



SUPPORTING DOCUMENTS

3.2.2

**NUMBER OF WORKSHOPS/SEMINARS CONDUCTED ON RESEARCH
METHODOLOGY, INTELLECTUAL PROPERTY RIGHTS (IPR) AND
ENTREPRENEURSHIP DURING THE YEAR**

NATIONAL CONFERENCE CALLED 'NOVEL PROGRESSIONS IN SCIENCE AND TECHNOLOGY'

The science department of St. Bede's College organized a two-day National Conference called 'Novel Progressions in Science and Technology-2022' on November 28th and 29th, 2022. The primary objective of the conference was to facilitate the exchange of new ideas, research experiences, and applications while fostering global partnerships for future collaborations. The attendees included students and faculty members from various departments, including biotechnology. The conference was inaugurated by Dr. Shashikant Sharma, a member of the HP Private Institutions Regulatory Commission, who also released the abstract book with the conference's organizing committee.

Proceeding's link of the conference:

<https://www.stbedescollege.in/wp-content/uploads/2023/03/Proceedings-of-National-Conference-on-%E2%80%98Novel-Progressions-in-Science-and-Technology-.pdf>



National Conference called “Novel Progressions in Science and Technology” (28th and 29th November)



St. Bede's College Shimla

Affiliated to
Himachal Pradesh University Shimla-5
(NAAC Re-Accredited A+ Grade)
Heritage Status by UGC



Organizing
A
National Conference
On
**Novel Progressions in
Science & Technology-
2022**

On
November 28-29, 2022



About the College

St. Bede's College located at Navbahar, Shimla, Himachal Pradesh, is a historical and educational landmark of North India which aims primarily at providing quality higher education and training to women. Established in 1904, the institute was Re-Accredited with A+ grade for the third time by NAAC in 2016. It has also been granted College with Potential for Excellence and Heritage Status by UGC.

About the Conference

The objective of the conference is to provide a common platform for the exchange of new ideas, applications, and research experiences, establish business or research relations, and find global partners for future collaborations.

Sub themes of the Conference

- ❖ *Advancements in Nanoscience*
- ❖ *Environment Sustainability, Biodiversity and Agricultural Science*
- ❖ *Biological techniques in Life Sciences*
- ❖ *Bio-engineering, Bio-therapeutics and Sustainable Food Technology*
- ❖ *Development in Natural and Chemical Science*
- ❖ *Advances in Mathematical and Physical Sciences*
- ❖ *Artificial Intelligence and Computational Research*
- ❖ *Start-ups, Innovations & Technology*

Advancement in Nanoscience

Nanoscience is an emerging zone of science which dealt with the study of structures and the unique applications of materials on an ultra-small scale. It has the potential to reshape the world around us. It could lead to revolutionary breakthroughs in fields ranging from manufacturing to health care. The term nanoscience is cross disciplinary, meaning scientists from a range of fields including chemistry, physics, biology, medicine, computing, materials science and engineering are studying it and using it to better understand our world. However, the similar term nanotechnology is the design, production and application of structures, devices and systems at the nanoscale and hence also called as molecular manufacturing. So specifically, one is dealing with the investigation of the range of nanoscale materials and their altering properties while the other is using those materials and properties to generate something new or different.

Environment Sustainability, Biodiversity & Agricultural Science

Biodiversity is the variety of plant and animal life in the world, including their genetic, species and ecosystems diversity. Biodiversity is the key indicator of the health of an ecosystem. It

is essential for sustainable development and human well-being. It reinforces the facility of food, fibre and water and provides resilience to climate change. Biodiversity and agriculture are strongly interrelated because both contribute towards environmental sustainability. Despite these important roles in sustainable development and ecosystem services, biodiversity is lost due to over exploitation of resources, there is a risk that some thresholds will be passed; which may cause ecosystem imbalance. Hence conservation and sustainable use of biodiversity must require for mitigation and adaptation to climate change.

