



SUSTAINABILITY FAIR

2022 |





**School of Engineering
UPES University
Technical Report**

SUSTAINABILITY FAIR 2022

Organized by SUSTAINABILITY CLUSTER, School of Engineering, UPES, Dehradun
from 11th–14th October 2022.

Theme: “Safe, Resilient, and Sustainable Cities & Communities.”



Convenor:
Prof. Manish Kumar

Organizing Secretary:
Dr. Abhishek Nandan

Organizing Secretary:
Dr. Saswati Datta

Executive Summary

"Sustainability Fair-2022" was the academia-industry-stakeholder summit that had five major verticals i.e., hands-on training, RISE (Sustainability Model competitions for school and college students), exhibitions by sustainability practitioners & networking sessions, panel discussions on 'Science, Sensibility and Sustainability' & 'Braving tides: Women in Sustainability', and ISSUE (International Symposium on Sustainable Urban Environment). This mega event of UPES was funded, supported, and partnered by Punjab National Bank (title partner), DST-SERB, International Water Association (IWA), Springer, Springer Nature, American Chemical Society (ACS), DHI, KAIZEN, and Centre for Public Policy and Good Governance (CPPGG), Uttarakhand Govt.

Objective of the event:

The fair aimed to display cutting-edge research on sustainability and related challenges of high societal importance, promote cost-effective and sustainable solutions, and organize brainstorming sessions on sustainable solutions through the industry-academia conclave and symposium. Institutions, organisations, and participants from various parts of the world including Spain, Denmark, Sri Lanka, Indonesia, and others showcased their work focussed on urban planning, industry, pollution, green energy, waste management, bio refinery, air pollution, and climate change.

Key Highlights:

The event was inaugurated by our Chief guest, Lt. Gen. (Retd.) Gurmit Singh, Honorable Governor, Uttarakhand on 12th October.

More than 1500 members from academia, industrialist, entrepreneur and NGOs participated in this event, which was spread over three days.

The pre-symposium inaugural session of the "Sustainability Fair-2022" on 11th October was graced by Honorable Cabinet Minister, Shri Subodh Uniyal, Minister of Forest, Language, Election and Technological Education, Government of Uttarakhand.\

World top 1% scientists were invited to share their keynote lectures from different part of world, which includes Prof. Ashok Pandey (UNESCO Professor in many countries, including France, Brazil, UK, Switzerland, Malaysia, Thailand, etc.), Prof. Tejraj M. Aminabhavi (Honorary Professor, Macquarie University, Sydney, Australia) and Prof. Meththika Vithanage (Professor, University of Sri Jayewardenepura, Sri Lanka) Prof. Christian Sonne (Professor, Aarhus University, Denmark), Prof. Su Shiung Lam (Professor, Universiti Malaysia Terengganu, Malaysia) and Dami`a Barcelo´ Department of Environmental Chemistry, Institute of Environmental Assessment and Water Research,(IDAEA-CSIC), Jordi Girona 18-26, 08034, Barcelona, Spain.

The fair was international extravaganza having events: keynote sessions, panel Discussion, technical events, technology demonstration and an international conference.

Event was concluded with the valedictory function on 14th October in the warm presence of our special guest Dr. Dhan Singh Rawat, Minister of Health, Education and Cooperative, Uttarakhand.





Honourable Governor of Uttarakhand is releasing the Sustainability Reports

The report presents the overview of 4 days long sustainability fair which happened from 11th October to 14th October of 2022, hosted by the sustainability Cluster of UPES, Dehradun. This is the First time in the history of our university where we made our mark by organizing the mega event- Sustainability fair.

Various eminent speakers and guests from different walks of their lives have visited our university to share their knowledge and vast experience to all of us. This enormous event has been put on with the support of both international and national organisations, such as Springer, IWA, ACS, ICRA-Spain and Sri Jayewardenepura University in Sri Lanka. Other national organisations involved include SERB and Punjab National Bank, etc.

The event focused on creating "Safe, Resilient, Sustainable Cities & Communities," as it is the underlying theme. Institutions and organisations from all over the world will showcased their work that focuses on urban planning, industry, pollution, green energy, waste management, biorefinery, air pollution, and climate change. The event witnessed 20+ plenary and keynotes from scientists around the globe 275+ paper presentation 180+ poster presentations 1000+ students from schools and colleges for project display competition (RISE) 100+ exhibitors from various parts of India. 10+ workshops conducted by various field experts.

The industry-academia conclave or symposium served as the platform upon which the fair presented cutting-edge research on issues of sustainability and related problems of high societal importance, advocate for solutions that are both cost-effective and sustainable, and organised brainstorming sessions on these issues. As a part of Sustainability fair-2022, few pre-conference events were organized by the sustainability Cluster. One of those events is AtmosFair that was conducted during World's Ozone Day-2022 for 4 days long by one the of student chapters of sustainability cluster. Also, most initiative and interesting events were organized by the faculty members of sustainability cluster – "RISE" and "PROJECT SUMEDHA".

Benefits accomplished by participants:

- Opportunity to demonstrate and learn ongoing sustainable development practices, activities experiences
- Academia-industry partnerships and knowledge transfer around sustainability
- Platform for networking with various stakeholders.
- Exposure to the latest technological advancements and current trends
- Exposure to the latest technological advancements and current trends for sustainable solutions.

1. Minutes to minutes of Sustainability fair 2022



Sustainability Fair 2022

Organized by
Sustainability Cluster, School of Engineering, UPES, Dehradun
Minute to Minute Programme
11-14th October 2022

| Day 1 (11 th OCT 2022) | | |
|-----------------------------------|--|--|
| Time | Agenda | Venue |
| 09:00-09:30 | Registration- Reception Desk Tea | MDC |
| 09:30-11:55 | Parallel Workshops (WS1, WS2, WS3) and STUDIO | CAD Lab & America (MDC) |
| 12:00-12:05 | Lamp Lighting | Vivekanand Auditorium |
| 12:05-12:10 | Welcome note from Prof. Manish Kumar, Cluster Head, Sustainability Cluster, | |
| 12:10-12:15 | Fair overview by Dr. Abhishek Nandan, Organizing Secretary, Sustainability Fair 2022 | |
| 12:15-12:20 | Address by Sri Sanjaya Kandpal, General Manager, PNB | |
| 12:20-12:30 | Address by Honourable Prof. Ram Sharma, Pro-Vice Chancellor, UPES | |
| 12:30-12:40 | Address by Honourable Prof. Sunil Rai, Vice Chancellor, UPES | |
| 12:40-12:55 | Address by Sri Subodh Uniyal, Cabinet Minister, Govt. Of Uttarakhand (Chief Guest) | |
| 12:55-13:00 | Vote of Thanks by Dr. Saswati Datta, Co-Organizing Secretary, Sustainability Fair | |
| 13:00-14:00 | Lunch | |
| 14:00-17:00 | Parallel Workshops (WS1 to WS8) and STUDIO | CAD Lab, MDC Rooms, Civil Lab, HSE Lab |
| 17:00-17:30 | Tea | MDC |

