# **INSTITUTE OF TECHNOLOGY**

UNIVERSITY OF KASHMIR ZAKURA CAMPUS



# **INSTITUTE OF TECHNOLOGY**

Institute of Technology (IOT), University of Kashmir, Zakura Campus, established in the year 2014 with the approval of All India Council of Technical Education (AICTE) is the constituent Engineering Institute of University of Kashmir. At the bachelor's level, the Institute offers programs in Electronics and Communication, Electrical, Mechanical and Civil Engineering. At the master's level, in Electronics and Communication, Power System and Control (Electrical Engineering) and Design Engineering (Mechanical Engineering). All the courses offered at the Institute are AICTE approved. At IOT we strive to maintain a good standard of engineering education through teaching, innovative curricula and research. With a sound foundation in the mathematical, scientific, engineering & computational fundamentals Institute aims at teaching and research for effective application of knowledge and skills for solution of problems locally as well as globally. To minimize the gap between industry and academia we strive at strengthening and expanding collaboration and partnerships with industry and R&D organizations, the Tech-Fest ROSHNAAS-22 is one of the many steps in the same direction.

## **VISION**

The Institution envisions to be a leading centre in the world promoting a scientific environment based on cutting edge technology where young minds are not only motivated to become the leaders of knowledge but are also trained to withstand challenges of the present times.

#### **MISSION**

The Institute aims to provide quality engineering education through qualified faculty and state-of-the-art technology to young minds so that they emerge as competitive engineers carrying out innovation-based projects for the benefit of society at large.

#### **CHIEF PATRON**



PROF. NILOFER KHAN
HONOURABLE VICE-CHANCELLOR,
UNIVERSITY OF KASHMIR

"Technology will not replace great teachers but technology in the hands of great teachers can be transformational" ~George Couros

ROSHNAAS-22 Inaugural edition.

**By:**Institute of Technology
University of Kashmir.

## **PATRON**



DR. NISAR AHMAD MIR
REGISTRAR, UNIVERSITY OF
KASHMIR

"Let's go invent tomorrow instead of worrying about what happened yesterday"

~Steve Jobs

#### **CO-PATRON**



PROF. S.M.A ANDRABI
DEAN SCHOOL OF ENGINEERING

Institute of Technology, Zakura Campus is a constituent Institute of University of Kashmir, a NAAC accredited A+ University. Established in the year 2014. Institute of Technology achieved prominence among the technical institutions of the UT of J&K in a short duration of less than a decade. The institute offers B.Tech. programme in all the major engineering branches and MTech. in Electronics and Communication, Power System and Control (Electrical Engineering) and Design Engineering (Mechanical Engineering).

With a vision to produce high quality engineering professionals, the institute is constantly striving to achieve its goal of high-quality technical education by self-assessment, accountability and innovative and modern methods of pedagogy. The institute has been able to create an enabling environment for innovation, incubation and entrepreneurship for the youth of J&K and many patents have been filed by the faculty and students at the institute in last couple of years. By producing technical manpower of international standard and by becoming a hub of scientific and technical innovations and inventions the Institute pledges to contribute its bit in nation building and in transforming agriculture-based economy of the country into technology-based economy.

The students of engineering are being equipped with theoretical and practical know how to provide technology-based solution to the problems and challenges faced by the society and become job providers rather than job seekers. It is in this pursuit that the Techfest "Roshnas-22" is being organised. The Techfest will provide students an opportunity to display their innovations, to discussion their ideas with experts, listen to the ideas and experiences of successful people in industry and academia and to prepare themselves for taking challenging roles as competent professionals in the field of technology and technopreneur ship.

I am looking forward to having a weeklong enthralling and interesting Techfest at the Institute between 8th to 12th Dec 2022. I wish organizers of Techfest a grand success.

#### **CO-PATRON**



PROF. GOWHAR BASHIR VAKIL
DIRECTOR INSTITUTE OF TECHNOLOGY

The Institute of Technology, University of Kashmir is one of the pioneers in the field of education in various branches of engineering as it enters the ninth year of its existence. Over the years, It has been attracting the best minds to various programmes creating the right atmosphere for them to flourish and help them grow into confident adults or world leaders.

The Institute encourages extra-curricular activities with one of them being Roshnaas Techfest that provides a platform for a unique blend of scientific thinking, innovation, exchange of ideas and social impact.

Roshnaas Techfest, the Science and Technological festival of institution of technology Zakura is the first of its kind with a motto of promoting excellence in technology, scientific thinking and innovation fostering healthy and spirited competition among students, etc. Techfest also boasts of displaying cutting edge technology in exhibitions and competitions, organising an array of thought provoking and motivating lectures to inspire students and having events like junkyard war, virtual competitions, etc. Techfest also provides and enchanting blend of Technology and entertainment while conducting workshops and seminars to hone the skills of participants.

we look forward to the Roshnaas Techfest 2022 and wish that it achieves the heights of success.

## **ORGANISING SECRETARIES**



ER. ROUF UL ALAM
ASSISTANT PROFESSOR, DEPARTMENT OF
ELECTRONICS AND COMMUNICATION
ENGINEERING



DR. JUNAID MASOODI
ASSISTANT PROFESSOR, DEPARTMENT
OF MECHANICAL ENGINEERING



ER. QAZI JUNAID ASHRAF
ASSISTANT PROFESSOR, DEPARTMENT
OF MECHANICAL ENGINEERING

"If I can't do

We can do

If I can do

We can do it better"



ROSHNAAS-22 is the inaugural edition of Annual Techfest of the Institute of Technology, University of Kashmir, Zakura Campus, scheduled from 8th to 12th December 2022. This 5-day mega techno-cultural fest will see huge participation of students from various schools, colleges and universities from all over the Union territory of J&K. ROSHNAAS-22 is a special series of events with more than 30 exciting competitions, project presentations, workshops, and seminars integrated with a perfect dose of entertainment. A diverse group of expert panellists which include innovators, scientists, engineers, academicians, administrators, artists, and entrepreneurs will lead a wide array of conversations sharing their experiences, endeavours, and insights amongst the youth of Jammu and Kashmir.

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**EVENTS** 

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- CAR/BIKE EXPO
- CAMPUS LAB TOURS
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## **EVENTS**

#### **LET'S TALK**

This is an event designed to educate and inspire. A network of thought leaders and experts is at the heart of our existence. We hope to bring together visionaries and luminaries across the fields, these include academicians, bureaucrats, entrepreneurs, artists, scientists and athletes under one roof for exchange of ideas. Through this event, students will be enlightened with true life stories of eminent personalities who have achieved great heights in their respective fields, giving students a chance to deepen their knowledge, strengthen their resolve and get motivated from the best in business.





Dr Rakesh Sehgal Director NIT



Ab Hamid Bhat Head Rahim Green



Dr Sehrish Asghar (IAS)



Prof. Zafar A Reshi Dean School of Biological Sciences University of Kashmir



Dr Javid Ahmad Wani Director NIFT Srinagar



Waseem Ahmad Nadaf Social Innovator



Er Ishtiyaq Amin Shah Chairman Forum for Revival of Human Values



Dr Vipin Kumar Director NIF



Dr Syed Fakhrudin DC Budgam



Zareef Ahmad Zareef Kashmiri Poet



Dr. Nisar Ahmad Mir Registrar University of Kashmir



Bikramjit singh
Director Scintillation, Research
and Analytics Services

#### **INVITED TALKS**

The main stage will feature diverse well-known speakers who will share their knowledge about various topics and more. This will be a great opportunity for the students to learn about new topics or get their questions answered by experts. This program is open to all interested students. Invited Talks would be addressed on





**Women Empowerment** 

Dr. Shazia Manzoor, Head Department of Social Works, University of Kashmir.



What After 12?

Mr. Salman Shahid, Co-founder and CEO RiSE Institute.



**New Education Policy**Prof. Geer M. Ishaq, Director CCPC, University of Kashmir.



**Vehicle Dynamics**Dr. Abhimanyu Pratap Singh, Department of Mechanical Engineering, IIT Kanpur.



**Essence of Software Systems in Formal Education** Mr. Naseer Ahmad, Sr. SWE Manager, Microsoft.



**Engineering as a Career**Mr. Hussain Kanchwalla, Assistant Professor, IIT Delhi.



Mental Health and Stress Management
Dr. Syed Mehwish, Department of Psychiatry, GMC Srinagar.

#### WORKSHOPS

The workshops will be conducted by the experts of respective fields and have been designed to impart hands-on training to equip students with job-oriented skills. An open registration link will be provided for the students to register on a first cum first serve basis. Features:





**3-D Modelling using SolidWorks** by Dr. Mohammad Zehab Ud Din, Lecturer, Department of Mechanical Engineering, Institute of Technology, University of Kashmir.



**Surveying and Levelling using advanced survey equipment** by Dr. Iftekar Gull, Lecturer, Department of Civil Engineering, Institute of Technology, University of Kashmir.



**Electronic Prototyping and Embedded Systems using Arduino** by Er. Rouf Ul Alam, Assistant Professor, Department of Electronics & Communication Engineering, Institute of Technology, University of Kashmir.



Scholarships for Higher Studies abroad by Mr. Aqib Mohammad, resource person Edu Planner.



**Entrepreneurship and self-employment** by Mr. Imtiyaz Ahad, associate project manager and start up coordinator JKEDI.

#### **OPEN MIC**

This program is intended to allow the participants to express themselves and share their talents with the audience. This includes singing, comedy, poetry etc. There will be open registrations for the same.

Disclaimer: Sensitive, immoral, political and religious topics are strictly prohibited.





