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UTTARAKHAND CHAPTER OF NATIONAL ACADEMY OF SCIENCES, INDIA (NASI)

Annual Report (2015-16)

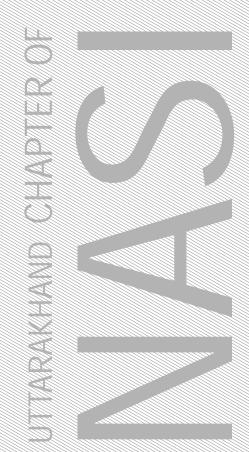




THE NATIONAL ACADEMY OF SCIENCES, INDIA



UTTARAKHAND STATE COUNCIL FOR SCIENCE & TECHNOLOGY



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The National Academy of Sciences, India

The National Academy of Sciences, India founded in the year 1930, is a society registered under the registration of society's act 1860. It is the oldest Science Academy of the country and is located at Allahabad. Over the years, this unique organization has served as a springboard for scientific and technological activities in a wide variety of S&T domains. It has helped India usher in a scientific milieu, in creating and nurturing talent in science and technology.

The Academy started with 57 ordinary Members and 19 Fellows but which has now grown many folds in strength and popularity. Today it has about 1571 Members and 1637 Fellows including 29 Honorary Fellows and 87 Foreign Fellows. All these, include scientists from various disciplines of Science and Technology from all over India and abroad.

The main objective of the Academy is to provide a national forum for the publication of research work carried out by Indian scientists and to provide opportunities for exchange of views among them. The Rules and Regulations of the Academy were based on those of the Royal Society of England and Asiatic Society of Bengal. These have since been revised and updated to meet the emerging challenges. Prof. Meghnad Saha was elected its first President.

NASI - ENVISIONS

The cultivation and promotion of Science & Technology in all its branches, through -

- The cultivation and promotion of Science and Technology in all its branches;
- To publish such proceedings, journals, memoirs, transactions and other works as may be considered desirable:
- To organize a Science Library;

- To organize meetings and hold discussions on scientific and technological problems;
- To promote scientific and technological research concerned with the problems of national welfare;
- To undertake, through properly constituted committees and bodies, such scientific work of technological or public importance as it may be called upon to perform;
- To co-operate with other organizations in India and abroad, having similar objects, and to appoint representatives of the Academy to act on national and international bodies:
- To secure and manage funds and endowments for the promotion of science and technology;
- To do and perform all other acts, matters and things that may assist in, conduce to, or be necessary for the fulfillment of the above mentioned aims and objects of the Academy;
- To create an adequate impact of the Academy all over the country, it may open Chapters of the Academy in other cities in the country, where reasonable number of scientists are interested.

STATE CHAPTERS:

The Academy has 16 Chapters located at Allahabad, Bengaluru, Bundelkhand Extended Region, Chandigarh, Chennai, Delhi, Hyderabad, Jammu, Kharagpur, Kolkata, Lucknow, Mumbai, Patna, Shillong (N.E. Chapter), Uttarakhand and Varanasi.

The man of Science has learned to believe in justification, not by faith, but by verification - Thomas Henry Huxley

UTTARAKHAND CHAPTER OF **NASI**

Uttarakhand is the youngest member among the metro chapters. Uttarakhand Chapter came in to being in the last quarter of 2006 with an aim to co-ordinate the activities of NASI, Allahabad in the newly formed state of Uttarakhand. The Uttarakhand Chapter of NASI, with its founder Chairman, Prof A.N. Purohit was formally inaugurated on October 12, 2006 at Uttaranchal Institute of Technology, Premnagar, Dehradun by Prof M.G.K. Menon, India's most renowned scientist. Other dignitaries who graced the occasion were Prof. P.N. Tandon, Former Director,

AIIMS, Dr. V.P. Sharma, Dr. (Mrs.) Manju Sharma, a large number of scientists and academicians in the state.

In recent years the chapter has observed change in office bearers with Prof. A.N. Purohit, Former Vice Chancellor, HNB Garhwal University is currently Chairman of the chapter and Dr. Rajendra Dobhal, Director General, Uttarakhand State Council for Science & Technology, Dehradun is the Secretary, NASI-UK Chapter. Dr. D.P.Uniyal is Coordinator & Coopted member to coordinate the chapter routine work under the guidance of office bearer. Since then the chapter has organized many Science popularization activities.



Fig. 1 Inauguration of NASI UK Chapter (Date: 12/10/2006)

UCOST AFFILIATION

The Uttarakhand Chapter of the Academy is affiliated to the Uttarakhand State Council for Science & Technology (UCOST). UCOST has not only provided space for housing the working office of the chapter, it has been the motivating force and provided the guidance, platform and financial support in organizing the activities since the inception of the chapter. This has begun to attract the attention of academics, intellectuals and society at large.

The UK Chapter, in close collaboration with the UCOST aims at achieving the National Academy's mandate and confident to achieve the following objectives:

- Promote science education in Uttarakhand
- Provide a forum for the fellows and members of ii) the NASI for fruitful interactions in the field of Science & Technology
- iii) Act as a link between the leading /renowned national/ international scientists and the science teachers and students in the state of Uttarakhand.

In addition to various activities related to above objectives the state chapter has instituted the Best Teacher Award of the year to promote science education in the state.

The state of Uttarakhand has 28 Fellows and 51 Members of NASI. The chapter has since its inception

has successfully organized various activities of science popularization that includes, Popular Lectures, Workshops and Seminars, Brainstorming Sessions $S\&T\ Exhibition\ and\ National\ Science\ Days\ etc.$

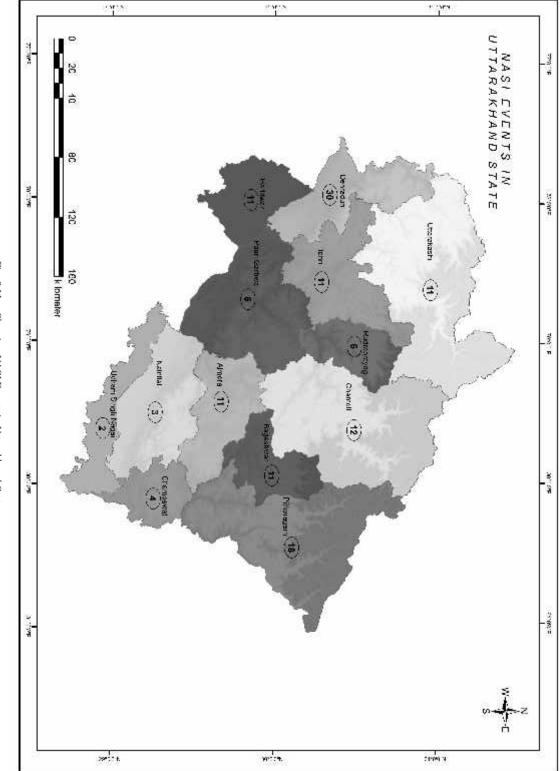


Fig. 2 Map Showing NASI Events in Uttarakhand State

NASI Plenary Lectures

UCOST organizes the Uttarakhand State Science & Technology Congress as a flagship programme annually. The event continues for 3 days providing a platform to the Scientists/Researchers/ Students to interact with senior scientists/experts of their respective subjects. Since 2009, during the inaugural session of state Science & Technology Congress, a NASI plenary lecture is being organized which is delivered a NASI fellow on various issues of S & T.

"Biodiversity is the key to sustainability"

Venue: 10th USSTC

Vigyan Dham, Jhajra, Dehradun

Dr Paramvir Singh Ahuja, F.N.A.Sc.

Adjunct Faculty

Biotechnology, Indian Institute of Science Education

and Research, IISER Mohali



Fig. 3 Dr. Paramvir Singh Ahuja, F.N.A.Sc., Former Director Genral CSIR delivering NASI Plenary Lecture

NASI Plenary Lecture by Dr. Paramvir Singh Ahuja

Dr. Paramvir Singh Ahuja, Former, Director General, CSIR delivered lecture on "Biodiversity is the key to sustainability". Dr. Ahuja emphasizesed on different aspects of the biodiversity. He explained how climate is formed by the abiotic factors, the past history of

climate change and human induced activities and their effect on biological resources. Dr. Ahuja highlighted the evolution of life on the earth and how innovation in science and technology played a crucial role in its development. He suggested that Country's best mathematicians, biologists, chemists and engineers should work together for better research. There is much scope for work in the newly emerging field of bioeconomy, bio-resources management he added.

The 10th Uttarakhand State Science & Technology Congress 2015-16 was inaugurated by the Hon. Minister of Science & Technology, Govt. of

Uttarakhand, Shri Surendra Singh Negi, and in his speech said that top priority should be given to S&T for the betterment of human kind.