| Day 2 (12 th OCT 2022) | | |
|-----------------------------------|---|-----------------------------|
| Time | Agenda | Venue |
| 09:00-11:00 | Parallel Workshops (WS1, WS2, WS3) and STUDIO | CAD Lab, MDC Rooms |
| 11:00-11:15 | Tea | MDC |
| 11:15-11:20 | Welcome of Chief Guest | MAC |
| | Lamp Lighting | |
| 11:20-11:30 | Welcome Speech by Prof. Sunil Rai, Vice Chancellor, UPES | |
| 11:30-11:45 | Address by Lt. Gen. (Retd.) Gurmit Singh, Honourable Governor, Uttarakhand (Chief | |
| 11:45-11:50 | Unveiling of Sustainability Report and Sustainability Fair Proceeding by Chief Guest and other | |
| | Token of thanks (Memento) to Chief Guest by Dr. S. J. Chopra, Chancellor, UPES | |
| 11:50-11:55 | Vote of thanks by Prof. Ram Sharma, Pro-Vice Chancellor, | |
| 11:55-12:10 | Campus tour of Honourable Governor | High Tea |
| Buffer Time | | |
| 13:00-14:00 | Lunch | Barons |
| 14:00-17:00 | Parallel Workshops (WS1, WS2, WS3, W9-W13) | CAD Lab, MDC Rooms, HSE Lab |
| | Research initiative in Science and Engineering (RISE) (University, College, School levels) and STUDIO | MAC |
| 17:00-17:30 | Tea | MAC |
| Day 3 (13 th OCT 2022) | | |
| Time | Agenda | Venue |
| 07:00-08:00 | Yoga Session | MAC |

| | | | |
|---------------|--|---|----------------------|
| 09:00-10:00 | Registration- Reception Desk | High Tea | Block 1 Quadrangle |
| 10:00 Onwards | Exhibitions by different stakeholders and STUDIO | | |
| | Chaired by Prof. Gautam Desiraju | | |
| 10:00-10:40 | PLENARY | Speaker 1: Prof. Ashok Pandey | MAC |
| 10:40-11:20 | | Speaker 2: Prof. Tejraj Aminabhavi | |
| 11:20-12:00 | | Speaker 3: Prof. Meththika Vithanage | |
| 12:00-13:00 | Panel discussion on “Recent Scientific Advancements to foster UN-SDGs” Moderator: Prof. Manish Kumar | | MAC |
| 13:00 -14:00 | Lunch | | Barons |
| 14:00 -15:30 | PARALLEL | Session 1: Waste Management and Circular Economy Nexus | America, MDC, UPES |
| | | Session 2: One Health and Environment (HEL&EN) | Asia, MDC, UPES |
| | | Session 3: Sustainable Materials and their role to foster UN-SDGs | Australia, MDC, UPES |
| | | Session 4: Advanced Remedial Approaches for Environmental | Europe, MDC, UPES |
| | | Special session 1: Biotechnology for improved health and | Block 1 (Board Room) |
| 15:30 -16:30 | Round Table Networking between Participants | | MAC |
| 16:30 -17:30 | PARALLEL | Session 5: Clean Energy (ENER) | America, MDC, UPES |
| | | Session 6: Water Resource Management (WATER I) | Asia, MDC, UPES |
| | | Session 7: Urban Planning and Management (URBPLAN) | Australia, MDC, UPES |
| | | Session 8: Climate Resilient Agriculture (AGRI) | Europe, MDC, UPES |
| 17:30 -18:00 | Tea | | MDC |

| Day 4 (14 th OCT 2022) | | | |
|-----------------------------------|---|--|-----------------------|
| Time | Agenda | | Venue |
| 06:00-08:00 | Nature Walk | | Himalayan Trail |
| 09:00-10:00 | High Tea | | MAC |
| | Chaired by Prof. D. K. Avasthi & Prof. S.M. Tauseef | | |
| 10:00-10:30 | PLENARY | Speaker 3: Prof. Christian Sonne | MAC |
| 10:30-11:00 | | Speaker 4: Prof. Su Shiung Lam | |
| 10:00-13:00 | Special Session 2: Innovative approaches toward energy transition and sustainable future (SUS & EN) | | Vivekanand Auditorium |
| 11:00-12:30 | PANEL DISCUSSION | Braving Tides! Role of women in Sustainability Moderator: Prof. Manish Kumar | MAC |
| | | Ms. Gayatri Ramanathan, Director ESG and Sustainability with Kaizen | |
| | | Ms. Nupur Tandon, Waste warrior, Bangalore | |
| | | Ms. Shilpa Urhekar, National Head for Renewable Energy Business in Sterling and Wilson | |
| | | Dr. Shalini Vohra, School of Liberal Studies, UPES | |
| | | Dr. Madhvi Joshi, Joint-Director, GBRC | |
| 11:00-12:00 | PARALLEL | Session 9: Water Resource Management (WATER II) | America, MDC, UPES |
| | | Session 10: Extreme events and Climate Change (CLIMATE) | Asia, MDC, UPES |
| | | Session 11: Air Pollution: Monitoring and abatement (AIR) | Australia, MDC, UPES |
| | | Session 12: Industrial Safety and Management (INDSAFE I) | Europe, MDC, UPES |
| | | Tea and Poster Evaluation | |



| | | | | |
|-------------|----------|--|--|----------------------|
| 12:00-13:00 | PARALLEL | Session 13: Revolutionizing Sustainability through Robotics (ROBO) | | America, MDC, UPES |
| | | Session 14: Industrial Safety and Management (INDSAFE II) | | Asia, MDC, UPES |
| | | Session 15: Climate Resilient Agriculture (AGRI II) | | Australia, MDC, UPES |
| | | Session 16: Advanced Remedial Approaches for Environmental | | Europe, MDC, UPES |
| 13:00-14:00 | | Lunch | | Barons |
| 14:00-14:30 | | Interaction of American Chemical Society Representatives with Participants | | MAC |
| 15:00-15:45 | | Plenary Talk by Prof. Damia Barcelo | | |
| 15:45-17:30 | | Prize Distribution and Valedictory | | |
| 17:30-18:15 | | High Tea | | |