#### **ENTERTAINMENT**

#### **ARTIST PERFORMANCES**

Notable Artists across the valley will perform a live show in front of audience. This will help the artists, students and others to showcase their real talent and will serve as platform for them to showcase their abilities and simultaneously act a dose of entertainment for audience.

#### **CULTURAL PROGRAMS**

This segment will include performances by participating students and will consist of school/college skit-drama like programs, school/college band performances etc.



#### PROJECT EXHIBITION

In collaboration with Centre for Innovation, Incubation & Entrepreneurship CIIE Institute of Technology, University of Kashmir and National Innovation Foundation (NIF), this event has been designed to pitch and promote innovation and ideas for a better future. And aims at encouraging students to have creative and unique ideas for local and global problems. Through this program. Students will showcase their innovative ideas by applying to the "Call for Ideas" part of this event or showcase the prototype and give a presentation about their prototype highlighting its use and uniqueness. The segment is designed to encourage research and ideas in innovation, which will be further evaluated by experts for probable incubation, assistance and product development under the aegis of CIIE and NIF. Moreover, it will help promote these ideas as viable projects for patenting. Winners will be awarded with prizes.





# **COMPETITIONS**

#### **DEBATE**

Debates are categorized into:

- **Symposium:** A time limit of 5 minutes would be given to each participant to speak on a given topic. They would be questioned by the audience and judges and based on their defence; the best speaker wins.
- Debates: In this event, 10 teams consisting of two members each will be formed. 5 teams will speak in Favor and 5 teams will speak against the given topic. The topics will be "Do Coaching Centers Really Play a Role in Building a Students Career." and " Why Core Branches of Engineering Are Underrated When Compared to IT."



## QUIZ

It will be a four-day long competition and will be conducted among different teams. Each team consists of 3 members who will be grouped into 5 different teams. There will be 4 rounds of the competition and the team with the maximum points would secure the winning spot and the awards.

The topics for the quiz are:

- Sports and Entertainment
- Kashmir Knowing Your Roots
- General Knowledge and Current Affairs
- Science and Technology



#### **ART COMPETITION**

This will be a theme-based competition for which a theme will be assigned on spot. the best art will be awarded. It includes:

- Drawing Competition
- Sketch Competition





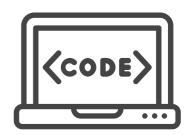
#### PHOTOGRAPHY COMPETITION

This will be a theme-based competition for which a theme will be assigned on spot. Participants will get limited time and the best photograph will be awarded.

## **GAMING SECTION**

# 1 CODERS' CORNER

Coding events will be hosted giving participants the opportunity to develop creative problem-solving abilities. Cryptic treasure hunts, bug-hunting competitions, and code relays are among the activities that will keep players hooked to their screens.





# 2 DA VINCI'S DEN

These competitions put to test the imaginative and technological prowess of the participants using CAD. In order to progress through the levels and be eligible to compete for attractive prizes, students in all sub-fields of engineering will need to broaden their perspectives and strengthen their understanding of their respective subjects.

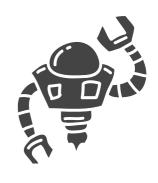
# 3 BLITZ

An eSports tournament will be held over the course of the event, and players will participate in first-person shooter classics like Valorant and CS:GO in order to display their dexterity and agility. Teams registering for the competition will face off against one another in a challenging series of matches with the expectation of securing first place and enticing cash prizes that are up for grabs.



# 4 THE TECHNOFORGE

The competing teams will be provided with basic components necessary to build simple robots for the CTF, KOTH, and racing challenges. The built bots will compete in an agility test to discover which one is the nimblest. In order to triumph over their rivals and take-home enticing rewards, teams will need to combine their intuitive abilities with their technical know-how. Additionally, the festival hosts a structure building exercise wherein participants collaborate to build structures using popsicle sticks, Elmer's glue, toothpicks, and dental floss. The structures will be rated on design aesthetics, originality, presentation, load bearing capability, strength-to-weight ratio, and failure point. As an added bonus, there will be a competition with a Junkyard Wars theme. Participants will utilize their ingenuity and imagination to construct unique machines.



# 5 FUN CORNER



ROSHNAAS not only hosts technical competitions, but also has recreational content for the participants to enjoy. There are several opportunities to test one's mettle, such as in Chess, Jenga, Hooky, Treasure Hunts, etc. As an added bonus, the arcade area is a great place to challenge participants to a game of Tekken, Mortal Kombat, Insane 2 etc. in a competitive environment.

# **EVENTS**

#### **CAR EXPO**

The Car Expo will be held on campus. It will be attended by automotive industry representatives, dealers and car enthusiasts that will come together on a single platform to showcase all that is best in the automotive world, in terms of products, technologies, concepts and trends.





#### **LAB TOURS**

This event will feature the visit of participating students to all the labs of Institute.

#### **SNACK SHACK**

Food Court for the benefit of the visitors to the event, a one-stop destination for all your food cravings will be available.





#### **OPEN MARKET**

Owners of several start-ups'/businesses will be a part of this fest. this event will serve as a platform for these start-ups' to promote their business and win over a larger clientele.

## **INVITEES**

#### **INDUSTRY STAKEHOLDERS**

The event offers a great opportunity for local and regional stakeholders from the industry. The industry stakeholders can tap the foremost engineering talent driven by technological innovation and skills. We have extended invitations to various government departments, industrial estate, MNC's among many others.





#### UNIVERSITIES/COLLEGES

This Techfest gives young and graduating students an opportunity to showcase their skills and provides them with an entrepreneurial exposure of one of its kind in the valley. More than 70 colleges across the Kashmir valley are invited to attend this event.

#### **SCHOOLS**

More than 100 schools have been invited to attend this fest. With dedicated events for school participants, students from 9th standard to 12th standard are expected to participate from the valley.





#### **GENERAL PUBLIC**

Roshnaas invites general public to inaugural edition filled with exhilarating competitions, astounding display of skills and mental prowess and cutting-edge technology.

# **SPONSORSHIP TIERS**

#### **Diamond**

#### ₹600000

LARGE LOGO ON ALL BANNERS

LOGO ON VOLUNTEER'S **JACKETS** 

LOGO ON PAMPLETS

**LOGO ON POSTERS** 

LARGE LOGO ON SPONSOR WALL

LARGE LOGO ON BARRICADES

LOGO ON INDIVIDUAL PROGRAM BANNERS

LOGO ON PODIUM

LOGO PROP IN PHOTO воотн

LOGO ON QUIZ QUESTIONS

LOGO ON SIGN BOARDS

MAIN STAGE BACKDROP TICKER

ALL PROGRAM INTERMISSION

SCREEN SAVERS OF **PROJECTORS** 

PRIME LOCATION OF STALL

PRIME LOCATION OF **CAR/BIKE EXPO** 

PRIME LOCATION OF **FOOD COURT** 

#### **Platinum**

#### ₹300000

SMALL LOGO ON ALL BANNERS

LOGO ON PAMPLETS

LARGE LOGO ON SPONSOR

**SMALL LOGO ON BARRICADES** 

MAIN STAGE BACKDROP

SCREEN SAVERS OF **PROJECTORS** 

PRIME LOCATION OF STALL

PRIME LOCATION OF FOOD COURT

#### Gold

#### ₹100000

LOGO ON PAMPLETS

SMALL LOGO ON SPONSOR WALL

SMALL LOGO ON BARRICADES

PRIME LOCATION OF **FOOD COURT** 

#### Silver





























#### **Diamond**

#### ₹600000

STORY ON INSTAGRAM POST ON INSTAGRAM VIDEO ON INSTAGRAM 3 REEL ON INSTAGRAM STORY ON TWITTER 8 POST ON TWITTER 5 VIDEO ON TWITTER 3 POST ON LINKEDIN VIDEO ON LINKEDIN 3 STORY ON FACEBOOK 8 POST ON FACEBOOK 5 VIDEO ON FACEBOOK 3 STORY ON SNAPCHAT STATUS ON FACEBOOK 3 REEL ON FACEBOOK 5 MAIN STAGE LED 30MIN **SCREEN TIME** 

#### **Platinum**

#### ₹300000

STORY ON INSTAGRAM 5 POST ON INSTAGRAM 3 VIDEO ON INSTAGRAM 2 REEL ON INSTAGRAM 5 STORY ON TWITTER 5 POST ON TWITTER 3 VIDEO ON TWITTER 2 POST ON LINKEDIN 3 VIDEO ON LINKEDIN 2 STORY ON FACEBOOK 5 POST ON FACEBOOK 3 VIDEO ON FACEBOOK 2 STORY ON SNAPCHAT 5 STATUS ON FACEBOOK 1 REEL ON FACEBOOK 3 MAIN STAGE LED SCREEN TIME

#### Gold

#### ₹100000

STORY ON INSTAGRAM	3
POST ON INSTAGRAM	2
VIDEO ON INSTAGRAM	1
REEL ON INSTAGRAM	2
STORY ON TWITTER	3
POST ON TWITTER	2
VIDEO ON TWITTER	1
POST ON LINKEDIN	2
VIDEO ON LINKEDIN	1
STORY ON FACEBOOK	3
POST ON FACEBOOK	1
VIDEO ON FACEBOOK	1
REEL ON FACEBOOK	1
STORY ON SNAPCHAT	3
MAIN STAGE LED SCREEN TIME	5MII

#### Silver

#### ₹30000

STORY ON INSTAGRAM 1
POST ON INSTAGRAM 1
REEL ON INSTAGRAM 1
STORY ON TWITTER 1
POST ON TWITTER 1
POST ON LINKEDIN 1
STORY ON FACEBOOK 1
STORY ON SNAPCHAT 1