Fig. 4 Dignitaries setting on Dias during 10th USSTC

He also said that some scientific technology should be invented to purify water resources and drinking water. Also the agricultural practices done by women in hilly areas should be technologically sound. He appreciated the achievements of UCOST & NASI, UK Chapter for developing the scientific temperament in the State. During the Inaugural function, three renowned Scientists were awarded the Science and Technology Excellence Award, 1. Prof. S.P. Singh, F.N.A., F.N.A.Sc., Former Vice Chancellor, HNB Garhwal

University Srinagar for outstanding contribution in the field of Plant Sciences, 2. Dr. B.R. Arora, F.N.A., F.N.A.Sc., Former Director, Wadia Institute of Himalayan Geology, Dehradun for outstanding contribution in the field of Earth Sciences, 3. Prof. R.D. Gaur, F.N.A.Sc., Former HOD Dept. of Botany, HNB Garhwal University Srinagar for outstanding contribution in the field of Environmental Sciences. All the awardees are closely associated with NASI, UK Chapter activities.



Fig. 5 Prof. S.P.Singh F.N.A., F.N.A.Sc., receiving Science & Technology Excellence Award in Environmental Science by the Hon. Minister of Science & Technology, Sh. Surendra Singh Negi, Govt. of Uttarakhand



Fig. 6 Dr. B.R. Arora, F.N.A., F.N.A.Sc., receiving Science & Technology Excellence Award in Earth Science by the Hon. Minister of Science &Technology, Sh. Surendra Singh Negi, Govt. of Uttarakhand



Fig. 7 Prof. R.D. Gaur, F.N.A.Sc., receiving Science & Technology Excellence Award in Plant Science by the Hon. Minister of Science & Technology, Sh. Surendra Singh Negi, Govt. of Uttarakhand

Previous Years NASI Plenary Lectures

Year	Presenter	Topic	During	Venue	Date
2015	Prof. A.N. Purohit Former Vice Chancellor, HNB Garhwal University Srinagar	CO2 Climatism & Challenging Climate	9 th Uttarakhand State Science & Technology Congress	UCOST, Campus Vigyan Dham, Jhajra, Dehradun	25 th February, 2015
2013	Prof. L. M. S. Palni Former Director G.B.Pant Institute of Himalayan Environment & Development, Kosi Katarmal, Almora	Biodiversity conservation and management	8 th Uttarakhand State Science & Technology Congress	Doon University, Dehradun	26 th December, 2013
2012	Dr Manju Sharma Former Secretary, Department of Biotechnology (DBT), GoI New Delhi	Biotechnology for Humankind: Relevance and Excitement	7 th Uttarakhand State Science & Technology Congress	Graphic Era University, Dehradun	21 st November, 2012
2011	Dr. Lalji Singh VC, Banaras Hindu University, Varanasi	Genetic diversity in Indian populations and its health implications	6 th Uttarakhand State Science & Technology Congress	Kumaun University, S.S.J. Campus, Almora	15 th November, 2011
2010	Dr. R.S. Tolia Former Chief Secretary of Uttarakhand	Indian Mountain Initiative:Role of Science & Technology	5 th Uttarakhand State Science & Technology Congress	Doon University, Dehradun	10 th November, 2009
2009	Late. Dr. Vinod Bhakuni Scientist-in-Charge Molecular and Structural Biology Division, CSIR CDRI, Luchnow	Drug Discovery Approaches	4 th Uttarakhand State Science & Technology Congress	G.B.Pant University of Agriculture & Technology, Pantanagar, U.S.Nagar	10 th November, 2009

Popular Lecture (2015-16)

Shri G.S. Rautela, Director General, National Council of Science Museum (NCSM), Kolkata delivered lecture on "Role of Science City/Regional Science Center in Science Popularization". In his speech, Shri Rautela emphasised that Science City/Regional Science Center (RSC) should also work to raise S&T based issues important to societies and to include them in policy and planning. He also explained that awareness programs of RSC impart a long lasting impression among visitors on protection of natural resources. He added that science museum provides an excellent platform to the students, researchers & common masses to understand the everyday science with the help of working models.

"Role of Science City/ Regional Science Center in Science Popularization"

Venue: Vigyan Dham, Jhajra, Dehradun

Date: 22nd April, 2015

Sh. G.S. Rautela

Director General

National Council of Science museum

(NCSM) Kolkata.



Fig. 8 Sh. G.S.Rautela Director General delivering Lecture on Role of Regional Science Center for Science Popularization

Prof. Ravi Chibbar, Dept. of Plant Sciences, College of Agriculture & Bioresearches, University of Saskatchewan, Canada, delivered lecture on "Genomic strategies for the improvement of grain quality" at Vigyan Dham, Jhajra, Dehradun on June 09, 2015. He stated that Genomic plays an important role in improving the grain quality and globally many efforts are going on. India is also taking initiatives in this direction. The lecture was attended by nearly 60 scientists/ researchers /students from various universities/organization & institution.

"Genomic strategies for the improvement of Grain quality"

Venue: Vigyan Dham, Jhajra, Dehradun

Date: 9th June, 2015 Prof. Ravi Chibbar Dept. of Plant Sciences

College of Agricultural & Bioresearches, University of Saskatchewan, Canada.



Fig. 9 Prof. Ravi Chibbar delivering lecture

On the occasion of World Environment Day (5th June, 2015), Uttarakhand State Council for Science and Technology & NASI-UK Chapter felicitated Sh. Kishan Singh Malada of Bageshwar district who have planted 160 plants of endangered species. He also attempted to replenish two dried up water sources near his Village. In this address, he requested schools & colleges to organize a plantation drive every month to make students understand the importance of trees. Several other speakers Dr. Rajendra Dobhal, DG UCOST, Dehradun Prof. A.N. Purohit, Former Vice Chancellor, HNBGU, Srinagar & Chairman NASI-UK Chapter, Er. Rakesh Oberai, Ex- Chairman, CII Dehradun and Prof. Gajendra Singh, Former Vice Chancellor, Doon University, Dehradun delivered lecture on "Agriculture & Climate Change".

"Agriculture & Climate Change"

Venue: Vigyan Dham, Jhajra,

Dehradun

Date: 5th June, 2015

Shri Kishan Singh Malada

Environmentalist, Bageshwar,

Prof. Gajendra Singh,

Former Vice Chancellor, Doon

University, Dehradun



Fig. 10 Shri Kishan Singh Malada receiving Excellence Award for Conservation of Environment by the Dr. Rajendra Dobhal, DG UCOST & Secretary NASI U.K.Chapter, Prof. A.N. Purohit, Former VC, H.N.B.Garhwal University Chairman, NASI UK Chapter & Prof. Gajendra Singh, Former, VC Doon University, Dehradun

On the occasion of earth day celebration (22nd April, 2015) a programme was organized at Vgyan Dham Jhajra Dehradun. Dr. Rajendra Dobhal, Director General UCOST gave the brief address on the need for sustainable development by making judicial use of natural resources. Former Senior Scientist of Wadia Institute of Himalayan Geology, Dehradun, Dr. A.K. Dubey delivered lecture on "Origin of the Himalaya and Geological structure in the Himalayan Arc". He also stressed upon the different disaster i.e., landslide, earthquake, flood, etc. Besides this he also explained the impact of climate change on the Himalayan region. NASI, UK Chapter Chairman & Former Vice Chancellor of H.N.B. Garhwal University, Srinagar, Prof. A.N. Purohit said that due to anthropogenic pressure the biodiversity of Himalayan region is getting adversely effected and need immediate attention.

"Origin of the Himalaya and Geological structure in the Himalayan Arc".

Venue: Vigyan Dham, Jhajra, Dehradun

Date: 22nd April, 2015

Dr. A.K.Dubey

Former Scientist-G,

Wadia Institute of Himalayan Geology,

Dehradun.



Fig. 11 Dr. A.K. Dubey, Senior Scientist, delivering Lecture

On the occasion of Earth Day a poster competition on the theme "Clean Your City" was also organized, students from the different Universities/ Institution/ Colleges participated in the competition and the winners were awarded.



Fig. 12 Participants drawing posters on the occasion of Earth Day.

Prof. K.S. Valdia, F.N.A, F.A.Sc., F.N.A.Sc., F.T.W.A.S., delivered a popular lecture on "Geological marvels, hallowed shrines and unification of people of India" He said that spectacular landforms and extraordinary geological features sculptured by uncommon earth processes occur in different parts of the Indian subcontinent. Presumably, unable to unravel the mysteries of their origin, and realizing that singularly odd features located in picturesque places attract believers and non-believers alike, the leading lights of the society of ancient India invested them with the aura of divinity and established shrines of the commonly venerated deity. Influencing convincingly people belonging to diverse racial-ethnic groups inhabiting different parts of the country, speaking languages belonging to disparate groups, indulging in different socio-cultural practices and eating and dressing differently, to go on regular visits to these hallowed sites or seats of deity, the visionary sages and seers of the ancient India endeavoured successfully to promote

interactions of visitors to these Geological marvels located in different parts of the country and bring about cross-fertilization of thoughts and cultural elements, and thus the unification of the largest section of the population.

"Geological marvels, hallowed shrines and unification of people of India"

Vigyan Dham, Jhajra, Dehradun

Date: 17th October, 2015

Prof. K.S. Valdia

Geodynamics Unit Jawaharlal Nehru Centre for advanced Scientific Research, Jakkur Campus, Bangalore.