Biological Techniques In Life Sciences

Biological techniques are an essential part of life sciences study. Biological techniques refer to any physical or chemical technique that is used to study biological processes. From the single cell to the most complex organs a wide variety of tools and techniques enrich our understanding of the living world. As the modern science progresses more and more new tools are being utilized for the same purpose. With these new advancements a plethora of information previously unknown to the scientific community is being unraveled at an astonishing pace. Immense new possibilities in the fields of medicine, agriculture and environment preservation have arisen.

Bioengineering, Bio-Therapeutics & Food Biotechnology

Bioengineering is a discipline that applies engineering principles of design and analysis to biological systems and biomedical technologies. It is a relatively new discipline that combines many aspects of traditional engineering fields such as chemical, electrical and mechanical engineering. Bioengineering research include bacteria engineered to produce chemicals, new medical imaging technology, portable disease diagnostic devices, and tissue engineered organs. Bio-therapeutics are "antibody-drug cell therapy products where the active substance is extracted or produced from a biological source." These products include recombinant proteins and hormones, monoclonal antibodies (mAbs), cytokines, growth factors, gene therapy products, vaccines, cell-based products, gene-silencing/editing therapies, tissue-engineered products, and stem cell therapies. Bio-therapeutics has become an integral part of modern medicine and is increasingly used to treat and prevent serious diseases, illnesses or infections. They have been highly effective in the treatment of a range of conditions- from cancer to diabetes to rheumatoid arthritis and more. Food biotechnology is the application of modern biotechnological techniques to the manufacture and processing of food products, food ingredients and food additives. The food industry has gone through major changes in response to consumers' demand like low calories food products enriched with natural ingredients and additives rather synthetic ones. This research area covers a wide range of

biotechnological applications as well as food production, food processing, and food preservation.

Natural & Chemical Science

This theme covers all field chemistry that deals with the properties, composition, and structure of substances, the transformations they undergo, and the energy that is released or absorbed during these processes. Scientists are extensively involved to develop theories of matter that satisfactorily explain both permanence and change. To understand these complex behaviours, this field is divided into three parts physical, organic and inorganic chemistry. To understand deep inside the field, it is further explained through several disciplines. For example, analytical chemistry, theoretical chemistry, biochemistry, medicinal chemistry, neurochemistry, material chemistry, nuclear chemistry, electrochemistry, astrochemistry, quantum chemistry, computational chemistry, flavor chemistry, natural product chemistry, organometallic chemistry, petrochemistry, photochemistry, polymer chemistry, radiochemistry, supramolecular chemistry, synthetic chemistry, agrochemistry, atmospheric chemistry, chemical engineering, chemical biology, chemo-informatics, environmental chemistry, geochemistry, marine chemistry, pharmacology, phytochemistry, solid-state chemistry, thermochemistry, and many others.

Advances in Mathematical & Physical Sciences

In today's era of science and technology, the role of an interdisciplinary area developed on the crossroad of many science disciplines. There are many examples of implementing numerous models discovered by physics, chemistry and mathematics for the development of science and technology. This sub-theme deals with all the domains of pure and applied mathematics and physics which include Algebra, Number Theory, Graph Theory, Calculus, Matrices, Topology, Discrete Mathematics, Probability, Operational research, Fluid dynamics, Numerical analysis and computational analysis, Cryptography, Real Analysis, Materials and Photonics, Biomaterials and Biophysics, Condensed matter theory, Soft matter, Quantum Engineering and Computational condensed matter Physics, Mechanics and Mechanical engineering, Nuclear physics, Astrophysics, Plasma Physics, Optical Physics, Statistical Mechanics, Elementary Particle Theory, Gravitation and String Theory.

Artificial Intelligence & Computational Research

Artificial Intelligence and Computational Research are the theory, design, application, and development of biologically and linguistically motivated computational paradigms. Artificial intelligence is more like human intelligence, thinking strategically, abstractly, and creatively, with the ability to handle a wide range of complex tasks. Computational research is an evolving field which encompasses computing paradigms like

ambient intelligence, artificial life, cultural learning, artificial endocrine networks, social reasoning, and artificial hormone networks. Computational research plays a major role in developing successful intelligent systems, including games and cognitive developmental systems. Over the last few years there has been an explosion of research on deep learning, machine learning and neural networks. Nowadays, deep learning and machine learning has become the core method for artificial intelligence.

