Siddiquepur, Jaunpur
25-	Mohd. Hasan Inter College	Jaunpur
26-	Murali Manohar Inter College	Jamalapur, Jaunpur
27-	Nehru Balodyan Inter College	Kanhaipur, Wazidpur, Jaunpur
28-	Pt. Deen Dayal Inter College	Maharajganj
29-	Public Inter College	Kerakat, Jaunpur
30-	R.S. Convent Inter College	Kakar Gahana, Jaunpur





31- Raj Convent Inter College	Balwaghat, Jaunpur
32- Ram Charitra Yadav Inter College	Palhamau Kala, Jaunpur
33- Raza D.M. (Shia) Inter College	Jaunpur
34- Feku Ram Yadav Inter College	Hamzapur, Jaunpur
35- Sahkari Inter College	Mihrawan, Jaunpur
36- Sant Kabir Inter College	Chachaipar, Makhmelpur, Mau
37- Sarvodaya Inter College	Khudauli, Jaunpur
38- Shahganj Public Inter College	Shahganj, Jaunpur
39- Shri Gandhi Smarak Inter College	Samodhpur, Jaunpur
40- Shri Ramagya Inter College	Seur, Mariahu, Jaunpur
41- Shri Vishwanath Inter College	Kalan, Sultanpur
42- St. John's School	Siddiqpur, Jaunpur
43- St. Patricks Sr. Sec. School	Panchatia, Sheetla Chaukiya, Jaunpur
44- Swami J.S. Public School	Kutcheri Road, Raebareli
45- Swami Vivekanand Inter College	Mariyahu, Jaunpur
46- T.D. Inter College	Jaunpur
47- Waqiph Husain Memorial Learners Academy	Babarkhan, Dakkhinpatti, Jaunpur
48- Woodward Public School	Civil lines, Power House Road, Bhadohi

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