Diamond	Platinum	Gold	Silver
₹600000	₹300000	<b>₹100000</b>	₹30000
STALL PRICE 150/sqft	STALL PRICE 200/sqft	STALL PRICE 250/sqft	STALL PRICE 300/sqft
CAR/BIKE EXPO PLATFORM PRICE 50/sqft	CAR/BIKE EXPO PLATFORM PRICE  100/sqft	CAR/BIKE EXPO PLATFORM PRICE 150/sqft	CAR/BIKE EXPO PLATFORM PRICE  200/sqft
FOOD COURT  100/sqft	FOOD COURT  200/sqft	FOOD COURT  300/sqft	FOOD COURT 400/sqft
NO. OF FREE STALLS 2  NO. OF FREE CAR/BIKE 1  EXPO PLATFORM  NO. OF FREE FOOD COURT 1	NO. OF FREE STALLS 1		
HIGH TEA WITH VIP GUESTS INVITATION TO PRIVATE EVENT (6TH DAY)	INVITATION TO PRIVATE EVENT (6TH DAY)	INVITATION TO PRIVATE EVENT (6TH DAY)	INVITATION TO PRIVATE EVENT (6TH DAY)

## **SPONSORS**











# **COLLABORATORS**





CENTRE FOR INNOVATION INCUBATION AND ENTREPRENEURSHIP

UNIVERSITY OF KASHMIR [CIE]

## **MEDIA PARTNERS**



















## COORDINATORS

- Dr. Junaid Hassan Masoodi
- Er. Qazi Junaid Ashraf
- Er. Rouf Ul Alam Bhat
- Er. Malik Younis
- · Er. Ubaid Qureshi
- Dr. Mueed Hafiz
- · Er. Adil Mudasir Khan
- Fr. Mohd Aarish Shaheen
- · Dr. Bilal Ahmad Malik
- Er. Riyaz Ahmad Qureshi
- Dr. Farooq Ahmad Najar

#### **MENTORS**

- Dr. Mohd Zehab Ud Din
- Dr. Afshan Amin Khan
- Dr. Viqar Yousuf
- Dr. Mushtaq Ahmad Rather

#### **PROJECT TEAM**

- Manan Sajad Malik
- Farhana Fayaz Batoo
- · Rashid Rasheed
- Mohammad Siraj
- Noman Bhat
- Nasir Fayaz

#### **DEBATE TEAM**

- Numrah Zahoor
- · Muqadas Manzoor
- · Zamina Shah
- Bushra Nisar
- Mufaiz Lone

#### **DESIGN TEAM**

- · Sofia Rafiq Mir
- Ambar Qazi
- Qazi Durdana
- · Sheikh Abrar Ahmad
- · Syedah Nuha Fatima
- · Syed Moazam Jalali
- Hadi Badri

#### **GAMING TEAM**

- · Dayaan Ahmad Zargar
- Mumin Bashir
- Saadat Majid
- · Tavkeer Zahoor Shah
- Syed Sakina Razvi
- · Sayid Khan
- Hyder Fayaz
- Aiman
- Mahdia
- · Zain Showkat

#### **CONTENT TEAM**

- Areeba Bhat
- Mumin Bashir
- Qazi Durdana
- Sidrat
- Syedah Nuha Fatima
- · Sofia Rafiq Mir
- · Ambar Qazi
- Ikraam Fazili
- · Hadi Badri
- · Shoaib Fayaz Malik
- Syed Fasil Manzoor

#### **MANAGEMENT TEAM**

- Manaan Sajad Malik
- Farhana Fayaz Batoo
- Ilham Hussain
- Zeela
- Sheikh Ateeb
- · Qazi Durdana
- Syed Nuha Fatima
- Hiba Riyaz
- · Sheeba Showkat
- · Sheikh Junaid
- Shakir Rajab Bhat
- Mamoon Banday

# ENTERTAINMENT TEAM

- Nadia
- · Ayesha Qadri
- Sinaian
- Ainain
- Shifa Aijaz

# OPEN MIC TEAM

- Zubair Mattoo
- Barkat Hussain
- Ikra Mushtaq
- · Tabish Mushtaq

# CALL FOR IDEAS TEAM

- Shifa Aijaz
- Aatira Qanoon
- Irtiqa Gundroo

#### **QUIZ TEAM**

- Zahir Javaid
- Zuha Khan
- Syed Tooba
- · Shiekh Azra
- Abaan
- · Hafsa Khan
- · Waseem Mushtaq
- Mehak Manzoor
- · Rashid Rasheed

#### **SPONSORSHIP TEAM**

- Manan Sajad Malik
- Farhana Fayaz Batoo
- Mamoon Banday
- Durakshan Saleem
- Hafsa Rais
- · Wafa Oureshi
- Umer Bilal
- Numan Hakak
- Mehak Manzoor

#### **SOCIAL MEDIA TEAM**

- · Syed Fasil Manzoor
- Syedah Nuha Fatima Kashani
- · Qazi Durdana
- · Zooman Qureshi
- · Shoaib Fayaz Malik
- · Ikraam Fazili



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roshnaas.iot





roshnaas iot



**Scan the QR code for location** 

# BOOKINGS FOR OPEN MARKET

STALL PRICE



CAR/BIKE PLATFORM PRICE

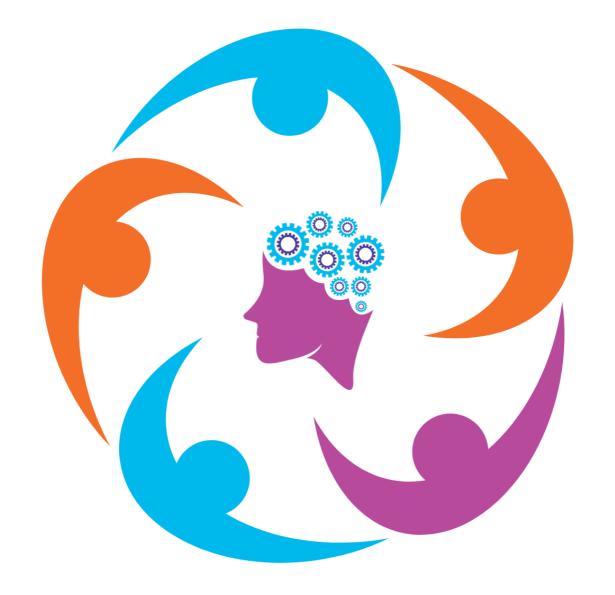


FOOD COURT STALL PRICE



# NOTE

- Businesses referred by General Manager
   District Industries will get 50% discount on direct booking
- The minimum stall size is 6ft\*6ft
- The minimum car/bike expo platform are 10ft\*10ft



# ROSHNAAS

**WIDEN YOUR HORIZONS** 

## **Technical Fest/Academic Fests Organised by the department of Chemistry from 2019-2023**

Name of the activity	Organising unit/ Forum/ collaborating agency	Date of the activity DD-MM-YYYY
3-Day Residential Yusuf Hamied Chemistry Camp at the University of Kashmir	Department of Chemistry, University of Kashmir in collaboration with Royal Society of Chemistry, organised a 3-day residential Yusuf Hamied Chemistry Camp for 9th standard students of the Government Schools of Kashmir/Royal Society of chemistry.	12 -14 September 2023
Synergistic Training program Utilizing the Scientific and Technological Infrastructure (STUTI)	Department of Chemistry, University of Kashmir, In association with Sophisticated Analytical Instrumentation Facility (SAIF), Panjab University, Chandigarh/ (DST, Government of India),	4 – 10 November, 2022
Chemistry Magic Show J. N. V Ganderbal	Dept. of chemistry, university of Kashmir, organized a one-day Chemistry magic camp at Jawahar Navodaya Vidyalaya, Hatbara, Ganderbalin, under the Society Science Responsibility (SSR) head of the Core Research Grant awarded by SERB, New Delhi.	27-July-2023

#### **Press Release**

#### 3-Day Residential Yusuf Hamied Chemistry Camp at the University of Kashmir

Department of Chemistry, University of Kashmir, inaugurated the 3-day residential Yusuf Hamied Chemistry Camp for 9<sup>th</sup> standard students of the Government Schools of Kashmir. Inauguration session of the event was chaired by Honorable Vice Chancellor, University of Kashmir, Prof. Nilofer Khan and attended by Prof. Farooq A. Masoodi, Dean Academic Affairs, Dr. Nisar Ahmad Mir, Registrar of the University, and Melissa Mendonza, RSC Programme Executive besides Prof. Aijaz Ahmad Dar, Head Department of Chemistry, Dr. Dar, Aijaz Ahmad, Coordinator of the camp, and senior faculty of the University. The camp is fully supported by the Royal Society of Chemistry (RSC) and is aimed to sensitize the students about the scope and opportunities of the applied sciences, through expert lectures, handson laboratory training sessions, campus visits and scholar interactions. The camp is attended by 73 students, both boys and girls nearly in equal numbers, representing more than 30 schools, from all areas of Kashmir.

Prof. Aijaz, welcomed the participants to the event and provided an overview and importance of the event. Ms. Melissa, provided the context, overview, objectives and achievements of the Yusuf Hamied camps conducted in India so far. Prof. Masoodi and Dr. Nisar, appreciated the event and stressed on its relevance vis-à-vis New Education Policy-2022. They further stressed the fact, that the event is an important development to reach out to the society and inspire young minds towards applied sciences. Prof. Nelofer Khan appreciated the efforts of organizers and thanked the RSC for supporting and hosting the camp at the University of Kashmir. She further stressed on the need to have such activities and briefly apprised the participants about new activities launched by the institute. Coordinator of the event Dr. Aijaz, thanked the university authorities and participants and impressed on the advantages of the camp for the participating students.