Innovation, Technology & Start-Up

Nowadays, Start-ups are being widely recognised as important engines for growth and jobs generation. Through innovation and scalable technology, start-ups can generate impactful solutions, and thereby act as vehicles for socio-economic development and transformation. For innovative entrepreneurs, the process of solving the customer's problems begins with observing people and keeping abreast of technological changes. The idea is not to eliminate the superfluous functions of a product or service but to tap innovative entrepreneur's in-depth knowledge of a particular subject in order to define the essence of the problem. Start-ups not just solve customer's problems but give it an innovative approach and reach to their needs through an intelligent way.

Abstract Submission

Abstract for the poster or oral presentation should not exceed 300 words. It should be written in *TIMES NEW ROMAN* and 12 font size with 1.5 spacing. Selected abstracts will be published in the form of full papers in college Journal "The Bede Athenaeum" (Peer reviewed).

Oral/Poster Presentation

Power point presentation for the selected abstracts should not exceed 12 slides and must comprise methodology, results and outcomes. Poster should be prepared in a prescribed format i.e. height (4 feet) x breadth (3 feet).

Registration

Last date for Abstract Submission and Registration- 25 October, 2022

Registration fee

UG/PG Students-INR 400/-, Research Scholars-INR 800/-, Faculty, Scientist & others-INR 1000/-. Registration fee includes conference kit, lunch and tea. Participants are requested to get registered well in time. On the spot registration will be allowed with a late fee of INR 500/-.

Awards

- ❖ Best Oral Presentations (2)
- ❖ Best Poster Presentations (2)

Link for Registration:

https://docs.google.com/forms/d/e/1FAIpQLScBqxZQNfYd5bQeoxbwStmzPyDmptB776PYpVSNPAyQE5mJEQ/viewform?usp=pp_url

Speakers



Prof. Nagesh Thakur
HPU Shimla



Prof. Pardeep Kumar
CUHP Dharamshala



Dr. Yogendra Padwad
CSIR-IHBT Palampur



Dr. Manoj Sharma
JNU Delhi



Dr. Pankaj Thakur
JNU Delhi



Dr. Lakshvir Singh
SPU Manli



Dr. Sandeep Sood
N.I.T. Kurukshetra



Dr. Ashish Arora
IKG PTU Jalandhar

Accommodation

The participants need to arrange their accommodation themselves. However the list of nearby hotels and guest houses will be provided.

Patron: Prof. (Sr.) Molly Abraham

Convener: Dr. Maheshwar Singh Thakur

Organising Secretary: Ms. Preeti Kaundal

National Advisory: Dr. Sunil Kumar HPU Shimla, Dr. Rakesh Kumar NIT Jalandhar, Dr. Dinesh Kumar CSIR-IHBT Palampur, Dr. Sunil Thakur CUHP Dharamshala,

Members: Dr. Sapna Sharma, Dr. Shramja Munjal, Dr. Shruti Gupta, Dr. Kusum, Dr. Shweta Thakur, Dr. Jyotika Brari, Dr. Kam Mehta, Mr. Susheel Gupta

Email Id: scibedes2022@gmail.com

Contact No. 9459742576, 7018705334

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Brochure

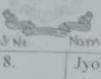


St. Bede's College, Shimla

National Conference on Novel Progressions in Science and Technology
November 28-29, 2022

REGISTRATION ATTENDANCE SHEET (2022-23)