2. DAY 1

The sustainability cluster, UPES hosted the sustainability fair on October 11, 2022. It was presided over by Prof. Manish Kumar, Head of, the sustainability cluster. The chief guest of the day was Sri Subodh Uniyal, cabinet minister, govt of Uttarakhand. He is the agricultural minister of Uttarakhand. He was the recipient of the Krishi Karman award in the year 2020. (Prof) of UPES were the comperes for the event. The function was attended by students and faculty from various departments. The function began at 12:00 h with lamp lighting followed by a welcome note from prof. Sunil Rai, Vice-chancellor, UPES. He extended his warm greetings to everyone present at the occasion. He spoke about the achievements of Sri Subodh Uniyal and his contribution towards the development of Uttarakhand. It was followed by a talk by Dr. Abhishek Nandan, organizing secretary, sustainability fair 2022, who briefed the students about the overview of the sustainability fair. The students were motivated on hearing the speech from the minister who stressed community involvement toward sustainability. Furthermore, he urged everyone to minimize the use of resources. A memento was awarded to Sri Subodh Uniyal as a token of gratitude and appreciation by Dr. Sunil Rai. Parallel workshops were conducted by the management. Dr. Bikrama prasad Yadav, associate professor of, the sustainability cluster, UPES delivered the vote of thanks. The function concluded at 17:00 h.



Registration Desk



Pre-symposium inauguration



Welcome Team at Reception



Delegates at pre-symposium inauguration



Dr. Sunil Rai welcoming the Chief-Guest Mr. Uniyal, Cabinet minister Govt. of Uttarakhand



Dr. Ram Sharma welcoming the Guest of Honour, Representative from Punjab National Bank.

UPES Sustainability Cluster

Sustainability Fair 2022
11-14th October 2022

WORKSHOP
Hands-on workshop on: Advanced Bioinformatics for Microbiome Analysis

Course Module: (Day 1)

- Basic commands in linux
- Analysis using QIIME2
- Estimation of different diversity indices
- Online and standalone alternatives for microbiome analysis

Course Module: (Day 2)

- Functional analysis using METABOLIC (METabolic And Biogeochemistry analyses in microbes)
- Cloud based alternatives using Kbase & Galaxy
- Biogeochemical cycle & antimicrobial resistance analysis

Participation Fees: 5000 INR
Date: 11 - 12 Oct 2022
Time: 10.30 am to 3:30 pm

Total Seats: 20 [It is suggested that the participants carry their personal laptops with minimum 4 GB RAM and at least 50 GB free drive space]

Who can attend:
Academicians, Practitioners, Researchers including Scholars, Post Graduate Students from relevant biological, biotechnological, healthcare, bioinformatics and allied sciences.

qime2 Click to Register

Dr. Chandrashekar Mootapally
Assistant Professor,
School of Applied Sciences & Technology (SAST),
Gujarat Technological University (GTU)

Dr. Neelam M Nathani
Assistant Professor,
School of Applied Sciences & Technology (SAST),
Gujarat Technological University (GTU)

Team members:

- Mr. Parth Sharma
- Ms. Riya Desai
- Mr. Parth Prajapati
- Ms. Pratiksha Nimbkar

UPES Sustainability Cluster

Sustainability Fair 2022
11-14th October 2022

WORKSHOP
Hands on training in ArcGIS and spatial analysis

- Learn Spatial data creation process in ArcGIS
- Creating Map layouts with cartographic principles
- Network Analysis in GIS (Calculating Shortest Route, Closest Facility, Service Areas)
- Surface Analysis (Calculating Slope, Aspect, Curvature, Contours)
- Hydrological Modelling (Creating a River watershed in ArcGIS)
- Spatial Interpolation (Inverse Distance Weighting)
- 3D Analysis (Using ArcScene, Create 3D surfaces)

Date: 11-10-2022
1:00PM to 5:00PM
Registration Fees
INR 2500/-
Click to Register

DR. ASHISH AGGARWAL
Assistant Professor - (SG)
Petroleum Engineering & Earth Sciences, SOE, UPES

UPES Sustainability Cluster

Sustainability Fair 2022
11-14th October 2022

Innovative Approaches Towards Energy Transition and Sustainable Future

Keynote Speakers:

Prof. Jitendra Sangwai (IIT Madras)
Prof. Vimal Srivastava Head of Chemical Engg. (IIT Roorkee)
Prof. Pramoch Rangsunvigit Dean, Chulalongkorn University, Thailand

Dr. Sanat Kumar (CSIR-IIP, Dehradun)
Dr. Hari Prakash Veluswamy (IIT Roorkee)
Dr. Ashesh Kumar (CSIR - IIP, Dehradun)

Session Guest Prof. Ram Sharma Pro-Vice Chancellor UPES, Dehradun
Moderator Dr. Gaurav Pandey Assistant Professor UPES, 9962678564
Moderator Dr. D. K. GUPTA Professor, UPES 9837717946

Click to Register **Date: 14-10-2022**

UPES Sustainability Cluster

Sustainability Fair 2022
11-14th October 2022

Certificate Course in Microplastics in the Environment: Extraction Techniques and Analysis

Click to Register

Date: 11 October 2022
Duration: 3h

Contents:

- Classification, sources and formation pathways
- Extraction techniques for water, soil, compost and dust
- Hands-on practice for analysis using FTIR

Workshop Resource Person **Team member**

Prof. Meththika Vithanage
University of Sri Jayewardenepura, Sri Lanka
Adjunct Professor, University of Western Australia
Highly Cited Researcher & World Top 2% Researcher

Ms. Madushika Sewwandi
Research Assistant
Ecosphere Resilience Research Center,
University of Sri Jayewardenepura, Sri Lanka

Event flyers for workshop and special session @ day 1

UPES Sustainability Cluster

Sustainability Fair 2022
11-14th October 2022

WORKSHOP

Training on Advanced Water Quality Instrumentations

Key Trainings:

- Atomic Absorption Spectroscopy
- TOC Analyzer
- Ion Chromatography
- UV Analyzer

Date: 11 October 2022
Duration: 3h
Registration Fees: INR 899/-
[Click to Register](#)

Trainers



Mr. Rahul Silori
Assistant Professor (SC),
Sustainability cluster, UPES
Contact: +91 8126516911



Er. Sunil Kumar
Sustainability cluster,
UPES



Mr. Neeraj Kumar
Sustainability cluster,
UPES

UPES Sustainability Cluster

Sustainability Fair 2022
11-14th October 2022

WORKSHOP

Hand on Training on NDT & DT Instruments

Workshop details

- Rebound Hammer
- Ultra Sonic Pulse Velocity
- Rebar Locator (Profometer)
- UTM
- CTM
- FTM