The camp is a 3-day event during which science will be presented to the students in a fun way and the participants will get an experience of university life. The expert talks will be delivered by Prof. Wajaht A. Shah, Department of Chemistry, University of Kashmir, Prof. M. A. Shah, Head, Department of Physics, NIT Srinagar and Prof. A. A. Natu, IISER Pune. The students will also visit the Departments and centres of the campus.





Insight and Hands on Training Program on Analytical Techniques in Chemical, Physical and Biological Sciences

# **PROCEEDINGS**

4<sup>th</sup> – 10<sup>th</sup> November, 2022

#### **Organized** by

Department of Chemistry, University of Kashmir, Hazratbal, Srinagar, J&K

#### In association with

Sophisticated Analytical Instrumentation Facility (SAIF), Panjab University,

Chandigarh









# **Insight and Hands on Training Program on**

# Analytical Techniques in Chemical, Physical and

# **Biological Sciences**

4<sup>th</sup> – 10<sup>th</sup> November, 2022

Under the aegis of

Synergistic Training program Utilizing the Scientific and Technological Infrastructure (STUTI)



Organized by

Department of Chemistry, University of Kashmir, Hazratbal, Srinagar, J&K





In association with

Sophisticated Analytical Instrumentation Facility (SAIF), Panjab University, Chandigarh

# **Organizers**



Dr. Pratishtha Pandey,
Scientist F & HEAD (R&D Infrastructure
Division)
DST, GOI



Dr. Aijaz Ahmad, Deptt of Chemistry, KU Organizing Secretary (M: 9596137387; email: aijaz\_n5@yahoo.co.in)



Prof. Nilofar Khan,
Vice Chancellor, KU
Chief Patron



Prof. Ganga Ram Chaudhary,
Director, SAIF, Panjab University,
Chandigarh,
STUTI Coordinator (PMU)



Prof. Syed Wajaht A. Shah,

Head, Deptt of Chemistry, KU

**Patron** 

Dr. Mohsin Ahmad Bhat, Deptt of Chemistry, KU Member



Dr. Masood Ahmad Rizvi, Deptt of Chemistry, KU Member



Dr. Dar Aijaz Ahmad, Deptt of Chemistry, KU Member





Prof. Nilofar Khan Vice Chancellor, University of Kashmir, Hazratbal, Srinagar

## **Message**

A warm welcome to all the participants of the Seven Days Training Program entitled "Insight and Hands on Training Program on analytical Techniques in Chemical, Physical and Biological Sciences" under the aegis of Synergistic Training Program Utilizing the Scientific and Technological Infrastructure (STUTI), an initiative of Department of Science and Technology (DST) at Department of Chemistry, University of Kashmir, Srinagar in association with Sophisticated Analytical Facility (SAIF)/Central Instrumentation Laboratory (CIL), Panjab University, Chandigarh, performing their role as Project Management Unit (PMU). This would be a wonderful platform which has been designed to cater to human resource and its capacity building through open access to Science &Technology Infrastructure across the country by organizing short term courses/workshops on the awareness, use and application of various instruments and analytical techniques.

I extend my warm wishes to Department of Chemistry, University of Kashmir, for taking initiatives and advantage of such opportunities to host these Hand on Training. I am very happy that the allied departments like Department of Botany, Department of Physics, Department of Earth Sciences, Department of Bioresources and Department of Zoology participated in organizing the programme to make the training programme truly an interdisciplinary one.

Techniques involving material characterization, spectroscopy, analytical methods related to food science, biotechnological methods etc. will strengthen various fields in broadening their research. Apart from this, it will aid various researchers and scientists from different parts of the country as well as from the region itself to collaborate with each other in order to utilize their expertise. The program sensitizes the candidates with important analytical techniques related to chemical, physical and biological sciences which is relevant and in line with the trends in the current research fields.

I am sure that the endeavors of the organizing team/committee will be fruitful accomplishment. I wish programme to be very successful in all respects that will provide confidence in research to our faculty and young students.

(Prof. Nilofar Khan)





# STUTI Coordinator-PMU Panjab University Chandigarh

## Message

I feel delighted to share that the STUTI Program has been a great success so far. The prestigious DST-supported STUTI program envisions hands-on Training Programs and sensitization of the state-of-the-art equipment as well as toward its sharing in various institutions while ensuring the transparent access to Science & Technology facilities.

Sophisticated Analytical Instrumentation Facility (SAIF), Panjab University, Chandigarh express our deepest gratitude to the Department of Science and Technology (DST) for choosing us to act as a Program Management Unit (PMU) and feel proud to be a part of this program.

The Training program on "Analytical Techniques in Chemical, Physical and Biological Sciences" at the Department of Chemistry, University of Kashmir, Hazratbal, Srinagar, J&K has provided practical hands-on training on sophisticated instruments and their use in chemical, physical and biological sciences such as Rheometer, GC-MS, DSC, Spectrophotometer, XRD etc.

I also believe that this Training Program not only enhances the quality of research but also assist the researchers in the optimum utilization of the instrumentation facilities at their institute.

(Prof. G. R. Chaudhary)





Head,
Department of Chemistry,
University of Kashmir,
Hazratbal, Srinagar

## Message

It is my privilege to welcome all the participants to University of Kashmir. This seven day training programme on "Insight and Hands on Training Program on analytical Techniques in Chemical, Physical and Biological Sciences", is being organized by The Department of Chemistry, University of Kashmir, under the aegis of STUTI in collaboration with SAIF/CIL, Panjab University.

This training program will surely help young researchers from various institution across the country and J&K with the basic as well as advanced techniques in Basic Medical Sciences and Research. The training curriculum includes the hands-on training sessions of various analytical techniques like food analysis, rheology, spectroscopy, electrochemistry, VSM, ELISA, tissue culture, HPLC, ground penetrating radar system, etc cutting across the barriers of biological, chemical and physical sciences. These sessions would help students and researchers in multidisciplinary fields to gain a better understanding of the various techniques. I am sure each one of you shall gain from this workshop and it shall be helpful in enhancing your research skills.

In addition, I must mention that the support and assistance by the faculty members and staff from our allied departments which include Earth sciences, Botany, Zoology, Bioresources and Physics has been the strong driving force behind organizing this program. I extend my sincere thanks to each of these departments for their cooperation, support and hard work.

(Prof. Syed Wajaht Amin Shah)





Organizing secretary,
Department of Chemistry,
University of Kashmir,
Hazratbal, Srinagar

# Message

I, on the behalf of organizing committee, welcome all the participants for the seven days training programme on "Insight and Hands on Training Program on analytical Techniques in Chemical, Physical and Biological Sciences", being organized by The Department of Chemistry, University of Kashmir, under the aegis of STUTI in collaboration with SAIF/CIL, Panjab University.

Training program encompasses insights and hands-on training on sophisticated instruments used in Chemical, physical and biological sciences such as Rheometer, HPLC, Stopped flow kinetic system, Carbon Analyser, Kjeltec, Soxtec, Bomb Calorimeter, High frequency Impedance Analyzer, Vibrating Sample Magnetometer, UV-Vis Spectrophotometer, Differential Scanning Colorimeter (DSC), Electrochemical workstation, SECM, Microwave Synthesizer, FT-IR and ELISA Reader. This training program will primarily help the participants who are seeking basic and advanced level training in basic sciences-based techniques to get insight into their research. The training program enhances the working horizon among faculty, post-doc fellows, and PhD Fellows. This training program will play a vital role in understanding importance of these analytical techniques in cutting edge research in physical, chemical and biological sciences.

We hope that this training program will stimulate new ideas and approaches for pursuing their respective research and enhance skills in the interdisciplinary scientific fields. I wish all participants a fruitful attendance and involvement in the event and hope that this training program is productive. Thank you for your participation and we wish you a very enjoyable stay in Kashmir.

(Dr. Aijaz Ahmad)

#### Brief overview of the general schedule of the program

There were two scheduled sessions in each day of the program, the morning session (Session-1) and the afternoon session (session-2). In the session-1 lectures were delivered by the experts, and at the end of the lecture each expert was felicitated with a token of gratitude in the form of a momento belonging to the culture of Kashmir. In the session-2 the participants were given hands-on training on various instruments in the departments of Chemistry, Botany, Zoology, Physics and Bio-resources. The participants were divided in 5 different groups with each group consisting of maximum of six participants. The participants attended each hands-on session on group rotation basis.

The program started on 4<sup>th</sup> November 2022 (Friday) with inaugural session and lecture 1 in the old committee room of the administrative block. Later the participants joined the hands-on session in the department of Chemistry. The venue selected for day-2 was the department of botany and zoology where two lectures were delivered in the morning session followed by hands-on session. On day-3 the venue was department of physics and bio-resources where again two lectures were given by the experts followed by the hands on session. From day-4 to day-7 of the training program the venue for morning session was department of earth sciences followed by hands-on session in the department of chemistry.

#### **DAY-01**

Department of Chemistry, University of Kashmir in association with Sophisticated Analytical Instrumentation Facility (SAIF) Panjab University, Chandigarh hosted one week program on, "Insight and hands-on training program on analytical techniques in chemical, physical and biological sciences" under the aegis of Synergistic Training Program Utilizing the Scientific and Technological Infrastructure (STUTI) from 4<sup>th</sup> – 10<sup>th</sup> November, 2022.

The STUTI scheme involves building of human resources and their knowledge capacity through open access infrastructure across the country. As a compliment to the various schemes of the Department of Science and Technology (DST) the funding for the expansion of research and development infrastructure at academic institutions, the scheme envisions a hands-on training program and sensitization of the state of the art equipment as well as towards sharing while ensuring transparent access to science and technologies facilities.