S.No.	Name of the Participant	Designation	Contact No.	Address	Oral/Poster/ Attendee/ Invited Talk	Fee Paid	Signature
1.	Ramesh Kumar	Asst. Prof.	8628820485	Govt. College Solan, Distt. Solan 173212, H.P. India	P1	Paid (Rs. 1000)	
2.	Dr. Rajesh Kumar	—	—	Jagdish Chandra D.A.V. College, Dasuya	P2	—	—
3.	Mohammad Perwez	Post. Doc N.P.P.F.	9818000662	Jawaharlal Nehru University	P3	Paid (Rs 800)	
4.	Palak Ahir	Research scholar	8627074747	H.P.U.	P4	Paid (Rs 800)	
5.	Neha	Ph.D. Scholar	908017250	Central University H.P.	P5	—	
6.	Marry Albright Johnson	Research scholar	9459131766	H.P.U.	P6	Paid (Rs. 800)	
7.	Jagriti Rana	PhD Research scholar	82191-40982	H.P.U.	P7	Paid (Rs. 800)	



St. Bede's College, Shimla

S.No.	Name	Designation	Contact No.	Address	Oral/Poster/Attendee/Invited Talk	Fee Paid	Signature
8.	Jyoti Rana	PhD Research scholar / Biochem	70124 84156	H.P.U.	P7	Paid (Rs. 800)	
9.	Dimple Guleria	PhD Research scholar	9015181473	H.P.U.	P8	Paid (Rs. 800)	
10.	Inesh Kumar	Research scholar	—	H.P.U.	P9	—	
11.	Dr. Vinit Kumar Chaudhary	Asst. Prof. Dept. Chemistry	70148 59984	IEC University Baddi, Solan H.P.	P10	Paid (Rs. 1000)	
12.	Kanika Mandhan	Ph.D. Chemistry	70148 59984	IEC University Baddi, Solan H.P.	P11	Paid (Rs. 800)	
13.	Dr. Vandna Sharma	Ph.D. Chemistry	70148 59984	IEC University Baddi, Solan H.P.	P12	Paid (Rs. 1000)	
14.	Dr. Lalit Kumar Guleria	Asst. Prof. Chem	7018605498	Govt. College Solan, Distt. Solan 173212, H.P. India	P13	Paid (Rs. 1000)	
15.	Shalima Kumari	Research scholar	7696008322	H.P.U.	P14	Paid (Rs. 800)	
16.	Kavita Devi	Research scholar	—	H.P.U.	P15	Paid (Rs. 800)	
17.	Babita Kumari	Ph.D. scholar	—	H.P.U.	P16	Paid (Rs. 800)	
18.	Dr. Sonika Sharma	faculty	—	MLSM College Sundernagar	P17	—	—
19.	Parul Chauhan	Ph. D. Chemistry IEC, Baddi	7015891495	IEC University Baddi, Solan H.P.	P18	Paid (Rs 800)	

S.No	Name	Designation	Contact No.	Address	St. Bede's College, Shimla	Fee Paid	Signature
					Oral/Poster/Attendee/Invited		
20.	Dr. Renu Bala	Guest Faculty	7018584787	Dept. Of Chemistry, Sardar Patel University, Mandi	P19	Paid(Rs 1000)	Renu
21.	Pushpak Dahiya	PhD Scholar	973879635	H.P.U	P20	Paid(Rs 800)	Pushpak
22.	Huma Fatima			Indian Institute of Technology Delhi	P21		
23.	Sangeeta Kumari	Research Scholar	9459028005	H.P.U	P22	Paid(Rs.800)	Sangeeta
24.	Dr. Prem Prakash			Dept. Of Botany, Govt. College, Solan	P23		
25.	Shweta Thakur	Faculty		St. Bede's College, Shimla	P24		
26.	Pooja Kumari	Research Scholar		Central University H.P	P25	Paid(Rs800)	Pooja
27.	Sanjay Kajal	Research Scholar	9132415119	H.P.U	P26	Paid(Rs.800)	Sanjay
28.	Shilpa Sharma	PG Student	9459909402	Dr. Yashwant Singh Parmar University of Horticulture and Forestry Nauni,	P27	Paid(Rs.400)	Shilpa
30	Aastha	P. G. Student			P30		