Fig. 13 Prof. K.S.Waldia delivering popular lecture



Fig. 14 Participants during popular lecture

Previous Year's Popular Lectures

			T	1
Year	Presenter	Topic	Venue	Date
2015	Shri Yashwant Panwar	Intellectual Property	UCOST Campus	27 th January,
	Director, TIFAC, DST, GoI,	Right(IPR)	Vigyan Dham Jhjra,	2015
9014	New Delhi	Diadianate in Life.	Dehradun	11 th
2014	Prof. L.M.S.Palni Former Director, GBPIHED	Biodiversity is Life:	UCOST Campus	
		Biodiversity is our Life	Vigyan Dham Jhjra, Dehradun	November, 2014
	Dean, Biotechnology, Graphic Era University,		Demadun	2014
	Dehradun			
2014	Prof. Anu Puri,	Nano-medicen:	UCOST Campus	23 rd May,
2011	Centre for Cancer Research,	Cancer & Beyond	Vigyan Dham Jhjra,	2014
	Maryland, USA	Existing strategy for	Dehradun	2011
	waryana, esz	drug delivery platform	Beindun	
2014	Prof. H.C.Pokhriyal	Participatory Learning	UCOST Campus	28 th July,
	Director, School of Open	by community	Vigyan Dham Jhjra,	2014
	Learning, University of Delhi	involvement	Dehradun	
2012	Prof. M.G.K Menon	Science & Society in	Indian Council of	24 th May,
	Former Union Minister of	the service of the	Forestry Research	2012
	Science & Technology	people of Uttarakhand	&Education, Dehradun	
2012	Prof. Balram Bhargava	Challenges &	Indian Council of	24th May,
	Dept. of Radiology,	Opportunities for	Forestry Research	2012
	All India Institute of Medical	healthcare innovation	&Education, Dehradun	
	Science, New Delhi	in India		
2012	Dr. V.P. Sharma	Preventive	Govt. Girls Inter	26th May,
	Former Director,	Measures: Water	College, Mussoorie	2012
	ICAR, New Delhi Delhi	Borne Disaster		
2010	Prof. Rajender S. Varma	Greener Syntheses	Doon University,	01 st
	Sustainable Technology	and Chemical	Dehradun	December,
	Division, National Risk	Transformations:		2010
	Management Research	Sustainable Alternative		
	Laboratory,	Methods and		
	U.S. Environmental Protection	Applications of Nano-		
	Agency, Cincinnati, Ohio45268, USA	Catalysts		
2010	Prof. Rajender S. Varma	Greener Syntheses	H.N. B. Garhwal	29 th
2010	Sustainable Technology	and Chemical	University, Srinagar	November,
	Division, National Risk	Transformations:	Chiversity, Shinagar	2010
	Management Research	Sustainable Alternative		2010
	Laboratory,	Methods and		
	U.S. Environmental Protection	Applications of Nano-		
	Agency, Cincinnati,	Catalysts		
	Ohio45268, USA	-		
2010	Dr. B.S. Rawat,	Energy Challenges of	Uttarakhand state	04 th January,
	Head, Dept. of Electrical and	Future	Council for Science	2010
	Biomedical Engineering,		&Technology Conference	
	University of Nevada, U.S.A		hall, Dehradun	
2010	Dr. E.J. Thomas,	Alternatives to	Uttarakhand state	04 th January,
	The School of Chemistry,	allylstannanes for	Council for Science	2010
	University of Manchester, UK	remote stereocontrol	&Technology Conference	
0000	I-4- D. V. 1D1 11 .	The Decide	hall, Dehradun	Orth T. I
2008	Late Dr. Vinod Bhakhuni	The Drug Discovery	Uttarakhand state	05 th Feb 2008
	Scientist-in-Charge	Constraints	Council for Science	2008
	Molecular and Structural		&Technology Conference hall,	
	Biology Division		Dehradun	
	CSIR-Central Drug Research		Delliauuli	1
	CSIR-Central Drug Research			
2008	Institute (CDRI), Lucknow	The Drug Discovery		05 th Foh
2008	Institute (CDRI), Lucknow Late Dr. Vinod Bhakhuni	The Drug Discovery	SGRR PG College	05 th Feb
2008	Institute (CDRI), Lucknow Late Dr. Vinod Bhakhuni Scientist-in-Charge	The Drug Discovery Constraints		05 th Feb 2008
2008	Institute (CDRI), Lucknow Late Dr. Vinod Bhakhuni Scientist-in-Charge Molecular and Structural		SGRR PG College	
2008	Institute (CDRI), Lucknow Late Dr. Vinod Bhakhuni Scientist-in-Charge		SGRR PG College	

Brainstorming Sessions

Venue: Vigyan Dham Jhajra, Dehradun

Date: 10.02.2016

During: 10th State Science congress

Four brainstorming sessions were organized during the 10th State Science congress. Many eminent scientist/academician took part in the discussion. The brief reports of these sessions are as follows:-

(1) Brain Storming Session on "Status of Research & Development in Higher Education"

Prominent Personalities:

The session was chaired by Prof A.N. Purohit, F.N.A., EN.A.Sc., Former Vice Chancellor, HNB Garhwal Central University, Srinagar, Uttarakhand, Prof. Veer Singh, Dept. of Environment Science, GBPUA&T, Pantnagar Prof.M.S.M. Rawat, Former Vice Chancellor, HNB Garhwal Central University, Srinagar, Uttarakhand, Dr Mangala Rai, Vice Chancellor, G. B. Pant University of Agriculture & Technology, Pantnagar, Uttarakhand, Prof H.S. Dhami, Vice Chancellor, Kumaun University, Nainital, Uttarakhand, Prof Jawahar Lal Kaul, Vice Chancellor, HNB Garhwal Central University, Srinagar, Uttarakhand, Prof R.C. Sobti, Vice Chancellor, Babasaheb Bhimrao Ambedkar Central University, Lucknow (UP), Dr U.S. Rawat, Vice Chancellor, Sri Dev Suman Uttarakhand University, Tehri Garhwal, Uttarakhand, Prof V.K. Jain, Vice Chancellor, Doon University, Dehradun, Uttarakhand, Prof P.K. Garg,

Vice Chancellor, Uttarakhand Technical University, Dehradun, Uttarakhand, Prof Dilip K. Bandyopadhyay, Vice Chancellor, IMS Unison University, Dehradun, Uttarakhand, Dr Shrihari Honwad, Vice Chancellor, University of Petroleum and Energy Studies, Dehradun, Uttarakhand, Prof V K Tewari, Vice Chancellor, Graphic Era University, Dehradun, Uttarakhand, Prof Sanjay Jasola, Vice Chancellor, Graphic Era Hill University, Dehradun, Uttarakhand, Dr Kuldeep K Raina, Vice Chancellor, DIT University, Dehradun, Prof S.C. Joshi, Vice Chancellor, Uttaranchal University, Dehradun, Uttarakhand, Prof Ravindra Bhardwaj, Vice Chancellor, Himgiri Zee University, Dehradun, Uttarakhand, Dr R.K. Lalwani, Vice Chancellor, The ICFAI University, Dehradun, Uttarakhand, Prof Ajay Gairola, Indian Institute of Technology- Roorkee, Uttarakhand, Prof Durgesh Pant, Director, Uttarakhand Space Application Centre (USAC), Dehradun, Uttarakhand, Dr P.T. Bhutiya, Ex-Scientist In-charge, Zoological Survey of India, Northern Circle, Dehradun, Uttarakhand, Dr Subhash Nautiyal, Research & Extension Centre, VCSG Uttarakhand University of Horticulture & Forestry, Selaqui, Dehradun, Uttarakhand, Prof J.S. Rawat, Dept of Geography, SSJ Campus, Kumaun University, Almora, Uttarakhand, Sh. Ravinder Gaur, Technology Development Transfer (TDT), Department of Science & Technology, New Delhi, Dr M.K. Nautiyal, Director, Uttarakhand Council for Biotechnology (UCB), U.S. Nagar, Uttarakhand, Prof Vijay Juyal, Registrar, HNB Uttarakhand Medical Education University, Dehradun, Uttarakhand, Prof H.C. Nainwal, Dept of Geology, HNB Garhwal Central University, Srinagar-Garhwal, Uttarakhand, Dr Vijay Sridhar, School of Environment and Natural Resources, Dehradun, Uttarakhand and Dr. Y. Singh, Principal, GB Pant Engineering College,

Ghurdauri, Pauri Garhwal, Uttarakhand.Dr. Chinnappan Baskar, THDC Institute of Hydropower Engineering & Technology, Tehri Garhwal, Uttarakhand, Dr. K. K.S. Mer, Director, Institute of Technology, Kothiyal Sain, Gopeshwar, Chamoli, Uttarakhand, Dr.B.K. Singh, Director, Seemant Institute of Technology, Pithoragarh, Uttarakhand, Dr. Veena Pandey, Kumaun University, Bhimtal Campus, Nainital, Uttarakhand, Dr. Kamal Pandey, Government Degree College, Haldwani, Nainital, Uttarakhand, Dr. C.S. Dhanai, VCSG Uttarakhand University of Horticulture & Forestry, Ranichauri, Tehri Garhwal, Uttarakhand,

Dr.Hemwati Nandan, Dept of Physics, Gurukul Kangari Vishwavidyalaya, Haridwar, Uttarakhand, Dr.Suman Singh, Former Professor, Lal Bahadur Shastri Academy, Mussoorrie, Uttarakhand, Dr. V. P. Uniyal, Scientist F, Wildlife Institute of India, Dehradun, Uttarakhand, Dr. Suresh Kumar, Head, Agriculture and Soil Division, Indian Institute of Remote Sensing (IIRS), Dehradun, Uttarakhand, Hari Raj Singh, Soil Consultant, Indira Nagar, Dehradun, Uttarakhand, Dr. Vinod Bhatt, Director, Navdanya, Dehradun, Uttarakhand, Prof. Lalit Tewari, Kumaun University, Nainital.