In the morning of day-1, the session was inaugurated in the presence of worthy chief guest, Prof. Farooq Masoodi (Dean Academic Affairs, University of Kashmir), Prof. Irshad A. Nawchoo (Dean Research, UoK), Dr. Nisar Ahmad Mir (Registrar, UoK), Prof. Syed Wajaht Amin Shah, (Head, department of Chemistry UoK), Dr. Aijaz Ahmad Dar (Associate Professor, department of Chemistry), the organizing secretary of the STUTI training program, the other faculty members of the department of chemistry and other allied departments, and the participants. Prof. Ganga Ram Chaudhary, director SAIF, Chandigarh was the Coordinator of the STUTI Program.

Prof. Masoodi in his presidential address, impressed upon the optimal use of high-end scientific equipment, calling its improper usage and care as a great disservice and injustice to the scientific community. He added that the training programmes like STUTI can facilitate collaborations and promote academic and intellectual growth of the participants. Dean research, Prof. Irshad A Nawchoo called for possessing "right knowledge and skills" on use of scientific equipment, even as he underscored the need for scholars and faculty to maintain the "equipment use register". Registrar, Dr. Nisar impressed upon young faculty members to formulate project proposals keeping in view their societal viability with clear-cut society-oriented deliverables. He also called for proper upkeep of the equipment. The Head, Department of Chemistry Prof. Syed W A Shah welcomed and introduced the STUTI scheme to the audience and also talked about the

FIST and PURSE-assistance of the department of chemistry making it eligible to host the hands-on training programme, being held under the banner of 'Azadi ka Amrit Mahotsav'. He also thanked SAIF for collaborating with the department of Chemistry for the programme which offers both theoretical and practical insights to the participants.

The STUTI Program was attended by the Ph. D. scholars and assistant professors from different disciplines of science from various universities and colleges across India which include, institutions from Himachal Pradesh, Chandigarh, New Delhi, Uttar Pradesh, Gurugram, Bihar, and Jammu and Kashmir. During the whole program, a number of eminent speakers from different Universities and Institutions were invited to speak on various instrumentation techniques followed by the hands-on-training.

Here are few glimpses of the inaugural session on Day 1





The inaugural session was followed by the short tea break and after that first lecture of the day 1 and also of the STUTI program.

The first lecture was delivered by Prof. Bikram Singh Bali, Department of Earth Sciences who highlighted and emphasized *the importance of Ground Penetrating Radar (GPR) for geophysical and environmental applications*. He explained GPR as a geophysical survey method that uses pulses of radiation to image the subsurface. Later after his lecture his research students further demonstrated the real time working of GPR in the lawns of department of Chemistry.





The lecture by Prof. Bikram Singh Bali marked the end of the first session of the Day-1.

In the second session, the hands-on training was conducted on various instrumentation techniques in the Department of Chemistry. The participants were divided into different groups with a maximum of 6 participants in one group. During the session the participants learned operation and running experiments on different instruments such as, FT-IR, Microwave

Synthesizer, Rheometer, HPLC, CV Potentiostat, SECM, DLS, Densitometry, UV-Visible spectrophotometer and Spectrophotofluorometer. The protocol for each experiment was handed over to each participant prior to the experiment. The participants were made to do the experiment on their own under the guidance of the expert of the instrument.

Here are given some glimpses of different hands on sessions held on Day 1 where different groups can be seen performing different techniques. The hands on session marked the end of the day 1 of the one week program.

















#### **DAY-02**

The first session of the Day-2 of STUTI program held in departments of botany amd zoology started with the lecture of Dr. Masood Ahmad Rizvi, senior Assitant professor department of Chemistry, University of Kashmir. Dr. Masood talked about *analytical monitoring of chemico-biological interactions*, in which he discussed the pH sensing of Harmol, characterization of the structural changes in BSA proteins and conformation of their complexation with drug molecules along with the detection of major binding sites by making use of the simplest instruments like UV-Visible Spectrophotometer and Spectrofluorometer. Dr, Masood in his lecture explained how in general, these simple and basic equipments can be utilized for the identification and characterization of minute structural changes at molecular level.



The second and final lecture after tea break of the session 1<sup>st</sup> on day 2 was delivered by Dr. Imtiaz Ahmad Khan, Assistant Professor, Department of Zoology, University of Kashmir. He talked about *the analytical techniques in food chemistry with special emphasis on protein, fat and energy content of major feed ingredient*. In his lecture shed light on the importance of analyzing the food stuffs for food industry, which assesses the quality of the original raw materials and its maintenance during the processing, transportation and storage. He discussed

some of the modern food content analyzing techniques employed in food chemistry such as Protein analysis by Kjeldhal method (Kjeltec), fat by soxlet extraction method (Soxtec) and energy estimation by Bomb calorimetric method. In his lecture, he explained the principle, construction, working and applications of these techniques in detail.



The lecture was followed by the usual lunch break a glimpse of which is given here.



In the 2<sup>nd</sup> session of the day, the participants performed hands on training on Kjeltec, Soxtec and Bomb Calorimeter in the department of zoology by Dr. Imtiaz Ahmad Khan, and, Microbial Identification System and Carbon Analyzer in the department of botany by Professor Manzoor Ahmad Shah. Dr. Khan along with his team of experts, demonstrated to the participants that how the sample can be prepared for the determination of protein, fats and energy content by using modern equipments like Kjeltec 8400, Soxtec 2050 and Bomb calorimeter 6400. In addition, the participants were also familiarized with the usage of Spectroscopy based NIR system used in feed industry for the analysis of major nutrients from the feed in one go without involving any wet-method. In the department of Botany, team of Prof. Manzoor demonstrated the working and functional attributes of the equipment used in microbial identification and carbon analyzer.





#### **DAY-03**

The first session of the Day-3 of STUTI program held in department of Physics and Bioresources commenced with the speech of Dr Manzoor Ahmad Mir, Assistant Professor department of bio-resources who spoke about "Enzyme Linked Immunosorbent Assay (ELISA) as a Diagnostic Technique for the Detection of Diseases". Dr. Manzoor talked about Hepatitis as the global health problem, in particular the huge increase in chronic hepatitis cases in India due to Blood borne –Hepatitis B & C with an approx. in his informative lecture Dr. Manzoor said, Hepatitis Infection is caused by five hepatitis viruses – A, B, C, D, and E (HAV, HBV, HCV, HDV, and HEV). Hepatitis B and C are responsible for 96% of overall hepatitis mortality. According to regional studies, there are 6-12 million people with Hepatitis C in India. As per WHO data, in 2019, 58 million people lived with chronic hepatitis C infection, resulting in about 400,000 deaths each year. As per studies, Chronic HCV infection accounts for 12-32% of HCC and 12-20% of cirrhosis in India.

The majority of Chronic HCV infections remain undiagnosed as persons suffering from HCV usually do not have any symptoms. However, these patients develop symptoms later, i.e., advanced liver disease. Such untreated infections can lead to life-threatening complications; Cirrhosis and Hepatocellular Carcinoma (HCC) account for increased death rates. Considering the disease burden, the WHO global health sector strategy on viral hepatitis has now set an ambitious goal to eliminate this as a public health threat by 2030. Since there is no vaccine for hepatitis C, the best way to prevent & reduce the spread of hepatitis C is to get tested for HCV and take timely treatment, as it takes 8 -12 weeks to cure the patient having HCV infection. Nucleic Acid Amplification Testing (NAT) remains the gold standard for confirming HCV infection. However, due to limitations of NAT and technological innovation, 4th generation HCV tests based on simultaneous detection of Core Antigen and anti - HCV (core and nonstructural) are found to be the best alternative as a diagnostic method for early detection of recent HCV infection. HCV core Antigen can be detected between 12-15 days after infection and hence 4th generation HCV test become positive as early as the HCV RNA assay and thus reducing the window period by 5-7 weeks for HCV acute infection in comparison to 3rd generation HCV test based on only antibody detection. The fourth generation ELISA test based on core antigen and anti-HCV detection is the best diagnostic screening method with higher sensitivity and

specificity. In addition, batch processing of Samples can result in a quick turnaround (less than 3 hours) when working with the ELISA method.



The 2<sup>nd</sup> lecture of the 3<sup>rd</sup> day was presented by Prof. Basharat Ahmad Want, department of Physics. He talked abouut The First order reversal curves: A novel method for characterization of magnetic system. In his lecture he gave introduction about vibrating sample magnetometer (VSM) for studying magnetic properties of materials. He gave some insight on measuring and construction and characteristic of FORC diagrams. He discussed about M-H loops also. The M-H loops are referred to as the key characteristic tool that determine how external perturbations like electrical or magnetic fields influence the magnetic character of a material. The parameters such as coercivity, saturation magnetization etc, derived from these M-H loops present bulk averages of the magnetic properties of all particles in a sample. However, to seek information beyond the scope of hysteresis loop measurements such as interaction or coercivity distribution, another technique becomes necessary. A more sophisticated approach for investigating the deep insight of the magnetic material is the First Order Reversal Curves (FORC). The First Order Reversal Curves (FORC) method is a novel approach for characterizing the magnetic materials. FORC method provides a way for evaluating the coercivity distribution, interaction fields between magnetic particles, irreversible magnetization components and for differentiating between magnetic mixtures in composite materials, which contain more than one magnetic phase. The FORC method was be presented and discussed. FORC diagrams of some magnetic systems such as spinel ferrites and some iron oxide systems were also displayed.



The lecture of both speakers were followed by question answer sessions, in which the speakers cleared the doubts of the audience.

The second leture was followed by the usual lunch break after which second session i.e. the hands on session started.

In the second half of the day 3<sup>rd</sup>, hands-on training was conducted on Immunological ELISA reader for the detection of Antigen- Antibody in the department of Bio-resources by Dr. Manzoor Ahmad Mir along with his team and the other VSM for studying magnetic properties of materials by and Prof. Basharat Ahmad Want and his team in the department of Physics.