3 | Page

S.No	Name	Designation	Contact No.	Address	St. Bede's College, Shimla	Fee Paid	Signature
					Oral/Poster/Attendee/Invited		
29.	Ruchika Devi	Research Scholar	8580747129	Solan H.P			
30.	Dr. Nitesh Kumar	Faculty	7876042204	H.P.U.	P28	Paid(Rs.1000)	Nitesh
31.	Rupinder Kaur	Faculty		Tula Institute Dehradun	P29	Paid(Rs.1000)	Rupinder
32.	Satish Kumar			Dept. Of Higher Education Shimla, H.P, India	O1		
33.	Aastha	Student	8289033089	H.P.U. Shimla	P2 (Poster)	Paid(Rs-800)	Aastha
34.	Dr. Kanu Mehta	Faculty		St. Bede's College, Shimla	O3		Kanu
35.	Rajbir Kaur	Asst. Prof. H.P.	9872655943	Gurunank Dev Engineering College Ludhiana Punjab	O4	Paid(Rs.800)	Rajbir
36.	Chitresh Sharma	Research Scholar	94188-0502	H.P.U	O5	Paid(Rs.800)	Chitresh
37.	Harjinder Singh	Research Scholar	9882314647	H.P.U.	O5	Paid(Rs.800)	Harjinder
38.	Dr. Neha Thakur	Asst. Prof.	9418459336	UHF Nauni	O6	Paid(Rs.1000)	Neha
39.	Vandna Kumari	HPU Shimla	8988484896	H.P.U	O7	Paid(Rs.800)	Vandna

4 | Page

S.No	Name	Designation	Contact No.	Address	St. Bede's College, Shimla Oral/Poetry/Attendee/Invited	Fee Paid	Signature
40.	Smita Kapoor	PHD Scholar	9805252966	CSIR-IHBT	O8	Paid(Rs.800)	Smita Kapoor
41.	Madhu Bala	Faculty		St. Bede's College, Shimla	O9		
42.	Yuvika Sood			Lovely Professional University Jalandhar	O10	Paid(Rs.800)	Yuvika
43.	Dr. Shaifali	Assistant Prof	9805087499	Ami University	O11	Paid(Rs.1000)	Shaifali
44.	Abhishek Goel	Ph.D Scholar	9857777877	CSIR-IHBT Palampur	O12	Paid(Rs.800)	Abhishek
45.	Moneesh Thakur	Online		Veterinary Hospital Harchakian, Kangra, H.P	O13	Paid(Rs. 1000)	Presented online
46.	Manju Bala	Research Scholar		H.P.U Shimla	O14	Paid(Rs.800)	
47.	Jyotika Brari	Faculty		St. Bede's College, Shimla	O15		
48.	Dr. Kusum	Faculty		St. Bede's College, Shimla	O16		
49.	Akshay Sharma	Ph.D.Scholar		H.P.U	O17	Paid(Rs.800)	Akshay
50.	Renuka Sharma	Ph.D.Scholar		H.P.U	O18	Paid(Rs.800)	Renuka

5 | Page

S.No	Name	Designation	Contact No.	Address	St. Bede's College, Shimla Oral/Poetry/Attendee/Invited	Fee Paid	Signature
51.	Vandna	Research scholar	8209071791	H.P.U	O19	Paid (Rs. 800)	Vandna
52.	Riya Chandel	Research scholar	7018942060	H.P.U	O20	Paid(Rs.800)	Riya
53.	Bhagwati Prashad Sharma	Research scholar	702761976	Career Point University Hamirpur H.P	O21	Paid(Rs. 800)	Bhagwati
54.	Arun Kumar	Research Scholar	750493492	Career Point University, Hamirpur, H.P	O22	Rs.800	Arun
55.	Archana Mullick	Student	7807068039	St. Bede's College, Shimla	O23		Archana
56.	Shivani Chauhan	Ms.	9805622311	Shimla	O24	Paid(Rs.400)	Shivani
57.	Vaishnavi	Ms.	9805109024	St. Bede's College, Shimla	O25		Vaishnavi
58.	Divya Thakur	PHD scholar	8219585027	Central University H.P.	Attendee	Paid (Rs. 800)	Divya
59.	Nancy	PHD scholar	8219434154	Central University H.P.	Attendee	Paid (Rs. 800)	Nancy
60.	Manjita	Ph.D Scholar	8210585077	Central University H.P.	Attendee	Paid (Rs. 800)	Manjita