Recommendations:

- Good Infrastructure facilities should be there in schools/colleges of rural areas.
- More S&T awareness programmes should be organized at school & college level.
- Science literature should be published in Hindi as
- Science teachers orientation/training should be 4) orgainized on regular basis.
- Science forum should be established at district level.



Fig. 15 Participants during BSS on Status of Research & Development in Higher Education



Fig. 16 Prof. A. N Purohit delivering lecture on BSS of Status of Research & Development in Higher Education

(2) Brain Storming Session on "Skill of Scientific Paper, **Projects Writing and Funding** Mechanism"

Prominent Personalities:

The Session was chaired by Dr. B.R. Arora, F.N.A, F.N.A.Sc., Former Director, Wadia Institute of Himalayan Geology, Dehradun, Session Co-Chairman, Prof. R.D. Gaur, F.N.A.Sc., Advisor, NASI-UK Chapter, Uttarakhand and Dr. Gopal Singh Rawat, F.N.A.Sc., Dean, Wildlife Institute of India, Dehradun, Speakers, Prof. U.C. Srivastava General Secretary (HQ), The National Academy of Sciences India, Allahabad, Prof. Paramjit Khurana, University of Delhi, South campus, New Delhi, Dr. D.P. Uniyal, Senior Scientific Officer, UCOST & NASI, UK Chapter Coordinator Dehradun (Session Convener) Session Coordinator: Dr. Manmohan Singh Rawat, UCOST, Dehradun, Dr. Jagbir Aswal, UCOST, Dehradun, Dr. Neelu Jyoti Ahuja, UPES, Dehradun. Experts, Dr. Rajeev Pandey, Scientist E, Indian Council of Forestry Research and Education, Dehradun, Prof. Sanjay Gupta, Department of Biotechnology & Biochemistry,

S.B.S. PG Institute of Biomedical Sciences and Research, Balawala, Dehradun, Dr. Ajay Kumar Biyani, Deptartment of Geology, D.B.S (PG) College, Dehradun, Dr. A.N. Rizvi, Scientist D, Zoological Survey of India, Dehradun, Dr. S.K. Srivastava, Scientist D, Botanical Survey of India, Dehradun, Dr. Kusum Arunachalam, Doon University Campus, Dehradun, Dr. Rakesh Singh, Department of Chemistry, D.B.S. (PG) College, Dehradun, Dr. Manisha Uniyal, Department of Zoology, Shri Guru Ram Rai (PG) College, Dehradun, Dr. B.S. Rawat, Department of Mathematics, D.B.S. (PG) College, Dehradun, Dr. Versha Parcha, Pharmaceutical Sciences, S.B.S. PG Institute of Biomedical Sciences and Research, Balawala, Dehradun, Dr. Kamal Kishor Pandey, Deptartement of Chemistry, M.B. PG College, Haldwani and Sh. Amit Chauhan, Department of Mathematics, D.B.S. (PG) College, Dehradun.

Prof. Pramjeet Khurna delivered lecture on "The Art of Scientific Paper Writing & Presentation", Prof. U.C. Srivastava, delivered lecture on "Concept building and Developing Hypothesis" and Dr. D.P. Uniyal delivered lecture on "Skill of Scientific paper, project writing and funding mechanism" respectively. In the open session participants interacts with the experts and panalist.



Fig. 17 Prof. Pramjeet Khurna delivering lecture on ""The Art of Scientific Paper Writing & Presentation""



Fig. 18 Prof. U.C. Srivastava delivering lecture on "Concept building and Developing Hypothesis"



Fig. 19 Dr. D.P. Uniyal delivering lecture on the "Skill of Scientific Paper, Project Writing and Funding Mechanism"

Recommendations:

- UCOST & NASI must identify areas of research applicable for science and technology development in the State of Uttarakhand.
- 2. Universities and research institutes should be asked to choose specific areas of research and development they would like to contribute to the science and technology for the development of the State. Emphasis should be on need-based, high-quality, innovative, focused and interdisciplinary research rather than on the repetitive
- Sufficient funds be provided for R&D purposes in terms of infrastructure development with ICT facilities. More money should be allocated to enhance R&D activities rather than to the organization of seminars/conferences.
- Institutes must build up an environment to generate their own funds.
- 5. Provision of sufficient scholarships/ fellowships to research students and financial aid to the students

- hailing from poor families will help the R&D environment to prevail in the State.
- 6. For creating a Network of all R&D partners, a website should be developed that will portray all going-on projects and resources/ facilities/ instruments/ research material available with individual institutes.
- 7. Signing of MOUs among institutes for meaningful collaboration and creating synergy must be a common practice.
- Conducting workshops/ conferences/ seminars to ignite young minds with mutual sharing of resources among various institutes should be duly encouraged.
- 10. Quality of teaching, research, extension activities and administration should be evaluated from time to time. Revamping of all the R&D programmes should also be done after their thorough review at regular intervals.

(3) Brain Storming Session on "Human-Robot Interaction"

Prominent Personalities:

The Session was chaired by Prof. Pathak Pushparaj Mani, Department of Mechanical and Industrial Engineering, IIT Roorkee, Roorkee, Session Co-Chairman, Dr. E.G. Rajan, Founder President, Pentagra m Research Centre (P) Limited, Hyderabad.Lead Speakers, Dr. Vrijendra Singh, Associate Professor, IIIT, Allahabad, Dr. P.C. Ray, Indian Institute of Remote Sensing(IIRS), Dehradun, Prof. D. V. Gadre Associate Professor, Netaji Subhash Institute of Technology, New Delhi, Prof. R.K. Singh, Director, BTKIT, Dwarahat, Almora, Dr. Loviraj Gupta, Dean, Lovely Professional University, Jalandhar, Dr. Manish Prateek, Associate Dean (CIT), University of Petroleum and Energy Studies, Dehradun, Prof. Shyam Akashe, Dept. of Electronics and Instrumentation, ITM University Gwalior, Mr. Trilok Tak, Director, Mindfield Technologies, Jodhpur, Rajesthan, Mr. Yogesh Kalia, Director, CTO, Medhaavi Center for Automotive Research, Hoshiarpur, Punjab, Session Convener, Mr. Manoj Kumar Singh, UCOST, Dehradun, Session Cordinator, Dr. Prashant Singh, District Coordinator,

UCOST, Dehradun, Mr. Rajesh Singh, UPES, Dehradun, Session Co-Cordinator, Ms. Anita, UPES, Dehradun. Session Experts, Prof. Rajesh Kumar, Department of ICE, Graphic Era University, Dehradun, Dr. Vishal Gupta, Associate Professor, GRD Academy, Dehradun, Mr. S. Choudhury, Head EIC, UPES, Dehradun, Dr. Paawan Sharma, Assistant Professor (SS), UPES, Dehradun, Dr. Adesh Kumar, Assistant Professor (SS), UPES, Dehradun, Mr. Bhupendra Singh, Director, Schematics Microelectronics, Dehradun, Mr. Ravindra Sharma, Head, Department of CSE, Nibus Academy of Management, Dehradun, Mr. Vivek Kaundal, Assistant Professor (SS), UPES, Dehradun, Mr. Devendra Singh, Head, Department of ECE, UIT, Dehradun, Mr. Kulshrest Paraliya, Assistant Professor, Department of CSE, JBIT, Dehradun, Dr. Kamal Kumar, Assistant Professor (SG), Centre of Information Technology, UPES, Dehradun, Mr. Deepak Bharadwaj, Assistant Professor, Department of Mechanical Engineering, UPES, Dehradun, Dr. Piyush Chauhan, Assistant Professor (SS), Centre of Information Technology, UPES, Dehradun, Mr. Raj Gaurav Mishra, Assistant Professor (SG), Department of EIC, UPES, Dehradun, Mr. Vinod kumar Yadav, Head, Departement of Civil Engineering, HRIT, Ghaziabad.