Dr. Manzoor demonstrated the assay based upon the two- step indirect method. In the first step, sample and recombinant HCV coated microwells are combined. During the incubation, the Anti-HCV present in sample binds to the antigen coated on the wells. After the washing, in the second step, enzyme conjugate is added to the reaction mixture during incubation, the Anti-HCV present in the sample reacts with mouse Anti-human IgG within enzyme conjugate. Then a complex is generated between the solid phase, the Anti-HCV within the sample and mouse Anti-human IgG in the enzyme conjugate by immunological reactions. After a second washing, substrate A and substrate B are then added and catalyzed by this complex, resulting in a chromogenic reaction. The resulting chromogenic reaction is measured as absorbance. The color intensity is proportional to the amount of Anti-HCV in the sample.

Prof Basharat gave a detailed demonstration to the participants on the working principle of VSM wherein he showed the dependence of magnetic behavior of a sample on the applied voltage.









#### **DAY-04**

The 4<sup>th</sup> day of STUTI program started with the expert talk on "Importance of Patents in Designing and Conducting Scientific Research" by Dr. Yogesh Nagpal, head of operations and co-founder of Patent Research and Analytical Business Winsome Intellectual property Solutions LLP. . The speaker discussed the fundamental notion while stressing the importance of Intellectual Property Rights in scientific research and its different forms. Dr. Nagpal emphasized that intellectual property (IP) relates to mental creations such as discoveries, inventions, literary and artistic works, designs, and commercially exploited symbols, names, and pictures. IP is legally protected by means such as patents, copyright, and trademarks, which enable individuals to get recognition or financial gain for their inventions or creations. The objective of the IP system is to establish an environment where creativity and innovation can flourish by finding a balance between the interests of innovators and the broader public interest. The speaker also educated the audience on the significance of establishing research projects to target specific applications so that the results can be patented. He described the many stages of the patenting process and the precautions that must be followed before and after patenting a work. He presented several case studies of innovative job design that can lead to a patent. The speaker also covered several aspects of innovations in IPR in relation to the chemical sector, elaborating that the innovation aspect can generate Intellectual Property (IP) - intangible assets that can be utilized to create value by a company.





The second lecture of the session 1 was delivered by Dr. Mohsin Ahmad Bhat, Associate Professor, Department of Chemistry, on "Analytical application of Dynamic Electrochemistry". Dr. Mohsin demonstrated the research interests linked to classical dynamic electrochemistry which is helpful in analytical Chemistry. Challenges, future prospects of the area were given thrust. The speaker introduced cyclic voltammetry as a dynamic technique for characterization of various materials and correlated it with other fields of science like Microbiology for cell count, Biochemistry and Biotechnology (Sensing of Biomarkers), Environmental sciences etc. The speaker also explained the aspects of innovations that can be custom designed for these sorts of analytical experiments so as to maintain cost effectiveness and affordable versions. Later, the speaker also discussed the aspects of high-end electrochemistry vis a viz SECM employed in imaging of electro-active and electro-catalytic systems, a modern tool for analytical chemistry.

In the 2<sup>nd</sup> session of the day-4, Hands-on training was conducted in the department of Chemistry on turn on various techniques- - FT-IR, Microwave Synthesizer, Rheometery, HPLC, SECM, DLS, Densitometry, UV-Visible spectrophotometry and Fluorometry.

















#### **DAY-05**

The first lecture on the 5<sup>th</sup> Day of STUTI was delivered by Dr. Aijaz Ahmad Dar, Associate Professor, Department of Chemistry on the "basics of rheology and its multidisciplinary applications". Dr. Aijaz focused on the viscoelastic behavior of the materials by discussing the three models like Dashpot model for Viscosity, spring model for Elasticity, and Maxwell and Voigt model for viscoelastic behavior. The speaker spoke about the significance of rheology in multiphase systems (dispersions, sols, emulsions and gels and macromolecular systems -polymer melts and solutions). He spoke about the rheometer equipment and explained how its oscillatory and rotational modes can be employed to know the material's viscoelastic behavior. Dr. Aijaz described oscillatory rheological tests, highlighted the amplitude sweep, frequency sweep, time sweep, temperature sweep, and oscillatory thixotropy tests and also highlighted their importance. The speaker spoke about thixotropic and rheopectic fluids and explained how their flow behavior is time-dependent. He also talked about how storage modulus (G') and loss modulus (G") changes over time, which provides information about the material's recovery. Dr. Aijaz talked on rheology's numerous terminologies, such as Magneto-Rheology, Electro-Rheology, and Hyphenated Rheology methods. The speaker also informed the participants about the applications of rheology in biomaterials, such as dentures, bone fillers, 3D-printed organs, Hydrogel wound dressings, and soft tissue engineering, among others.



The lecture second Day-5 was delivered by Prof Syed Wajaht Amin Shah, HOD, Department of Chemistry who discussed the chromatographic technique, as a way to separate a mixture into its individual components through equilibrium distribution between two phases. It is essentially based on the disparity in the rates at which the components of the mixture move through a porous medium (SP) under the influence of a gas or liquid (MP). The speaker explained to the audience how chromatography is classified based on a number of factors, including gas, liquid, and supercritical fluid chromatography (based on geometry), adsorption, affinity, partition, and ion exchange chromatography, as well as molecular exclusion chromatography (based on stationary phase). Prof. Wajaht also spoke about HPLC instrumentation, covering topics including the instrument's pump, injector auto-sampler, HPLC column, detector, and waste. Additionally, he discussed HPLC in reverse and normal phases, as well as the proper employment of stationary and mobile phases and their component parts. Prof. Wajaht talked on the uses of HPLC, such as in the pharmaceuticals, in forensic testing, and in the analysis of environmental contamination.



Hands-on training was conducted in the Department of Chemistry in the second session of the Day -5 on various techniques- - FT-IR, Microwave Synthesizer, Rheometery, HPLC, SECM, DLS, Densitometry, UV-Visible spectrophotometry and Fluorometry. The groups did their experiments as per their schedule.













#### **DAY 6**

The day-6 of the STUTI program started with the expert talk on Design and synthesis of chemosensors for environmental analysis by Prof. Narinder Singh, Department of Chemistry, IIT Ropar. Dr. Singh laid emphasis on the sensing of different pollutants like mercury (Hg<sup>2+</sup>) and other industrial pollutants. Dr. Singh demonstrated different instruments that he and his research group developed in his lab to detect the pollutants. This real time application of his work was wonderful and eye-catching. Also, the solid-state synthesis of various fluorophores from organic wastes by ball milling technique, hence turning waste to wealth was one of his greatest achievements in the field of environmental chemistry. Dr. Singh also highlighted the importance of collaboration in the research.



The lecture 2<sup>nd</sup> of the session was delivered by Dr. Ramesh K. Sharma, SAIF/CIL, Panjab University, Chandigarh. He delivered the lecture entitled "Basics and Applications of Mass Spectrometry". He enlighted the participants about the core concepts of Mass Spectroscopy in which he discussed about the hardware, software, and operation of mass spectrometer. Dr. Ramesh discussed various applications of this instrument in various fields of research like chemistry, physics, biology etc..



In the

second half of the 6<sup>th</sup> day, the hands-on session commenced as usual in the department of Chemistry on Fluorometry, HPLC, Rheometry, FT-IR, Microwave Synthesizer, SECM, DLS, Densitometry, and UV-Visible spectrophotometry. The participants learned how to handle the aforementioned instruments and performed the experiments on their own.



#### **DAY-07**

The day-7 of the STUTI commenced with the lecture of Director SAIF/CIL Prof. Ganga Ram Chaudhary, the Coordinator of STUTI Program, Panjab University. He threw light on the importance of conducting STUTI programs all over the country and how researchers and other students get benefitted with these programs by acquiring skills of handling and operating multifarious instruments applicative in the distinct research areas. Later on, he continued his lecture on "Nanoparticles" in which he emphasized their significance and how to synthesize them. The speaker also mentioned some of his prominent works from his research lab on nanoparticles. He also talked about the Patents he has filed. The speaker concluded his talk by expressing his gratitude to the Organizer STUTI, Aijaz Ahmad Dar for organizing such an event in the University of Kashmir and other eminent speakers from different Universities and Institutions.



After the short tea break which followed the lecture of Prof. G R Chaudhary, valedictory function was organized.

During the valediction ceremony, concluding remarks about the STUTI Program were given by the Dean Research Prof. Irshad A. Nawchoo, and HOD Chemistry department Syed Wajaht Amin Shah in which they appreciated the DST-STUTI Coordinator and the Organizers for organizing such event all over the country.

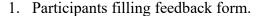
A highly positive feedback was received from the participants. The participants were highly gratified for attending such a program and admired the efforts of organizing committee of the Department of Chemistry, University of Kashmir for training and hands-on experience.

All the participants were highly thankful to the DST, Government of India, for opening a new gateway to scientific knowledge and bringing forth such a platform to access the instruments easily through hands-on training.

Dr. Aijaz Ahmad Dar, Organizer STUTI Program expressed his gratitude towards the DST (Government of India), Prof. Ganga Ram Chaudhary, the Coordinator STUTI, Vice-Chancellor, Prof. Nelofar Khan, Prof. Farooq Ahmad Masoodi, Dean Academic Affairs, Dr. Nisar Ahmad Mir, the Registrar and Prof Irshad A. Nawchoo, Dean Research of University for providing all the support for successful organization of the event. Dr. Aijaz acknowledged all the speakers for delivering highly enlightening and informative talks and for conducting hands-on session related to physical and biological sciences

The "Certificates of Participation" and the "Certificates of Appreciation" were given to the participants and the volunteers respectively.