6 | Page

St. Bede's College, Shimla							
S.No	Name	Designation	Contact No.	Address	Oral/Poster/Attendee/Invited talk	Fee Paid	Signature
61.	Priya	Phd Scholar	9625568504	Central University H.P.	Attendee	Paid (Rs. 800)	<i>Priya</i>
62.	Priyanka	PhD scholar	8219585071	Central University H.P.	Attendee	Paid (Rs. 800)	<i>Priyanka</i>
63.	Sameer Khan	STUDENT	8278890868	Shoolini University	Attendee	Paid (Rs. 400)	<i>Sameer</i>
64.	Aashtha Dhawan	Student	8289033089	Shoolini University	Attendee (Poster)	Paid (Rs. 400)	<i>Aashtha</i>
65.	Shweta Manan	-	-	S.V.S.D.P.G College Bhatoli Una	Attendee	-	-
66.	Vicky	-	-	MLSM College Sundernagar	Attendee	-	-
67.	Dr. Maridula Thakur	As. Prof.	7982-45885	H.P.U	Attendee	Paid (Rs1000)	<i>Maridula</i>
68.	Shashikant	-	-	Raipur Institute of technology	Attendee	-	-
69.	Ashish Bamta	PhD Scholar	7018401583	H.P.U	Attendee	Paid (Rs. 800)	<i>Ashish</i>
	Aastha	Ph.D Scholar	7018583170	H.P.U	0	Paid (Rs. 800)	<i>Aastha</i>

7 | Page

St. Bede's College, Shimla							
S.No	Name	Designation	Contact No	Address	Oral/Poster/Attendee/Invited talk	Fee Paid	Signature
70.	Dr. Lakhveer Singh	Associate Professor and Head	-	Department of Chemistry Sardar Patel University, Mandi	Invited Speaker	-	<i>Lakhveer</i>
71.	Dr. Ashish Arora	Professor	-	Department of Mathematical Sciences, I.K. Gujral Punjab Technical University	Invited Speaker	-	<i>Ashish</i>
72.	Dr. Pankaj Thakur	Associate Professor	-	Special Centre for Nano Science, Jawaharlal Nehru University, New Delhi.	Invited Speaker	-	-
73.	Dr. Manoj Kumar	Assistant Professor	-	Crop Genetics and Informatics Group School of Biotechnology JNU, New Delhi	Invited Speaker	-	<i>Manoj</i>
74.	Dr. Pradeep Kumar	Professor, Dean Academics	-	Central University Himachal Pradesh	Invited Speaker	-	<i>Pradeep</i>
75.	Dr. Tarun Sharma	Assistant	-	U.T. H.P.U	Invited Speaker	-	<i>Tarun</i>

8 | Page

University
Institute of
Technology

S.No	Name	Designation	Contact No.	Shimla			Signature
76.	Dr. Sandeep Chauhan	Professor		Department Of Chemistry, HPU	Chairperson	-----	<i>[Signature]</i>
77.	Dr. Balbir Patil	Assistant Professor		Department of Physics, HPU	Chairperson	-----	<i>[Signature]</i>
78.	Dr. Meenakshi Sharma			Department of Zoology, Centre of Excellence, Govt college, Sanjauli	Chairperson	-----	
79.	Dr. Sunil Kumar Kumar	Associate Professor	9418353476	Department of Chemistry, HPU	Chairperson	-----	<i>[Signature]</i>
80.	Dr. Sunil Tripathi	Professor		Dept of Animal Science CUHP Deemed to be Univ.	Chairperson		<i>[Signature]</i>
81.							

Registration Attendance Sheet