Fig. 20 Expert delivering lecture on BSS in Human - Robot Interaction



Fig. 21 Expert delivering lecture on BSS in Human - Robot Interaction

Recommendations:

- Drones with more precision are the requirement of today. As in case of disaster pictures from satellite only gives the overall picture but exactly where the need of rescue is not clear. Robotics is field which can help in rescue operations and agricultural need of Uttarakhand.
- Robots for agricultural need to be emphasized for Uttarakhand.
- Cost effective robots should be developed for various applications.

- UCOST & NASI must sponsor some projects on robot development for agriculture application particularly for Uttarakhand.
- There is requirement to create a portal where all the database related to disaster happens in Uttarakhand can be hosted and used by the researchers.
- Govt. should promote the development of few robots specially designed for educating children staying at remote locations in Uttarakhand.

(4) Brain Storming Session on "Application of Media & Social Media for Science Communication"

Prominent Personalities:

The Session was chaired by Mr.Devendra Mewari Eminent Science Writer, New Delhi, Session Convener Expert present in BSS was Mr. D.S. Kunwar, Editor, Times of India, Dehradun, Dr. R. Gopichandran, Director, Vigyan Prasar, Noida, Mr. Biju Negi, Beej Bachao Andolan, Uttarakhand, Mr. Ravindra Nath Kaushik, Doon Darpan, Dehradun, The Editor, Amar Ujala, Dainik Jagran, Rashtriya Sahara, Pioneer, Dehradun, Mr. Ashok Mishra, Editor, Garhwal Post, Dehradun, Mr. Satish Sharma, Editor, Garhwal Post, Dehradun, Mr. Girish Gururani, Editor, Hindustan (Hindi), Dehradun, Mr. Anupam Trivedi, Bureau

Chief, Hindustan Times, Dehradun, Mr. Kuldeep Singh Panwar, Senior Sub - Editor, I next, Dehradun Mr. Sanjeev Sharma, IBN-7, Dehradun, Mr. Yogesh Bhatt, Editor, Jan Vani, Pithoragarh, The Bureau Chief, Sahara Samay, Samachar Plus, Network 10, TV 100, Dehradun, Mr. Virendra Bhardwaj, Bureau Chief, Punjab Kesri, Dehradun, Mr. Sunil Talwar, Bureau Chief, Punjab Kesri, New Delhi, Ms. Anjali Nauriyal, The Times of India, Dehradun, Mr. Sonu Singh, Zee Sangam, Dehradun, Mr. S.M.A. Kazmi, Editor, The Tribune, Dehradun, Dr. Girish Ranjan, Head of the Department of Journalism and Mass Communication, DSB Campus, Kumaun University, Nainital, Dr. Govind Singh, Head, Department of Journalism and Mass Communication, Uttarakhand Open University, Behind Transport Nagar, Teenpani Bypass Road, Haldwani, Ms. Laxmi Mishra, Centre for Technology & Devlopment, Dehradun, Prof. Shivendra Kumar Kashyap, Head, Department of Agricultural Communication & Joint Director, Communication Centre, College of Agriculture, GB

Pant University of Agriculture & Technology, Pantnagar, Dr. Sukhnandan Prasad, Head Journalism, Dev Sanskriti Vishvavidyalaya, Gayatri Kunj, Shanti Kunj, Haridwar, Ms. Jas Kiran Chopra, The Pioneer, Dehradun, Mr. Rajeev Lochan Shah, Editor in Chief, Nainital samachar, Dr. Punam K. Singh, Regional Director, IGNOU, Shimla, Dr. S.K. Kulshrestha, President, DOON Science forum, Mr. Gaurav Mishra, Sr. Journalist, Amar Ujala, Mr. Paritosth Kimothi, Sr. Journalist, The Pioneer, Mr. Yotirmay Thapliyal, Sr. Journalist, Tribune, Mr. Vijay Bhatt, Secretary, Doon Science Forum, Mr. Pradeep Bhandari, Manager, Centre for Technology & Devlopment, Dehradun, Dr. Manmohan Singh, Director, Meteorological Center, Shimla, Himachal Pradesh, Dr. A Senthil Kumar,

Director, IIRS Dehradun, Dr. Binita Shah, SARG Vikash Samitee, Dehradun, Dr. N.S.K Harsh, Group Coordinator, Research, FRI, Dehradun, Mr. Bikram Singh, Director, Meteorological Centre, Uttarakhand, Dr. Ashwani Arvind Ranade, Scientist, Surface Water Hydrology, NIH, Roorkee, Vaidya Balendu Prakash, Founder Director, VCP Cancer Research Foundation -Dharmashila Cancer Research Centre & Hospital, Dehradun, Dr. C.M. Nautiyal, Scientist In-Charge, Radiocarbon Lab, BSIP, Lucknow, U.P., Dr. N.A. Siddiqui, Head, Dept of HSE, UPES, Dehradun. Dr. Kirti Joshi, UCOST, Dehradun, Session Coordinator Dr. Brijmohan Sharma, Secretary, SPECS, Dehradun and Dr. Prasoom Dwivedi, UPES, Dehradun.



Fig. 22 Dignitaries sitting on Dias during BSS in Application of Media & Social Media for science communication



Fig. 23 Participants during BSS in Application of Media & Social Media for science communication

Recommendations:

- 1. Certain remarkable platform should be given to the scientists and some group should be formed to share science related information.
- 2. Workshops on scientific writings comprising of both scientists and media persons should be organized.

NASI Uttarakhand Chapter Meeting

NASI Uttarakhand Chapter meeting held at UCOST on 03 July, 2015

The National Academy of Sciences (NASI) UK-Chapter annual meeting was held at UCOST. The meeting was chaired by Dr.(Mrs.) Manju Sharma, Former Secretary to the Govt. of India, Department of Biotechnology, Principal Advisor to the Dept. Science and Technology, Gujarat, Distinguished Women Scientist Chair, NASI, Allahabad, Prof. A.N Purohit, Former Vice Chancellor, H.N.B.G.U. Srinagar, Chairman of NASI UK Chapter, Prof. R.D Gaur, Former Head, Dept. of Botany & Adviser NASI UK Chapter, Dr. Rajendra Dobhal, Secretary NASI UK Chapter, Director General UCOST, Dr Neeraj Kumar,

Executive Secretary, NASI Allahabad, Dr. B.P Purohit, Joint Director, UCOST, Dr. D.P Uniyal, Coordinator & Co-opted Member NASI UK Chapter & Dr. Manmohan Singh Rawat, UCOST were present in the meeting. The NASI UK Chapter annual report was also released during the meeting by the dignitaries. All the members agreed that NASI-UK Chapter will organise theme based programme on Bio-Diversity & Climate Change and Farm Mechanism (problem of Mountain Farming in Uttarakhand) and also decided that NASI 86th Annual Session and Symposium on "Science, Technology and Entrepreneurship for Human Welfare in The Himalayan Region" will be held at Dehradun in collaboration with Uttarakhand State Council for Science & Technology & Uttarakhand Technical University, Dehradun.



Fig. 24 NASI Allahabad & NASI UK Chapter Office Bearer in meeting



Fig. 25 Release of NASI-UK Chapter Annual Report 2014-15

Science Day and S&T Exhibition

Celebration of National Science Day-2016

National science day 2016 was organized at Regional Science Center (RSC) Jhajra, Dehradun on 27th February 2016. The Chief Guest, Prof. A.N.Purohit, Former Vice Chancellor, HNB Garhwal University Srinagar & NASI, UK Chapter Chairman, elaborated that the human resources of the Country should be skilled in such a way so that they can contribute to the Make in India programme. He professed that the scientific temperament should be inculcated included in every man of the society. The Scientific approach is must for the youth of the country and much more is needed than a technological approach as science is the source for the development of technology. Dr. Rajendra Dobhal, DG, UCOST & Secretary NASI, UK Chapter, elaborated on the theme of this year national science day "Make in India: S&T based innovation". He said that make in India should be innovation centric for maintaining the momentum of Research & Development in the Country. If make in India programme becomes successful than India will leave a mark globally. The guest speaker Dr. S.S.Pandey, Joint Commissioner, Civil Supply & Consumer protection, Uttarakhand Government in her presentation described why science day is celebrated in context of Prof. C.V. Raman. She also explained about how in pre-independence era, Jamshedji, Tata influenced by Swami Vivekanend started manufacturing steel within India. Dr. Swaminathan's role in bringing about Green revolution within the Country to make India self sufficient in Agricultral production. Other Scientists she touched upon were Dr. Vivesaraya etc. The other speaker for the event, Dr. C. M. Nautiyal, Scientist Incharge Radiocarbon Dating Lab, Birbal sahani Institute of Paleobotony, Lucknow gave his talk on "How old is old: Radiocarbon dating". In a very simple

way he explained to the participants about the techniques of radiocarbon dating and told that Willard Libbi got a Nobel prize in chemistry for this technique. During the session, the participants were given handson training on making of solar and LED lights by Dr. Brij Mohan Sharma, SPECS along with his team. At the end the participants toured the RSC where they learn about science through exhibits installed. The

250 participants were from Govt. Degree College Rishikesh; DIT University, DAV PG College, Uttaranchal University, The Cambridge School, University of Petroleum & Energy Studies, Himalayan Institute of Parmacy, Govt. High School, Kotla Santoor, Doon School, Welham Boys School, Gyani Inder Institute and Doon University.