Date: 11 Oct 2022
Duration: 3h
Venue: Concrete Technology Lab
Registration Fees: INR 1000/-

[Click to Register](#)



Prof. Susanta Sethy



Mr. Vipin Kumar



Mr. Ram Sagar

UPES Sustainability Cluster

Sustainability Fair 2022
11-14th October 2022

Certificate Course in Biochar for Adsorptive Removal of Contaminants

WORKSHOP

Contents:

- Biochar production technology
- Introduction to basics of biochar
- Different production techniques
- Properties and characterization
- Feedstocks and production techniques based properties
- Different ways of characterization
- Being an adsorbent – Lab tests and upscaling
- Discussion of laboratory protocols for batch and column experiments
- Data modeling using kinetic and Isotherm equations
- Upscaling based on column experiments

Date: 11 October 2022
Duration: 3h
Registration Fees: INR 2500/-
[Click to Register](#)

Workshop resource person



Dr. Meththika Vithanage
University of Sri Jayewardenepura,
Sri Lanka
Adjunct Professor, University of Western Australia
Highly Cited Researcher & World Top 2%
Researcher



Anusha Ekanayake
Research Assistants
Ecosphere Resilience Research
Center,
University of Sri Jayewardenepura,
Sri Lanka



Oshadi Hettithanthri
Research Assistants
Ecosphere Resilience Research Center,
University of Sri Jayewardenepura,
Sri Lanka

UPES Sustainability Cluster

Sustainability Fair 2022
11-14th October 2022

Certificate Course in Scientific Writing & Publishing

[Click to Register](#)

Date: 11 October 2022
Duration: 3h
Registration Fee: INR 2500/-

Topics covered

- General aspect of scientific writing
- Tips to improve your scientific writing
- Writing reviews and research papers
- Different review articles
- Titles and abstracts
- From introduction to conclusion
- Pathway to high impact publication
- Tactics to improve chances for high impact publications
- Authorship and authors' responsibilities
- Selecting a journal for publication
- Measuring impact
- Plagiarism and other ethical issues

Workshop resource person



Prof. Meththika Vithanage
University of Sri Jayewardenepura,
Sri Lanka
Adjunct Professor, University of
Western Australia
Highly Cited Researcher & World Top
2% Researcher

Event flyers for workshops @ day 1

3. DAY 2

The sustainability cluster, UPES hosted the 2nd day of sustainability fair on October 12, 2022. It was presided over by Prof. Manish Kumar, Head of, the sustainability cluster. The chief guest of the day was Lt.Gen.(Retd) Gurmit Singh, honourable governor, govt of Uttarakhand. (Prof) of UPES were the comperes for the event. The function was attended by students and faculty from various departments. The function began at 11:15 h with lamp lighting followed by a welcome note from prof. Sunil Rai, Vice-chancellor, UPES. He extended his warm greetings to everyone present at the occasion. He spoke about the achievements of Lt.Gen.(Retd) Gurmit Singh and his contribution towards the development of Uttarakhand. It was followed by a unveiling of sustainability report and sustainability fair proceeding by chief guest and other dignitaries. The students were motivated on hearing the speech from the governor who said sustainability is very clear to everyone of us and hold on to our responsibility towards sustainability of the nation. Furthermore, he added that each innovation is directed to SDG'S. A memento was awarded to Lt.Gen.(Retd) Gurmit Singh as a token of gratitude and appreciation by Dr. S J Chopra, chancellor, UPES. Several workshops and models were presented for the RISE (Research initiative in science and engineering) competition conducted by the management. Prof Ram Sharma, Pro-vice chancellor of the sustainability cluster, UPES delivered the vote of thanks. The function concluded at 17:00 h.



Late Dr. S. C. Chopra, Chancellor, UPES handing over the souvenir to Lt. Gen.(Retd) Gurmit Singh, honourable governor, govt of Uttarakhand at the Inauguration of sustainability Fair 2022

It was an honour to have Gurmit Singh, Governor, Uttarakhand as the Chief Guest. He shared his thoughts on how we are driving the need for sustainability on a large platform to achieve economic growth, social development and environmental sustainability.

UPES Sustainability Cluster

Sustainability Fair 2022
11-14th October 2022

WORKSHOP

Hands on training on Hydraulic Instrumentations and Advances

Participants will be able to apply the concepts of uniform flow through visualisation techniques. They will be able to calibrate any open channel flow measuring device after the workshop completion. Participants will be able to interpret and analyse the phenomenon of scouring of bridge piers.

Date: 12-10-2022
Duration: 3h

Registration Fees INR 999/-
[Click to Register](#)

Prof. Durga Prasad Panday
Mr. Guddu Singh
Mr. Vipin Kumar

UPES Sustainability Cluster

Sustainability Fair 2022
11-14th October 2022

RISE

School / College / University Level

Exciting prizes (Book coupons) worth

| School Level | University Level |
|----------------|------------------|
| 1st - 15,000/- | 1st - 20,000/- |
| 2nd - 7,000/- | 2nd - 10,000/- |
| 3rd - 5,000/- | 3rd - 5,000/- |

MODEL DEMONSTRATION

We are delighted to invite students to showcase their engineering concepts in terms of model demonstrations at UPES in the following themes and to participate in the "Sustainability Fair 2022"

- Sustainable urban planning and management
- Emerging pollutants and green technologies
- Sustainable industrial practices
- Safe water and sanitation
- Biowaste-based bio-refineries
- Sustainable waste management approaches
- Climate resilient agriculture
- Wastewater treatment and utilization
- Air pollution and measures
- Green energy

Registration Fees
College/University - INR 1000/-
Private School - INR 500/-
Govt. School - INR 100/-

Contact us

Dr. Kanchan Bahukhandi
kanchan@ddn.upes.ac.in
989724631

Dr. Prasenjit Mondal
pmondal@ddn.upes.ac.in
8192940797

Submission link [CLICK HERE](#)
www.sustainabilityfair.upes.ac.in
email: sustainabilityfair2022@ddn.upes.ac.in

UPES Sustainability Cluster

Sustainability Fair 2022

Workshop on:
"Basic of Statistics by MS-EXCEL and SPSS"

EXCEL **IBM SPSS**

PROF. GYAN PRAKASH SINGH, BANARAS HINDU UNIVERSITY

Moderator : Vaibhav Srivastava, PhD

Date: 11-12 Oct 2022
Time: 10:00 AM to 4 PM

Participation Fees: INR 5000
No. of available seats: 30

Venue: Sustainability Cluster, UPES
For more details, contact: Vaibhav Srivastava: 9935287772

WHO CAN ATTEND:
Academicians, Practitioners, and Researchers from the related areas of Social Science, Humanities, Management, Medical Science, Engineering, and Science.