Some of the Glimpses of the valedictory session are given..





# 2. The on-stage feedback by participants





3. The certificate distribution.





## 4. The group Photographs









# **List of Participants**

S.No.	Name	Designation	Email Address	Name of College/Department/Institute	State/UT	Gender
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# <u>Chemistry Magic Show</u> <u>J.N.V. Ganderbal</u> 27 July 2023



Chemistry is a central subject that is being explored through experimental and theoretical means. The chemistry covers up the exciting results based on practical experiments, generating new ideas and innovations that make the world a better place to live. Every new experiment attracts the interest of students, researchers, scientists, etc., and opens new windows for the basic understanding and opportunities of the subject. The experimental design varies according to age group. The lower age group is attracted to the subject owing to the fascinating nature of experiments and also attracts their interest and curiosity towards the subject. Keeping this in consideration and to attract and imbibe the basic concepts of chemistry, its designing strategies, experimental set-up, handling and career opportunities in young minds, workshops, seminars, and outreach activities are the central sources. In light of dispersing the basic concept of chemistry to young minds, the Department of Chemistry, University of Kashmir organized a one-day Chemistry magic camp at Jawahar Navodaya Vidyalaya, Hatbara, Ganderbalin, under the Society Science Responsibility (SSR) head of the Core Research Grant awarded by SERB, New Delhi. The camp was coordinated by Dr. Aijaz A. dar, Assistant Professor and facilitated by research Scholars, Adil A. Ahmager, Asif A. malik and Innayatullah. Nearly 60 students of grade VI-IX participated in the event, which started with a motivational talk by Dr. Aijaz, which was followed by a series of interesting and fun experiments like clock reaction, color creation, rainbow experiments, etc. The experiments were demonstrated by Scholars. The students enjoyed and found experiments full of curiosity and fascinating. The discussion and sharing of ideas between students and teacher mentors was healthy and enriching. The event was appreciated by participating students and note of formal note of thanks was forwarded to the Department by the principal of the institute which also include written and video recorded thank you notes by the students.

#### **UDAAN Training-Cum-Placement Drive (2018)**



The Department of Management Studies at the University of Kashmir's South Campus organized a "Training and Recruitment Drive" for its students on 7th June 2018 in collaboration with *Rooman Technologies*. This event aimed to enhance the employability of students by providing them with essential skills and offering direct recruitment opportunities with a reputed company.

The drive commenced with an introductory session, where representatives from *Rooman Technologies* explained the recruitment process and the skill sets they were looking for in potential candidates. The session emphasized the importance of technical knowledge, communication skills, and industry-specific competencies, preparing students to meet the growing demands of the workforce.

A key feature of the event was the training component, designed to provide students with industry-relevant knowledge and skills. This training covered various aspects of the technology sector, from basic IT skills to more advanced areas like software development and network management. It was conducted by professionals from *Rooman Technologies*, who shared their expertise and provided hands-on experience.

The recruitment part of the event allowed eligible students to participate in interviews and assessments for immediate job placements. Several students were shortlisted for various roles within *Rooman Technologies*, opening the doors to exciting career prospects for those who had showcased the required competencies.

The event not only bridged the gap between academia and industry but also offered students a chance to interact with experts from the field, gaining insights into real-world challenges and solutions. It was well-received by students, many of whom expressed their gratitude for the opportunity to enhance their skills and secure promising job offers.

The successful collaboration between the Department of Management Studies and *Rooman Technologies* exemplified the university's commitment to providing students with practical training and career-oriented support, helping them transition smoothly into the professional world.

#### **IMBA Carrom Competition 2019**







**IMBA Carrom Competition 2019**, organized by the University of Kashmir South Campus, was a highly anticipated event that brought together students for a fun yet competitive display of skill. The competition aimed to promote recreational activities and foster a spirit of camaraderie among the students while providing a break from their academic routines.

Held on the university campus, the event was structured in a knockout format, with both singles and doubles categories. It saw participation from a diverse group of students, each eager to showcase their carrom skills. The matches were intense, with participants demonstrating impressive accuracy, concentration, and strategic thinking. The final rounds were especially thrilling, with every move holding significant weight in determining the winners.

The competition not only offered a platform for students to showcase their talents but also created a sense of unity and enthusiasm, as the audience cheered on their peers. The event was an

excellent opportunity for students from various disciplines to come together, share experiences, and engage in friendly rivalry.

The winners of the competition were awarded trophies and certificates, recognizing their exceptional performances. The event concluded on a high note, with participants and attendees reflecting on the success of the competition and its role in building community spirit.

Overall, the IMBA Carrom Competition 2019 was a memorable occasion that highlighted the importance of extracurricular activities in enhancing student life. It demonstrated how sporting events, even simple ones like carrom, can bring people together and promote a balanced, well-rounded university experience.

#### Kashmir University organizes 3-day literary festival 'VIRSA-2021





The University of Kashmir organized a three-day literary festival 'VIRSA-2021' to celebrate the region's rich cultural heritage. The festival encompassed a range of activities, including poetry readings, storytelling sessions, and insightful discussions, aiming to provide a platform for both established and emerging literary voices. Distinguished scholars, artists, and students came together to engage in these creative explorations. The festival's broader goal was to highlight Kashmir's unique literary traditions, encourage the preservation of local literature, and inspire the younger generation to appreciate their cultural heritage.

In addition to literary activities, the festival featured cultural performances, art exhibitions, and music, reflecting the diversity and richness of Kashmiri traditions. Notably, participants from outside Kashmir were also involved, enriching the discussions with their perspectives and contributions. This inclusiveness fostered cultural exchange and created a collaborative environment where attendees could engage with various forms of expression and narratives, both traditional and contemporary.

The event placed special emphasis on the oral traditions of Kashmir, particularly its Sufi and folk literature, which have historically played a significant role in shaping the cultural identity of the region. By highlighting these aspects, VIRSA-2021 sought to preserve the oral narratives and ensure they remain relevant in the contemporary literary world.

The festival concluded with awards and recognition for outstanding contributions in the field of literature, further motivating artists and writers to continue their creative endeavors. Overall, VIRSA-2021 was not just a literary festival, but a cultural experience designed to bridge the gap between the past and the present, fostering appreciation for the literary heritage of Kashmir.

### **Harud Fest 2022**







The Department of Management Studies at Kashmir University's North Campus organized the two-day "Harud Fest 2022" to provide a platform for students to exhibit their entrepreneurial skills. The Business Fest was inaugurated by Director Prof. Bashir A. Ganai, who lauded the organizing committee and expressed his continued support for the department's future academic initiatives. The event featured participation from students of various departments and neighboring colleges, with coordinators and faculty members also in attendance. This festival not only highlighted student talent but also encouraged a culture of innovation and business acumen among participants.

The event included various sessions designed to inspire entrepreneurship, such as workshops, business plan competitions, and panel discussions, which allowed students to present their innovative ideas to an engaged audience. These sessions aimed to foster critical thinking and problem-solving skills, preparing students for real-world business challenges. The hands-on activities encouraged students to think creatively about market opportunities and business models, promoting a culture of entrepreneurship within the academic environment.

One of the key highlights of the event was the interactive networking opportunities it provided. Students had the chance to interact with industry professionals and faculty, gaining valuable insights into entrepreneurship, business management, and the dynamic world of startups. The collaborative environment helped participants develop new ideas and hone their skills in leadership, teamwork, and business communication.

In conclusion, the "Harud Fest 2022" was a resounding success, offering a dynamic platform for students to showcase their entrepreneurial talent while providing learning experiences that will help them in their future professional endeavors. The event reinforced the commitment of Kashmir University's North Campus to fostering innovation and entrepreneurship among its students, and it is expected to pave the way for more such initiatives in the future.

### Business Fest held at KU's North Campus



**Srinagar, Sep 16:** The Department of Management Studies at the Kashmir University's North Campus organised a two-day event under the banner of 'Harud Fest 2022'.

Director North Campus Prof Bashir A Ganai inaugurated the Business Fest that offered a platform to students to showcase their talent by exhibiting their entrepreneurial skills.

Addressing the participants, Prof Ganai congratulated the organising committee for holding the event. He also assured his full support to the Department of Management Studies in its future academic endeavours.

The inaugural session was attended by coordinators, faculty members and students of various departments, besides students from several adjoining colleges as well.

Dr Ambreen Wani, Event Coordinator, briefed the audience about the main objectives of the two-day programme.

Prof Bashir A Ganai, Prof Irshad Ahmad Wani, former Director North Campus, Dr Qazi Khurhseed Ahmad, senior faculty, and other invited guests went around the stalls to interact with young entrepreneurs.

On the second day of the fest, the students of the Management Studies Department showcased their talent by participating in various cultural programmes.

The glittering event was attended by Prof Irshad Ahmad Wani, Prof Naseer Iqbal, Prof Aijaz Ahmad and Prof Pervez Ahmed (All former directors of North Campus).

On the occasion, Dr Viqar-u-Nissa carried out a felicitation ceremony wherein the former directors were honoured for their exceptional services to the growth and development of North Campus.

Dr Maleeha Gul, Coordinator, Department of Management Studies, presented the concluding remarks, and Dr Mubashir Majid Baba delivered the vote of thanks.

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# KU VC chairs closing ceremony of 2-day 'TechFest' at South Campus

Calls for strong University-Industry linkage



**Anantnag, Nov 15:** Vice-Chancellor University of Kashmir Prof Nilofer Khan on Tuesday visited the varsity's South Campus here and chaired the concluding ceremony of a two-day 'TechFest', an event that brought together people from academia and industry to help foster greater linkage between the two.

In her presidential address, Prof Nilofer said such events are very important for the University to develop a strong network with the Industry and to keep pace with the technological advancements so that our students do not lag behind their counterparts in updating their knowledge and skills.