Fig. 26 Dignitaries sitting on Dias during National Science Day-2016



Fig. 27 Participants during National Science Day -2016



Fig. 28 Dr. C.S. Nautiyal delivering lecture during National Science Day-2016

Science & Technology **Exhibition:**

With a view to encourage, popularize and inculcate scientific temper among the Students/Researchers & common masses, every year State level Science Exhibition is being organised, Students/ Researchers showcase their talents in science and their applications in different areas related with our everyday life.

The exhibition was inaugurated by Hon. Minister of Science & Technology, Govt. of Uttarakhand, Sh. Surendra Singh Negi. During the exhibition, the exhibitors not only displayed their scientific talents through their models and exhibits, but also get an opportunity to listen to some of the eminent scientists and scholars of the region.

Objectives of the Exhibition:

- To provide a forum for Students to pursue their natural curiosity and inventiveness to quench their thirst for creativity;
- b. To make Students feel that science is all around us and we can gain knowledge as well as solve many problems also by relating the learning process to

- the physical and social environment;
- To lay emphasis on the development of science c. and technology as a major instrument for achieving goals of self-reliance and socioeconomic and socio-ecological development;
- d. To highlight the role of science and technology for producing good quality and environmental friendly materials for the use of society;a. To encourage Students to visualise future of the nation and help them become sensitive and responsible citizens;
- To analyse how science has developed and is affected by many diverse individuals, cultures, societies and environment:
- To develop critical thinking about global issues to g. maintain healthy and sustainable societies in today's environment;
- h. To apply mathematics and information technology to visualise and solve problems pertaining to everyday life etc.;
- i. To appreciate the role of science in meeting the challenges of life such as climate change, opening new avenues in the area of agriculture, fertiliser, food processing, biotechnology, green energy, disaster management, information and

- communication technology, astronomy, transport, games and sports etc.; and
- To create awareness about environmental j. issues and concerns and inspiring Students to devise innovative ideas towards their mitigation.

List of exhibitor in Science Exhibition:

- Uttarakhand State Council for Science & Technology(UCOST), Dehradun.
- 2. Forest Research Institute(FRI), Dehradun.
- 3. Society for Pollution and Environmental Conservation Scientists (SPECS, Dehradun.
- 5. Centre for Technology Development (CTD), Dehradun.
- Navdanya, Dehradun. 6.
- 7. Indian Institute of Central Soil and Water Conservation Research and Training Institute (IICSWCRT), Dehradun.
- 8. Himalayan Action Research Center (HARC), Dehradun.
- 9. Dehradun Institute of Technology (DIT)

- University, Dehradun.
- 10. Himalayan Institute for Environment, Ecology & Development (HIFED), Dehradun.
- 11. Industries Association of Uttarakhand(IAU), Dehradun.
- 12. Graphic Era University (GEU), Dehradun.
- University of Petroleum & Energy Studies (UPES), Dehradun.
- 14. Instruments Research & Development Establishment(IRDE), Dehradun
- 15. Centre for Aromatic plants (CAP), Dehradun.
- 16. Wadia Institute of Himalayan Geology (WIHG), Dehradun.
- 17. Indian Institute of Petroleum(IIP), Dehradun.
- 18. Industries Department Uttarakhand(IDU), Dehradun.
- 19. **Defence Electronics Applications Laboratory** (DEAL), Dehradun.
- 20. Defence R&D Organization(DRDO), Govt. of India, Ministry of Defence, Dehradun.
- 21. M/s. Strategic Marketing, Dehradun.
- 22. Uttarakhand Organic Commodity Board (UOCB), Dehradun.



Fig. 29 Hon. Minister S &T Sh. Surendra Singh Negi inaugurating S&T Exhibition



Fig. 30 Exhibitor showing their model to the Hon. Minister Science & Technology, Govt. of Uttarakhand



Fig. 31 Exhibitor showing their models to visitors

NASI Best Science Teacher Award

NASI BEST TEACHER **AWARD:**

National Academy of Sciences (NASI), Uttarakhand Chapter and Uttarakhand State Council for Science & Technology every year facilitate Best Science Teacher Award. NASI Best Teacher Awards nominations were invited through advertisement published in different newspaper by UCOST, Dehradun on dated 10 November, 2015.

A total of 16 nomination from different Schools of Uttarakhand were received. A NASI committee was set up to select the best teacher for selection of the NASI Award. After going through the Bio-data, enclosed testimonial, teaching experience and board results the committee selected Mr. Samir Dhingra, HOD-Science, Welham Boys School, Dehradun for NASI Best Teacher Award 2016 for outstanding contribution in the field of Science Popularization.

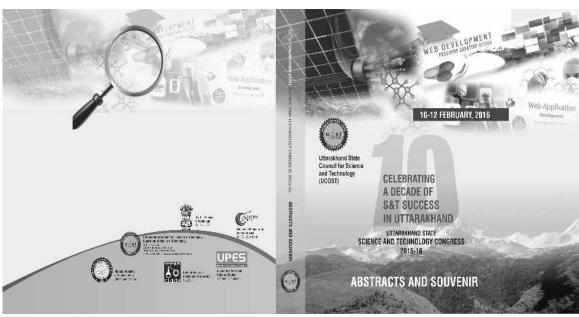


Fig. 32 Sh. Samir Dhingra receiving Best Science Teacher Award from Hon. Minister S&T Govt. of Uttarakhand, Sh. Surendra Singh Negi

Previous year NASI Best Science Teacher Awardees

S. No.	Name of Teacher	Designation	School Name	Year of Award	Subject
1	Dr. Bhuwan Chandra Pandey	Lecturer	Govt. Inter College, Khoont, Almora	2008	Botany
2	Mr. Narayan Singh Rana	Lecturer	Government Kirti Inter College, Uttarkashi	2009	Botany
3	Mr. Umesh Chandra Pandey	Lecturer	Govt. Inter College Dinapani, Almora.	2010	Mathematics
4	Mr. Alakh Narayan Dubey	Assistant Teacher	Govt. Higher Secondary School, Aagar, Tehri Garhwal	2011	Science
5	Mr. Aatma Prakash	Assistant Teacher	Govt. Inter College Chinka, Chamoli	2012	Mathematics
6	Mr. Kalayan Singh Rawat	Lecturer	Govt. Inter College, Maldevta	2014	Biology
7	Mr. Neeraj Kumar Joshi	Assistant Teacher	Govt. Inter College, Josha, Munsiyari	2015	Mathematics

Publication & Reports





राष्ट्रीय विज्ञान अकादमी भारत (नासी) इलाहाबाद द्वारा विज्ञान एवं प्रौरोगिकी जागरूकता कार्यशाला का आयोजन भारत तिब्बत सीमा पुलिस, देहरादून में।



चस्तर खन्ड राज्य विज्ञान एवं प्रौग्मेनिका परिषद व राष्ट्रीय विज्ञान अकादमी भारत (नाली), उरतराखण्ड अध्याय के संयुक्त तत्वयान में भारत तिब्बत सीमा पुलिस, सीमाहार के परिसर में "सेना में विज्ञान एवं प्रीह्योगिकी" की गुरिका विषय गर कार्यशाला का आयोजन दिनांक 4 जन, 2015 को किया गया। इसला

मुख्य उदवेश्य सैनिकों को सुदूर क्षेत्रों में सीनओं की निमरानी करते इए जो शारीरिक व गानसिक ळठिनाई आती है उनके बारे में दिस्तार से कर्यां की गयी व विषय दिशंपजों ने उन्हें बताया कि उन्हें किरा प्रकार के व्ययम, कपते, खानमान व रहन-सहन रखने चाहिए जिससे कि दे शारीरिक व मानसिक रूप से स्वस्थ्य रह सके ग साथ ही अपने कार्यों को सूचारू रूप से कर सकें। उपरोक्त कार्यक्रम

में डा० मंज् शमां, मूतपूर्व सचिव, डी०बी०टी०, जा। शशी बाला सिंह, निदेशक, रक्षा अनुराधान एवं विज्ञान संगठन, रक्षा शरीरकिया एवं सम्बद्ध विज्ञान संस्थान, नई दिल्ली, ऑ6 राजेन्द्र डोनाल, महानिवेशक, यूकॉस्ट, प्रोठ रूसी श्रीवास्तव, महासचिव, नासी, डॉंंंं नीरज क्यार, अधिकासी लचिव, गासी, इलाहाबाद ने अपने विचार प्रस्तुत किए व साथ ही अधिक री व सैनिकों ने अपने लंकाओं का समधान भी किया।



राष्ट्रीय विज्ञान अकादमी भारत (नासी), उत्तराखण्ड अध्यारा की वार्षिक वैठक



राष्ट्रीय विद्यान अकावमी भारत (नारी), उत्तराखण्ड अध्याय की वाशिक वैतक प्रयुद्ध वैज्ञानिक डों० मन्त्र् शर्मा, भूतपूर्व सचिव, जैव