Please visit our website for more information
www.sustainabilityfair.upes.ac.in
sustainabilityfair2022@ddn.upes.ac.in

[in](#) [tw](#) [f](#) [ig](#)

UPES Sustainability Cluster

Sustainability Fair 2022

Hands on training on: Data Science using Python for Petroleum Geoscientist and Engineers

Module 1. Introduction to Data Science in oil and gas using Python: Anaconda and Jupyter quick start, variables and standard operators, data structures in Python, Python inbuilt functions.

Module 2. Statistics for Data Science: Understanding Data, Different types of data and their representation, exploratory data analysis, Python data visualization, bivariate data analysis. Hypothesis testing.

Module 3. A project: Titanic survival prediction

Date
Time 10 am-3 pm
Fee: 2500/- (student)
5000/- Industry professional
early registration discounts (for first 30)
Contact at, annapurnaboruah@gmail.com; solutions@theearthenergy.com
www.theearthenergy.com

Click to Register

Annapurna Boruah, Ph D Associate Professor| UPES

Bikram Pratim Bhuyan Assistant Professor| UPES

SUSTAINABILITY FAIR
11-14th October 2022

Event flyers for workshops@ day 2

UPES Sustainability Cluster

Sustainability Fair 2022
11-14th October 2022

"Hands on training for air pollution modeling and water quality monitoring tools"

WORKSHOP

Workshop Highlights

- Water quality monitoring and assessment tools
- Air pollution modeling special emphasis on HYSPLIT & MEERA

Resource Person

Dr. Abhishek Nandan
Assistant Professor (SG), Sustainability Cluster, UPES

Dr. Chandrashekhar Bhagat
Assistant Professor, Sustainability Cluster, UPES

Date: 12-10-2022
Duration: 3h

Registration Fee
INR 500/-

[Click to Register](#)

UPES Sustainability Cluster

Sustainability Fair 2022
11-14th October 2022

WORKSHOP

Hands-on training on "Sophisticated Water Quality Analysis and Advances"

Date: 12 October 2022
Duration: 3h

Registration Fees
INR 2500/-

[Click to register](#)

Key Trainings:

- Atomic Absorption Spectroscopy (AAS) and Inductively Coupled Plasma Optical Emission spectroscopy (ICP-OES)
- Ion chromatography (IC)
- Total Organic Carbon (TOC) Analyzer
- HPLC (High Performance Liquid Chromatography)

Trainers

Dr. Suvendu Manna
Assistant Professor (SG), Sustainability cluster, UPES
7001363684

Mr. Rahul Silori
Assistant Professor (SG), Sustainability cluster, UPES
8126516911

Mr. Prakash Vasanthrao Babde
Research Scientist, UPES
9404408180

Event flyers for workshops@ day 2

4. DAY 3

The sustainability cluster, UPES hosted the 3rd day of sustainability fair on October 13, 2022 kickstarted with 1hr or yoga session followed by exhibition by different stake holders and studio. The function began at 10:00 h. The fest was chaired by Prof. Gautam desiraju for the plenary session on circular economy, resource recovery and wastewater treatment etc.

UPES Sustainability Cluster

Sustainability Fair 2022
11-14th October 2022

PLENARY SPEAKER

Prof. Ashok Pandey
Distinguished Scientist
Center for Innovation and Translational Research,
CSIR-Indian Institute of Toxicology Research,
Lucknow

UPES Sustainability Cluster

Sustainability Fair 2022
11-14th October 2022

PLENARY SPEAKER

Dr. Meththika Vithanage
Faculty of Applied Sciences,
University of Sri Jayewardenepura,
Nugegoda-Sri Lanka

Event flyers for Planary speaker@ day 3

Further, panel discussion was presided over by Prof. Manish Kumar, Head of, the sustainability cluster on the topic “Recent Scientific Advancements to Foster UN-SDG’s”. The function was attended by students and faculty from various departments. Post lunch, different workshops were conducted and poster evaluation is been done on MDC, UPES. The students were motivated and gained hands-on experience from the workshop. A memento was awarded to the panel speakers as a token of gratitude. The function concluded at 17:30 hr.



Event flyers for Plenary lecture @ day 3

2.1 Parallel session with venue

| SESSION | Parallel session name | VENUE |
|-----------------|--|----------------------|
| 1 | Waste Management and Circular Economy Nexus (WMCE) | America, MDC, UPES |
| 2 | One Health and Environment (HEL&EN) | Asia, MDC, UPES |
| 3 | Sustainable Materials and their role to foster UN-SDGs (MAT) | Australia, MDC, UPES |
| 4 | Advanced Remedial Approaches for Environmental | Europe, MDC, UPES |
| 5 | Clean Energy (ENER) | America, MDC, UPES |
| 6 | Water Resource Management (WATER I) | Asia, MDC, UPES |
| 7 | Urban Planning and Management (URBPLAN) | Australia, MDC, UPES |
| 8 | Climate Resilient Agriculture (AGRI) | Europe, MDC, UPES |
| SPECIAL SESSION | Special session 1: Biotechnology for improved health and environment | Block 1 (Board Room) |
| SPECIAL SESSION | Innovative Approaches towards energy transition and sustainable future | Block 1 (Board Room) |

List of abstracts selected for Poster session

Waste (WMCE)