Congratulating the Department of Computer Sciences South Campus for organising the TechFest, Prof Nilofer advised the students to be well-versed with technological advancements, saying "data is the future and is expected to influence all aspects of our lives".

Reiterating her commitment to further development of South Campus, Prof Nilofer urged the students to actively participate in the upcoming 'Sonzal' festival to showcase their talent.

Registrar Dr Nisar A Mir, who was a special guest, said the University is formulating a Master Plan for further development of South Campus in terms of infrastructure and pro-student facilities.

In his welcome address, Director South Campus Dr Mukhtar A Khanday said the event aims to connect South Campus with the Industry to help its student passouts to establish themselves as professionals in diverse fields of technology.

Dr Hilal A Khanday, Coordinator, Department of Computer Sciences South Campus gave a detailed overview about the two-day event. He said competitions including a coding competition, technical quiz and 'Hackathon' were held which saw an active participation of students from across higher education institutions in the Valley.

An alumni meet of the department was part of the TechFest which was attended by alumni serving various academic and non-academic institutions, besides top tech firms like IBM, Infosys and Google, in different parts of the country.

Mr Shahid and Mr Muddasir from LeLafe Solutions, a Kashmir-based IT firm, talked about how the University can get closer to the Industry, while Mr K P Singh, a manager from Marg Education Academy, discussed how to bridge the Industry-Academia linkage.

The closing ceremony was attended by faculty, students and scholars of South Campus, besides varsity officers including Prof Aijaz A Wani, Provost (Boys Hostels) and former Director South Campus.

On the occasion, the students of the department presented colourful cultural performances, even as the winners of competitions were felicitated by the Vice-Chancellor.

# KU's NSS, NYKS organise 'Yuva Utsav India@2047' in Varsity; 260 young students attend multi-event festival



Srinagar, June 1: The National Service Scheme (NSS), University of Kashmir, and Nehru Yuva Kendra Srinagar, on Thursday organised a district-level 'Yuva Utsav India@2047' in the Varsity which drew the participation of hundreds of young students from across Kashmir.

Vice-Chancellor Prof Nilofar Khan, presided over the inaugural session as Chief Guest.

The event, which aimed to nurture the potential of youth and help channelise their talent towards positive and productive pursuits, was organised on the 'Panch Pran of AmritKaal' and celebrate the Azadi Ka Amrit Mahotsav in the spirit of 'Yuva Shakti Se Jan Bhagidari'.

Over 260 young and talented youth in the age group of 15-29 from various colleges and higher secondary schools of Srinagar showcased their talent in five respective categories, including Young Artist Contest (Painting), Young Writers Contest (Poetry), Photography Contest and Workshop, Declamation Contest and District Cultural Presentation.

In her presidential address, Prof Nilofar Khan extended the University's full cooperation and support for such events concerning the welfare and betterment of youth.

She said the NSS and NYKS have a central role to play in helping to unlock the hidden creative potential of youth.

Registrar KU Dr Nisar A Mir later presided over the valedictory session and said the programme is a wonderful opportunity for the youth to showcase their talent in various forms of art and literary activities. He said the NSS and NYK are doing their best to involve the youth in constructive pursuits.

Dr Musavir Ahmad, Coordinator, NSS, KU said that talented youth from higher secondary schools and colleges participated in the Yuva Utsav with great enthusiasm.

The winners of all five competitions were later felicitated with cash prizes, trophies, and certificates presented by Dr Nisar.

Deputy Director, NYKS, Hakim Abdul Aziz thanked the Vice-Chancellor and NSS, KU for their cooperation in making the event a success.

## 'Lights, Camera, Inter(Action)': 2-day Travelling International Film Festival begins at KU

VC urges students to raise awareness on social issues through the medium of films



**Srinagar, May 16:** A two-day Travelling International Film Festival started at the University of Kashmir on Tuesday, with special focus on key themes including gender, equity, diversity and inclusion.

The festival titled 'Samabhav' has been organised by Educational Multimedia Research Centre (EMRC) in collaboration with Men against Violence & Abuse (MAVA), with active partnership from KU's Centre for Women's Studies and Research, Media Education and Research Centre and Department of Social Work.

Vice-Chancellor Prof Nilofer Khan inaugurated the film festival as chief guest and hoped that it would be a great experience for young students to learn about film-making and the need to highlight social issues through the medium of films.

She said youth can act as enablers of a positive change in the society by raising awareness on issues like gender inequality using films as medium to convey their message.

The VC also congratulated EMRC, MAVA and other associating partners for organising the important film festival.

Dean, School of Social Sciences, Prof Irshad A Nawhoo, a guest of honour at the inaugural session, highlighted various initiatives taken by the University of

Kashmir to hassle-free academic progression of women students and research scholars.

Mr Harish Sadani, Co-Founder and Executive Director, MAVA, said the 5th edition of Travelling International Film Festival is a completely student-centric programme, where students will be analysing, reviewing, debating and discussing the short-films, documentaries and feature films soon after their screening during the festival. "It is an interactive festival, where lights, camera and inter(action) is the focal area," he said.

Director EMRC Dr Salima Jan earlier welcomed the dignitaries, guests and student participants, and also spelt out the broad objectives of the film festival. She said nearly 200 students from University of Kashmir, its affiliated colleges, Central University of Kashmir, Islamic University of Science and Technology and North Campus KU will be participating in the two-day event, where 12 films will be screened and reviewed.

On directions of the VC, the students from KU's MERC, Department of Social Work, North Campus, Centre for Women's Studies and Research, besides members of Internal Complaints Committee were particularly chosen to participate in the event in view of the high importance of the theme.

Dr Roshan Ara, Coordinator CWSR delivered the vote of thanks, while Dr Tariq Abdullah from EMRC conducted proceedings of the inaugural session.

### Latest trends and developments in Artificial Intelligence & Machine Learning Applications -2023





The Department of Computer Sciences, South Campus, University of Kashmir, organized a one-day seminar on emerging technologies, including Artificial Intelligence (AI), Machine Learning (ML), Robotics, and Blockchain. The seminar, held on March 29, was attended by faculty, research scholars, and students from various departments of the campus. Dr. Hilal Ahmad Khanday, Academic Coordinator of the Department of Computer Sciences, delivered the welcome address, highlighting the key objectives of the event.

In his introductory speech, Dr. Mukhtar Ahmad Khanday, Director of South Campus, emphasized how technology has minimized human intervention in solving a wide range of problems. He encouraged students to explore new job opportunities by acquiring skills in AI,

ML, and Robotics, given the high demand for these fields.Dr. Khanday also invited the special guest, Mr. Shameem Shah, CEO of Lelafe IT Solutions Pvt Ltd, to assist students in securing placements and internships within his company.In his keynote address, Mr. Shah provided insights into the vast potential of AI in today's world. He highlighted how AI is revolutionizing healthcare systems globally and how its widespread application can help the industrial sector automate processes and reduce human intervention.Guest speaker Dr. Rayees Ahmad discussed 'Bridging the Gap Between Industry and Academia' through AI. He demonstrated how real-life problems could be addressed using AI and ML.Another guest speaker, Mr. Mudasir Bhat, provided an in-depth overview of video analytics in the industrial sector.Dr. Abid Hussain Wani, faculty member of the Department of Computer Sciences, concluded the event with a vote of thanks.

### "CHIRGISH Unleashes Entrepreneurial Brilliance: University of Kashmir's Two-Day Business Fest a Showcase of Innovation and Talent"

Prof. Nilofer Khan Inspires Students to Showcase Skills and Transform Ideas into Reality at "CHIRGISH"



**Srinagar November 13-** In an inspiring display of creativity, innovation, and entrepreneurial spirit, the Department of Management Studies at the University of Kashmir organised two-day mega business fest "CHIRGISH." The event was inaugurated by the Vice Chancellor(KU), Prof. Nilofer Khan. The Fest serves as a dynamic platform for students to showcase their knowledge, skills, talents, and entrepreneurial ventures.

The fest witnessed active participation from students across various departments, creating a vibrant and engaging atmosphere. It aimed to provide students with a hands-on training experience, fostering an environment conducive to learning and growth.

One of the highlights of "CHIRGISH" was the array of stalls installed by students, each serving as a canvas for the exhibition of their creativity and entrepreneurial prowess. These stalls not only showcased innovative ideas but also reflected the dedication of the students to turn their visions into reality.

Prof. Nilofer Khan, while inaugurating the fest, expressed her vision for the University of Kashmir as a nurturing ground for the youth of the valley. She emphasized the importance of providing a platform for students to exhibit their skills, fostering an ecosystem that encourages entrepreneurship and innovation. The Vice Chancellor noted that a significant number of stalls belonged to university students, indicating a growing interest in entrepreneurship among the student community.

Speaking about the fest, Prof. Nilofer Khan stated, "It also gives students training on how they should venture into entrepreneurship, with their own innovation. In line with the new education policy, skill development and training are strong components, and the university is at the forefront of these initiatives."

Head, Department of Management Studies at the University of Kashmir Dr. Bashir Ahmad Joo, highlighted the fest's role in offering students a unique opportunity to gain real-world experience. He emphasized the importance of networking with potential customers and investors, providing participants with valuable feedback on their ventures. Moreover, the fest opened its doors to other enterprises, offering them space to promote and showcase their products, fostering collaboration between academia and industry.

The fest's success was further evident in the substantial turnout of students, faculty members and university officials, including Dr. Nisar Ahmad Mir, Registrar KU,Prof. Mushatq Ahmad Darzi, Prof. Iqbal A. Hakim, and Special Secretary to VC Dr. Ashfaq Ahmad Zari, who all contributed to the fest's vibrant energy.