ब्रौद्योगिकी विभाग, भारत सरकार, नई दिल्ली की अध्यक्षता में परिषद कं परिसर विज्ञान धाम, ब्राह्मरा सें दिनांक ०३ जून, २०१५ आहुत की

गयी। सर्वप्रथम डॉ० चलेन्द्र डोन्स्. सकिए नासी उत्तराखण्ड अध्याय ने राजाराकाक अध्यय हारा राज्य में किये जा रहे विज्ञान लोकव्यापीकरण के कार्यक्रपी (कार्यशाला / सेमिनार / लोकप्रिय वास्त्रान/विज्ञान प्रदर्शनी आवि) के बार में विस्तृत प्रस्तृतिकरण दिया व वताया कि इस पर्व कार्यकर्मा से 2000 से अधिक शोधार्थियों / गैज़ानिकों को लाम निला है साथ में **उनके द्वारा परिषद द्वारा शोध एवं** विकास, विज्ञान लोकव्यापीकरण आदि पर किसे जा रहे प्रवासों का भी विवरण दिया।

डॉं। मन्त् शर्म ने नसी, एकाराखण्य अध्याय के गविष्य के कार्यक्रमों पर उपस्थित सदस्यों से

मिडान परिवर्ध | वर्ष ५, व्याप ४, व्योजन्यान २०१५

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विचार विमर्श कर कार्यक्रमों की रूपरेखा तैयार की। डॉ० शर्मा ने कहा कि इस वर्ष स्वास्थ्य चौपाल, जलवायु परिवर्तन व कृषि तकनीकी विषयों पर कार्यशाला व लोकप्रिय व्याख्यान व Science Conclave व नासी का वार्षिक अधिवेशन का आयोजन किया जाने पर सहमती बनी। इस बैठक में नासी, उत्तराखण्ड अध्याय के अध्यक्ष, डॉ० ए०एन० पुरोहित, भूतपूर्व कुलपति, गढ़वाल विश्वविद्यालय, श्रीनगर ने

विशेष बल देकर कहा कि राज्य के सुदूर क्षेत्रों में स्कूली बच्चों के लिये नासी, उत्तराखण्ड अध्याय विभिन्न प्रकार के कार्यक्रम आयोजित करेगी। प्रो० आर०डी० गौर, सलाहकार, नासी, उत्तराखण्ड अध्याय ने कहा कि राज्य में जैव विविधता पर कार्यशालाओं का आयोजन किये जाने पर बल दिया। नासी, इलाहाबाद से आये डॉ० नीरज कुमार द्वारा अकादमी के नवीनतम कार्यक्रमों की जानकारी दी

गयी। कार्यक्रम में नासी, उत्तराखण्ड अध्याय की वार्षिक रिपोर्ट 2014—15 का भी विमोचन किया गया। इस बैठक में डॉ0 डी०पी० उनियाल, समन्वयक, नासी, उत्तराखण्ड अध्याय एवं डॉ0 बी०पी० पुरोहित, संयुक्त निदेशक, यूकॉस्ट उपस्थित रहे।

राष्ट्रीय विज्ञान अकादमी भारत (नासी) की वार्षिक बैठक

राष्ट्रीय विज्ञान अकादमी भारत (नासी) की वार्षिक बैठक का आयोजन नेशनल इन्स्टीट्यूट ऑफ प्लांट जियोनोमिक रिसर्च, नई दिल्ली में दिनांक 14 अप्रैल, 2015 को आयोजित की गयी। इसमें उत्तराखण्ड अध्याय की वैज्ञानिक उपलब्धियों को प्रस्तुत करने हेतु डॉ०डी0पी0 उनियाल, समन्वयक, नासी उत्तरखण्ड अध्याय ने प्रतिभाग किया व अध्याय द्वारा किये जा रहे विज्ञान लोकव्यापीकरण कार्यक्रमों का प्रस्तुतीकरण किया, जिसको कि नासी के पदाधिकारी ने काफी सराहा व अन्य अध्यायों से उत्तराखण्ड की तरह कार्य करने हेतु सुझाव दिये। इस बैठक में नासी के महासचिव, डाँ० ए०के० त्यागी, डॉ० मंजू शर्मा, पूर्व सचिव, नासी, डॉ० वी०पी० शर्मा, प्रो० यू०सी० श्रीवास्तव व डॉ० नीरज कुमार ने सभी अध्यायों का मूल्यांकन किया व भविश्य में नासी इलाहाबाद द्वारा कार्यक्रम किये जाने हेत् जानकारी दी।

राष्ट्रीय विज्ञान आकदमी भारत द्वारा ग्रीष्मकालीन शिविर का आयोजन

राष्ट्रीय विज्ञान अकादमी भारत (नासी), इलाहबाद द्वारा ग्रीष्मकालीन शिविर का आयोजन दिनांक 12-18 जून, 2015 को इन्स्टी्यूट ऑफ टैक्नोलॉजी, देहरादून (डी०आई०टी०) में किया गया। उद्घाटन सत्र में परिषद के महानिदेशक, डाँ० राजेन्द्र डोभाल ने छात्र-छात्राओं को विज्ञान एवं तकनीकी के विषय में विस्तृत जानकारी देते हुए बताया कि किस प्रकार वे विज्ञान के क्षेत्र में अपने केरियर की शुरूआत कर सकते हैं व भारत में विज्ञान का क्या इतिहास रहा है व कौन से वैज्ञानिकों द्वारा उत्कृष्ट वैज्ञानिक कार्य किये गये हैं। उन्होंने प्रतिभागियों को विज्ञान के विषय में समझने हेत् प्रयोग करने के लिए प्रेरित किया। उपरोक्त समर स्कूल प्रतिभागियों को देहरादून स्थित वन अनुसंधान संस्थान, देहरादून, ऑयल एण्ड

नेवुरल गैस कारपोरेशन लिमिटेड, (ओ०एन०जी०सी०), वाडिया इन्स्टीट्यूट ऑफ हिमालयन संस्थान, सर्वे ऑफ इण्डिया आदि का भ्रमण कराया गया। उपरोक्त शिविर में डॉ० डी०पी० उनियाल, वरिष्ठ वैज्ञानिक अधिकारी, व समंवयक नासी उत्तराखण्ड अध्याय

ने "हिमालयी जैव विविद्यता" पर विशेष व्याख्यान दिया व उन्होंने प्रतिभागियों को जैव विविद्यता के संवर्द्धन व संरक्षण हेतु आवश्यकता के बारे में बताया वृ हिमालयी क्षेत्र में पाये जाने वाले जीव जन्तुओं के बारे में जानकारी दी।





विज्ञान परिचर्चा | वर्ष 5, अंक 4 | अप्रैल—जून 201

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- 1. NASI 86th Annual Session/Symposium
- 2. Workshops/Seminars/ Conferences
- 3. Environment Summit
- 4. Brain Storming Sessions on S&T Issues
- 5. National Science Day
- 6. International Biodiversity Day
- 7. National Technology Day
- 8. World Environment Day
- 9. Popular Lectures on S& T Issues
- 10. Science & Technology Exhibition

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Media Coverage

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Dr Rajendra Dobhai, Secretary of the Uttarakhand chapter of the National Academy of Sciences India, releases the annual report of the Uttarakhand chapter in Dehradun on Saturday, ATRIBUNE PHOTO

2,000 scientists benefited from NASI schemes: Dobhal

TRIBUNE NEWS SERVICE

DEHRADUN, JULY 5

Dr Rajendra Dobhal, Secretary of the Uttarakhand chapter of the National Academy of Sciences India (NASI), has said that more than 2,000 researchers and scientists have benefited in the past one year from various programmes organised by the NASI.

Dobhal while presiding over the annual review

meeting of the state chapter here, said the NASI had been working to promote science in the region and had given adequate encouragement to both scientists and researchers in the state. He also gave a presentation of work activities undertaken by the Uttarakhand chapter during the past one year.

Dr Manju Sharma spoke on future programmes of the NASI. She said the Uttarakhand chapter would focus on issues such as climate change and agriculture in the coming years. Prof RD Gaur, adviser Uttarakhand chapter, stressed on the conduct of more programmes that focus on biodiversity of the state.

The state chapter's annual report (2014-15) was released on the occasion. Dr DP Unival coordinator and Dr BP Purohit were prominent present on the occasion.



DEHRADUN I SATURDAY I JULY 4, 2015

NASI's State chapter plans various events

PNS M DEHRADUN

he Uttarakhand chapter of The Uttarakhand chapter of National Academy of Sciences, India (NASI) will organise Health Chaupal apart from workshop and popular lecture series on climate change and agricultural technology.

NASI principal scientist and former secretary, Biotechnology department, Prof Manju Sharma stated this at the annual meet of the

NASI State chapter in Dehradun on Friday. At the start of the meet-ing, NASI Uttarakhand secrering, NASI Ottarakhand Seterary and Uttarakhand State Council for Science and Technology (UCOST) director general Dr Rajendra Dobhal made a presentation about the various science programmes including workshops, seminars, lecture series and science exhibition among other activities of the State chapter. He said that the pro-grammes held by the State chapter so far this year had benefited about 2,000 researchers and scientists.