| S. No. | Paper Title | Corresponding Author | Affiliation |
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| 1 | SUSTAINABLE WASTE MANAGEMENT APPROACHES IN DEHRADUN CITY | Dr. Anupama Tripathi, Dr. Sharad Kumar Tripathi | DBS PG College, Dehradun, Uttarakhand |
| 2 | Current status of municipal solid waste generation and management practices in the Haridwar municipality, Uttarakhand | Aditi Bisht, Nitin Kamboj | Department of zoology and Environmental Science Gurukula Kangri Deemed to be University, Haridwar. 249404 |
| 3 | A study on the efficiency of garden waste decomposition and reproductive potential assessment of Eisenia fetida | Amrit Kumar and Nitin Kamboj | Department of Zoology and Environmental Science, Gurukula Kangri (Deemed to be University), Haridwar, Uttarakhand, India, 249404" |
| 4 | Formulation of Healthy Beverage from Food Waste for Sustainable Approach of Waste Management | Ms Paulami Ghosh 1 , Dr Shuchi Upadhyay | UPES |
| 5 | Implication of Biomedical waste disposal during COVID-19 on environment | Rahul Silori, Ayush Sahu, | UPES |
| 6 | Sustainable Waste Management | Priyanka, Dr Neetu Tirpathi | MKP PG College, Dehradun |
| 7 | Does Robotics Really Work Like Human Brain | Ritu Sharma, Gagan anand | Chandigarh University |
| 8 | Linear Regression Model in Machine Learning Field | Kiran Mahara , Amreen Ahmad and Gagan Anand | Chandigarh University |
| 9 | A Review Paper on Spiking Neural Networks | Ritika Narwala, Amreen Ahmadb, Parveen Tyagi | Chandigarh University |
| 10 | Analysis of initial approximation in various iterative methods | KOMAL, JATINDER SAINI | Chandigarh University |
| 11 | Application of IOT in minimising Human efforts and Physical contact to reduce the risk of spreading disease | Aarohan Goel; Amarnath Bose | UPES |
| 12 | Application of IOT in minimising Human efforts and Physical contact to reduce the risk of spreading disease | Aarohan Goel; Amarnath Bose | UPES |
| | Impact assessment of fungicide carbendazim exposure during | Dr. Jyoti Upadhyay | UPES |

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| 13 | pregnancy and its association with neonatal defects, a study in female wistar rat model | | |
| 14 | Electromagnetic properties and Biomedical applications of Ni-Zn ferrites | Krishna Saini | Chandigarh University |
| 15 | A Review of Ceramic Materials for Dental Applications | Rajeev Gupta 1 , Amneesh Singla | UPES |
| 16 | Utilisation of mushroom and oats waste for development of geriatric formulation | Ms. Snigdha Paul 1 , Dr. Shuchi Upadhyay 2 & Dr. Ravinder Kaushik | UPES |
| 17 | Worldwide Genealogy analysis reveals phylogenetically segregated Entamoeba histolytica population from India | Shashi Upadhyay, Pooja Sachdeva, Koushik Das | UPES |
| 18 | Antibiogram Profiling of ESKAPE Pathogens in India towards currently available antibiotics | Aakanksha Kalra*, Akansha Mathur and Harshita Jonwal | Dr. B. Lal Institute of Biotechnology, Jaipur |
| 19 | Nanoparticles - mediated delivery of redox modulating agents to alveolar lung cells: an effective strategy to treat chronic obstructive pulmonary diseases (COPD) | Vicky Sinhal Nidhi Gupta ² and Aakanksha Kalra ^{1*} | Dr. B. Lal Institute of Biotechnology, Jaipur |
| 20 | USAGE OF AI FOR DISCOVERY AND DEVELOPEMENT OF DRUGS: A STUDY | Aditya Kr. Singh , Chanchal Kumar | Chandigarh University |
| 21 | Application of Artificial Intelligence in Healthcare | MADHURIMA GHOSH, Sonia | Chandigarh University |
| 22 | ANALYSIS OF SOCIAL NETWORKING SITES DURING COVID 19 BY CHI-SQUARED TEST | Sahil, Himanshu | Chandigarh University |
| 23 | Supercapacitor: Management and Development of a green Energy Composed Entirely of Environment Friendly Materials | Hanish singh , Ajay vasishth | Chandigarh University, |
| 24 | Nanomaterials For High-Energy Supercapacitor Component: A Source For Green Energy | Ajay Sharma , Ajay Vasishth | Chandigarh University, |
| 25 | Recent Advancements In Materials For Solar Cell | Sushila , Ajay Vasishth | Chandigarh University, |

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| | Applications: Renewable Source of Power | | |
| 26 | Optimization of Hydrogen Fuel Cell Economy for next generation power supply | Ashwin Xavier Francis,Bhaumik,Rhythm Mahesh Galrani,Ramesh Kumar* | UPES |
| 27 | Sustainable green energy strategies: | Ritu Kumari, Dr. Parul Parihar | LPU |
| 28 | Cattle Dung as a Substrate for Bio-Electric System | Kumar Sonu 1 , Monika Sogani | Kashi Institute of Technology, Varanas |
| 29 | Windoku Based Solar PV Array One Time Reconfiguration for Maximum Power Enhancement under Partial Shading Scenarios | kapil khatri, Mirza Mohammad Shadab2 | Pranveer Singh Institute of Technology, |
| 30 | PREDICTING THE COMPRESSIVE STRENGTH OF CONCRETE MIXES USING SHALLOW ARTIFICIAL NEURAL NETWORKS | M Harikumar, A D Singh, B Ferrao, D Saiteja, L D Deepak, A S Sandra, S Shivhare | NIT Goa |
| 31 | A short review on biosynthesis of ZnO nanoparticles using plant derivatives | Nishtha 1 , Nupur Aggarwal | Department of Physics, Chandigarh University, Gharuan, Punjab, India, 140413 |
| 32 | Physicochemical investigations of rare earth Ce 3+ ion modified ZnO nanoparticle | Samridhi 1 , Nupur Aggarwal | Department of Physics, Chandigarh University, Gharuan, Punjab, India, 140413 |
| 33 | Investigation of Structural, electrical and magnetic properties of copper doped Mg-Mn ferrite | Vidhi Tyagi, Anjana Sharma | Chandigarh University, Punjab 140413, India |
| 34 | Techniques to improve efficiency in solar cells | Sharmili, Shilpi Jindal | Department of Physics, Chandigarh University, Mohali, Punjab, India |
| 35 | REVIEW ON GREEN SYNTHESIS OF SILVER NANO-PARTICLES AND ITS ANTIOXIDANT OR ANTIBIOTIC PROPERTIES | Vikas | Department of Physics, Chandigarh University, Mohali, Punjab, India |
| 36 | Review on Synthesis, Characterization and Properties of Transition Metal Doped ZnO Nanostructures | RIA POTAN | Department of Physics, Chandigarh University, Mohali, Punjab, India |

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| 37 | A REVIEW PAPER ON SUSTAINABLE MATERIALS | Ayush Tariyal | UPES |
| 38 | Electrodeposited Graphene oxide on ITO substrate with viologen based material fabricated on Electrochromic device to study colour switching speed and voltage | Anuj Baghel, Jitendra Kumar | HBTU, Kanpur, India. |
| 39 | A review paper: The synthesis methods and application of the Mn-Zn ferrites. | Kanika Sharma, Anjana Sharma. | Chandigarh University |
| 40 | Synthesis and characterization of Mg-Mn Ferrites: A short review | Shweta, Anjana Sharma | chandigarh University |
| 41 | A short review on synthesis, characterization and application of Mn-Zn ferrites. | Anamika Thakur Anjana Sharma | Chandigarh university |
| 42 | Preparation and Characterization of Graphene-oxide Promoted Vitrimers for Corrosion Inhibition Coatings | Poonam Singh, Tanya Dagar, Aman Choudhary, Pankaj Kumar, Sravendra Rana* | UPES |
| 43 | Acute Water Crisis in Shimla in the Summer of 2018: Present Scenario and Future | Dr. Navjot Hothi | UPES |
| 44 | A multivariate and statistical estimation of heavy metal toxicity in different water resources of Haridwar city, Uttarakhand, India | Mr. Neeraj Pandey, Dr. Nitin Kamboj | Department of Zoology and Environmental Science, Gurukula Kangri (Deemed to be University), Haridwar, Uttarakhand, India, 249404 |
| 45 | Assessment of electro-assisted constructed wetland using Taro (<i>Colocasia esculenta</i> L. Schott) plants for treating paper mill effluent | Sheetal Rani and Vinod Kumar | Department of Zoology and Environmental Sciences, Gurukul Kangri (Deemed to be University) Haridwar, Uttarakhand |
| 46 | WATER WISE, BE WISE | Monica Gangopadhyay and Dr. Suman Naithani | Graphic Era (deemed to be) University, |

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| | | | 566/6, Bell Road, Society Area, |
| 47 | Evaluation of seasonal water quality using Water Quality Index (WQI) | Kiran Joshi 1 *, Chitra Pande 2 , Ashutosh Pratap Pande 3 , Geeta Tewari | Graphic Era |
| 48 | Performance evaluation of on-site sewage treatment system (Johkasou) | Aashutosh Garg, Ankur Rajpal, A.A Kazmi | Indian Institute of Technology Roorkee, |
| 49 | Safe water & Sanitation | Dikha, Dr Neetu Tirpathi | MKP PG College, Dehradun |
| 50 | Wastewater treatment and utilization | Reetu Sati, Dr. Neetu Tripathi | MKP PG College, Dehradun |
| 51 | Use of Plant Leaves in Providing Rapid Water Filtration for Rural Areas | Ankit Belwal, Shipra Thapliyal, Rishi Dev Nautiyal and Abdesht Mishra | Uttaranchal University, Dehradun |
| 52 | Sustainable Natural Water Resources of Indian Himalayan Region:Overview | Divya Shukla 1, * Bhavtosh Sharma 2 , Anita Rawat 2 , Mohit Kumar 1 , Prashant Singh | Dev Sanskriti Vishwavidyalaya, Haridwar USERC, Dehradun DAV (PG) College, Dehradun |
| 53 | A Review on Emerging Contaminants in Surface and Ground Water Bodies of India (An Assessment of an exposure on Human Health) | Kanika Dogra1 Dr. Kanchan Bahukhandi2 | upes |
| 54 | SPATIAL AND TEMPORAL VARIATION IN SURFACE AND GROUND WATER USING MULTIVARIATE STATISTICAL TECHNIQUES (A REVIEW) | Vismaya Uday1, Kanchan Deoli Bahukhandi2, Dr Bhavtosh Sharma3 | UPES |
| 55 | A study of multi-temporal image analysis for LULC classification and change detection for sustainable land use management in Shiwalik Himalayas, India. | Nitin Kamboj, Manisha Bharti, Aditi Bisht and Vishal | KambojGurukula Kangri (Deemed to Be University), Haridwar, Uttarakhand, |
| 56 | A REVIEW PAPER ON GREEN BUILDINGS | Ayush Tariyal | UPES |
| 57 | SUSTAINABLE DEVELOPMENT AND | 1Pankaj Kumar, Isha Sharma | Chandigarh University |

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| | ENVIRONMENT: AN INSIGHT | | |
| 58 | Emphasizing the Security of Meter reading using a Motion Sensor to avoid tampering/fraud of data using Proteus Software | Khushi Yarlagadda Dhruv Chakravarty Nath Achint Singh, Surajit Mondal | UPES |
| 59 | Co-relating Contemporary Culture with Ancient Vedic Systems of India: A case study of Sustainable Eco-Villages | Dr. Pooja Gupta, | Assistant Professor(SS) School of Liberal Studies UPES, |

Occurrence and removal of contaminants (CON&REM)

| S. NO. | Paper Title | Corresponding author | Affiliation |
|--------|---|------------------------------------|---|
| 1 | ENVIRONMENTAL SENSOR | Pankaj 1 , Ajay Vasishth | CHANDIGARH UNIVERSITY, MOHALI PUNJAB, INDIA |
| 2 | Electrochemical reduction of nitrate with different metal oxide cathodes | Janhavi Ingle, Upendra D. Patel | The Maharaja Sayajirao University of Baroda, Kalabhuvan, Dandia Bazar, Vadodara |
| 3 | Implication of PPCPs usage during COVID-19 on environment | Rahul Silori1,* , Raja2 | UPES |
| 4 | Biochar: Feasibility and suitability study for removing emerging contaminants from soil | Rahul Silori1,* , Anish Raj Bhati1 | UPES |
| 5 | Biochar: Feasibility and suitability study for removing emerging contaminants from water | Rahul Silori 1,* , Anish Raj Bhati | UPES |
| 6 | Emerging pollutants and Green technologies. | Tuba Taziun and Dr. Parul Parihar | LPU |
| 7 | Microplastic proliferation : A review | Monica Gangopadhyay | Graphic Era |
| 8 | Green synthesis of recyclable magnetic nanoparticles for efficient adsorption of antibiotic compounds from wastewater solutions | Saurabh Shukla, Ramsha Khan | Shri Ramswaroop Memorial University, Barabanki, India |

Air: Quality/ Pollution/ Abatement (AIR)

| S. NO. | Paper Title | Corresponding author | Affiliation |
|--------|---|--|---|
| 1 | Monitoring air pollution with UAV-based solutions | ANAND RADHAKRISHNAN, Ramesh Kumar*,EIMY WATSON,SHUBHAM INDRAMANI YADAV | University of Petroleum and Energy Studies |
| 2 | Air pollution and measures | Bilal Ahmad Mir, Parul Parihar | LPU |
| 3 | Air Pollution: Cause and Measures | KM Megha, Dr.Neetu Tripathi | MKP PG College, Dehradun |
| 4 | Assessment of indoor and outdoor air pollution in process industry of Industrial area of Hyderabad, India during Covid 19 Pandemic(A review) | Raghav Mohina*, Dr. Kanchan Deoli Bahukhandi b* Vipin Sainic | University of Petroleum and Energy Studies, Dehradun, India. Doon University , Dehradun |