Dobhal also spoke of the
efforts of UCOST towards popularization of science along with research and devel-opment activities.

Speaking at the meeting, Prof Sharma discussed the future programmes of the State chapter in detail with the members. She said that lecture series and workshops will be held on various subjects

DR RAJENDRA SAID THE **PROGRAMMES** HELD BY THE STATE CHAPTER SO FAR THIS YEAR HAD BENEFITED **ABOUT 2,000** RESEARCHERS AND SCIENTISTS

including climate change and agricultural technology. Speaking in the meeting, NASI Uttarakhand chapter head and former vice chan-cellor of Garhwal University, Prof AN Purohit stressed that the State chapter will organise various types of programmes also for school children living in remote areas. Adviser to the chapter, Prof RD Gaur emphasised on the need for organizing workshops on the sub-ject of biodiversity.

Addressing the gathering on the occasion, Dr Neeraj Kumar from NASI, Allahabad, spoke of the latest programmes of the national academy. The NASI academy. The NASI Uttarakhand chapter annual report was also released in the meeting. State chapter coor-dinator Dr DP Uniyal and UCOST joint director Dr BP Purohit were also present in the meeting.



State Science & Technology Minister SS Negl presents an award at the inauguration of the 10th Uttarakhand State Science and Technology Congress (USSTC) 2015-16, being organised from 10 to 12 February at Vigyan Dham, Jhajra, in Doon, Also seen Director General, UCOST, Dr Rajendra Dobhal. (News on page 2)



IISWC technologies exhibited at 10th



By OUR STAPE REPORTER DEHRADUN, 13 HSWC exhibited the technologies developed by the

Institute or Science Exhibition during the 10th Uttarakhand State Science and Technology: Congress (USSTC-2016) organised by Uttarakband Council of Science and Technology (UCOST) Iran 10 to 12 Fabruary. Dr PK Mishra, DSWC Director, held discussions with dignitaries of the congress and had a proactive intéraction with participants and at 25 scientific stalls present.

Surendra Singh Negi, Minister of Science and Technology, Ultarakhand, Dr Rajendra Dobhal, Director General, UCOST, over 300 scientists, technocrats, scholars and students from various tesearch organisations, academia and NGOs, besides many Directors, Heads, Professors and VCs of research organisations and universities were exposed to various uschnologies of the Institute.

Verious soft and water conservation technologies, rechnological potential for improving agricultural and

fisheries production and the need for faster recognition of effective technologies by the stakeholders were highlighted during the exhibition. Flyers and brochuses on various technologies and concepts evolved at the Institute were distributed to the participants. The participants of the congress remarked on the useful interaction held at me IISWC Stall.

Dr Muruganandam, Sr Scientist (Fisheries), coordinated the exhibit on of IISWC at the Congress. Lakshmikant Shanna, Rakesh Kurnar and KR Joshi, Seniorlevel Technical Officers. actively parlicipated in the

UCOST celebrates National Science Day

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Javanti Prasad to be honoured by PAHAL

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The Tribune

Media not giving due space to science: Dobhal

DEBINATOR, FURNISMENT II Newspapers are not report-ing news relating to science that could play a psyotal role



Carbon dating studies can help in understanding climate change: Expert

Meha Pant

DEHRADUN: Extensive carbon cating studies can help under-stand climatic changes in the Himalayan region over the centu-ries, said noted palaeobotany scientist Chandra Mohan Nautiyal on Salanday Carbon dating is a method of

determining the age of something that is very old (such as a dinesaur bone) by measuring the amount of certain forms of carbon in it. He was in Debradun to address the National Science Day 2015 pro-gramme at the Regional Science Centre, Vigyan Dham.

Nautiyal sold. "The carbon dating can be utilised extensively for studying the past climatic changes, especially in the Himologyan region, like in Uttarskhand, This will in turn help us understand how and why those changes took place and consequently teach us lessons on what not to do (to avoid similar events) in future. "

similar events in ratio; Carbondalling ranakabe used for deciphering the archieological events like population raigration in response to calculities, shall in agricultural practices and cultur-al evolution, he said. We can collect samples from several metres deep (billiothe Kartin's surface) and can go back thousands of years in time," he said.

Su, how exactly is earthon dating done? Nautryal said that a sample



Palaeobotany scientist Dr Chandra Mohan Nautiyal speaks at the Regional Science Centre in Dehradun on Saturday.

of sediment or wood or charcoal associated with it) is burnt in the presence of oxygen which results in the conversion of carbon into benzeled guing through a long chemical procedure and then measuring the amount of radio-carbon to become. "More the amount of radiocarbon, younger

is the sample," he explained. Talking about some interesting against and the state of the st hills—was found to be about 900 years old through the application of carbon dating. Despite being located in seismically value took zone, the multi-storeyed houses have successfully with stood severad major and minor earthquakes,

Similarly, the evidence of the ancient cist burial chambers found in Kinnaur district of Himschal Fradesh were found to be around 2500 years old. In Unian Pradesh's Sant Kabir Nagar dis-trict scientists found evidence of domesticated rice dating back to as old as the Chinese

In Gujarat, while studying a charcoal sample—which was found to be around 4000 years old - we also found evidence of grains associated with both win ter and summer crops which was a bit surprising given the current climatic conditions of the state. Mayles the climate was different ther unless they developed some water harvesting technique, Nautiyal said

National Science Day celebrated in Dehradun

HT Correspondent

DEHRADUM: Students from over 200 schools, colleges and uni-versities of Dehradun parversities or Denraum per-ternated in National Science bay residual ons on the theme "Make in India: Science and Technology based Innovation" of the Regional Science Centre

in Debradum on Saturday.

During the session, portionals were given bands on man-ing in making solar lights and light entiting diode (LED) lights. Dr A N Purobit, former vice-chanceFor of Henwati Nandan Bahugum: Garhwal Central Howarsity, said scientific rem-perament should be developed

throughout the society,
The students also learnt
fundamentals about science through exhibits installed at the centre. The celebrations were held by Ettarakhand State Council for Science and Technology, in collaboration with Utrarakhand chapter of Netional Academy of Sciences India and National Council of Science Museum

The Tribune

Use scientific tools to make people's life better, says Negi



The Tribune

Develop libraries for better research: Negi

State science congress concludes, budding scientists honoured





10th USSTC concludes at Vigyan Dham

Develop libraries for children to promote research: Dr SS Negi

By OUR STAFF REPORTER DEHRADUN, 12 Feb: The 10th USSTC concluded at Vigyan Dham, Jhajhra, today.

The Chief Guest at the valedictory function was Dr SS Negi, Director General, Union Ministry of Forest, Environment & Climate Change, said that to develop R&D activities, one had to develop libraries first for the children and also to create relevant books and journals, and provide easy accessibility to them. He advocated the full exploitation of the newly created innovation hub in the premises of the regional science centre by the young scientists, in particular, and the masses, in general.

The presidential address was delivered by Indu Kumar Pandey, Financial Advisor to CM Harish Rawat. He advised that traditional knowledge in modern times ought to be propagated. Internationalisation of Yoga was a fruition of such a process.

Dr RC Sobti, Vice Chancellor, Baba Bhimrao Ambedkar University, Lucknow, gave a detailed lecture regarding



Research on Stem cells and their utility in curing various diseases. He explained how the human organs could be developed through the process of organogenesis. He prophesied that, in the near future, diseases would be cured through stem cells

Prof HS Dhami, VC, Kumaon University, said that to be in the

league of best universities, one had to enrich qualitatively. He wanted such conferences and workshops to be periodically organised.

VC, UTU, Prof PK Garg advised young researchers to contribute prolifically in R&D activities. Focus on skill development made youth more employable.

Director, Wadia Institute of Himalyaa Geology, Dr Anil Kumar Gupta said one had to increase R&D activities in the higher education sector for a developed

Dr Raiendra Dobhal, Director General, UCOST summed up the three day USSTC and presented a brief report. He presented the recommendations given by the

sessions. A total of 490 papers were presented during 17 technical sessions, which were evaluated by subject experts from outside the state of Uttarakhand. Among them 50 young scientists were awarded the Young Scientist Award, of which 28 were male and 22 females

The selected awardees were then felicitated by the dignitanes with awards and certificates. GB Pant University of Agriculture and Technology grabbed the maximum awards - 14, followed by HNB Garhwal University, 6, and Kumaon University, 4.

Prof SP Singh, ex-VC, HNB Garhwal University, was felicitated with the Eminent Science & Technology Excellence Award by UCOST, BSIP, Lucknow, Scientist Dr CM Nautiyal spoke about the importance of Science Communication.

The Innovator of the Year vard 2016 was won by Somjit Mandal, Graphic Era University for

his water flow stopper. UPES Chancellor Prof SJ Chopra proposed the Vote of



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