Safety/ Industry/ Disaster Management (INDSAFE)

| S. NO. | Paper Title | Corresponding author | Affiliation |
|--------|--|--|--|
| 1 | An implementation of Behavioral Based Safety approach for machine guarding's critical points survey in FMCG Industry | Ayush Saini, Amarnath Bose | University of Petroleum and Energy Studies, Dehradun |
| 2 | Supervision of industrial safety and security with unmanned aerial vehicles | EIMY WATSON, Ramesh Kumar*,ANAND RADHAKRISHNAN,SHUBHAM INDRAMANI YADAV | University of Petroleum and Energy Studies |
| 3 | Status of CCUS project viability for Mumbai offshore and Cambay basins, Western India | Rahul Kumar Singh ¹ and Atul Kumar Patidar ¹ , | UPES |
| 4 | Credit card Risk analysis | Deepak | Chandigarh University |
| 5 | A state of the art review of the failure modes & effect analysis of flame arrestors | Prakhar Prakash Singh a , Vinay a , Chirag Singh a , Sarthak Srivastava a , Madhu Sharma | UPES |

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| 6 | An Unceasing Behavior-Based Safety (BBS) Approach for Ceaseless Safety Improvement in FMCG Industry | Rahul Singh 1, , Kanchan Deoli Bahukahndi2 , Dr. Pankaj Kumar Mewerguru3 | University of Petroleum and Energy Studies, Dehradun, India. Central Pollution Control Board |
|---|---|--|--|

Climate Resilient Agriculture/ Plant Science (AGRI)

| S. NO. | Paper Title | Corresponding author | Affiliation |
|--------|---|--|--|
| 1 | Host range isolation on Chilli (<i>Capsicum frutescens</i>) of Doon Valley in Uttarakhand | Vijaylaxmi and Dr.Nirmala Koranga | DBS PG College, Dehradun, Uttarakhand |
| 2 | Developing genome-scale metabolic model for <i>Nitrosomonas europaea</i> and analysing flux distribution for improved nitrification process | Nishu Goyal*, Chia Pei Lyn, Shilpi Aggarwal, Frankline Gerold, I A Karimi* | Department of Chemical and Biomolecular Engineering, National University of Singapore, Department of Chemical Engineering, School of Engineering, University of Petroleum and Energy Studies, Dehradun 2 |
| 3 | The assessment of the nitrogen and phosphorus budgeting in the sugarcane land use system | Garima and Namita Joshi | Department of Environmental Science, Kanya Gurukula Campus, Gurukula Kangri (Deemed to be University), Haridwar, |
| 4 | Soil Enzyme Activities in Different Salt Affected Soils | Ibha Suhani, Rajeev Pratap Singh* | BHU |
| 5 | A short review of statistical quality control (sqc) in food industry QUALITY MANAGEMENT | Purba Devi , Sonia Bhalla, Amreen Ahmad | Chandigarh University |

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| 6 | Response of seed germination and seedling growth of native tree species to the leaf tissues of noxious invasive weed <i>Ageratina adenophora</i> | Kavita Khatri 1* , Bhawna Negi 1 , Kiran Bargali 1 , Surendra Singh Bargali | Kumaun University |
| 7 | EFFECT OF METHODS OF SEED COLLECTION ON QUALITY AND STORABILITY OF <i>PRINSEPIA UTILIS ROYLE</i> (BHEKAL) SEED | Prabal Kumar 1* , Devendra Kumar 2 , Vijay Kumar Dhawan 1 , and Sheesh Ram | FRI |
| 8 | Seasonal variation in species composition and diversity in temperate grassland of Kumaun Himalaya | Archana Fartyal1 , S.S. Bargali1 and Kiran Bargali1 | Kumaun University |
| 9 | Factors affecting roadside distribution pattern of Crofton weed along elevational gradient in Kumaun Himalaya, India | Bhawna Negi 1 , Kavita Khatri 1 , S.S. Bargali 1 and Kiran Bargali 1 | Kumaun University |
| 10 | Effect of soil type on propagation of rare chasmophytic shrub <i>Catamixis baccharoides</i> Thoms. | Dixit Kumar Pathak 1* , Kiran Bargali 1 , Surendra Singh Bargali | Kumaun University |
| 11 | Soil nutrient status across different <i>Cupressus torulosa</i> D. Don stands along altitudinal gradient in Central Himalaya, India | Disha Upreti1 , Lalit Mohan Tewari1 , Ashish Tewari2 | Kumaun University |
| 12 | Hybrid Classification Method for Plant Disease Detection | Malle siva vara prasad[, Vikas Wasson | chandigarh university |

Extreme events & Climate Change (CLIMATE)

| S. NO. | Paper Title | Corresponding author | Affiliation |
|--------|--|--|---|
| 1 | Impact of Climate Change on Natural Water Resources of Indian Himalayan Region | Prabhat Bahukhandi1,* Bhavtosh Sharma2, Sheetal Tyagi1, Ajay Kumar3, Kanchan Deoli | 1Department of Chemistry, SGRR University, Dehradun |

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| 2 | Cloudbursts and flash floods in Himalayan Region: A detailed Analytical Study | Soumya Jain ¹ , a, Kanchan Bahukhandi ¹ | ¹ Department of Health, Safety & Environmental Engineering, University of Petroleum and Energy Studies, Dehradun, India |
| 3 | Causes and Aftermaths of Floods in India: A detailed study and review | Dibendu V Nayar ¹ , a, Kanchan Bahukhandi | University of Petroleum and Energy Studies, Dehradun, India. Doon University, Dehradun |

Miscellaneous (MISC)

| S. NO. | Paper Title | Corresponding author | Affiliation |
|--------|--|--|---|
| 1 | Transparent Anti-Icing Superhydrophobic Coatings for Solar Application: Mechanisms, Fabrication, Challenges, and Opportunities | D.P. Singh, Rajeev Gupta | UPES |
| 2 | "An insect faunal study at Dolphin campus, Near Manduwala Village, Dehradun, Uttarakhand, India" | Dinesh Kumar Bhardwaj, Beena Joshi Bhatt, Shivam Vitlani and Abishek Pradhan | Deptt of Zoology, Dolphin Institute of Biomedical and Natural Sciences, Dehradun, Uttarakhand |
| 3 | Biotic Index with Reference to Macroinvertebrates in the rivers of Doon Valley – An Assessment of Water Quality | Deepali Rana ^{1*} , Rahul Rana ² and Beena Joshi Bhatt | Deptt of Zoology, Dolphin Institute of Biomedical and Natural Sciences, Dehradun, Uttarakhand |
| 4 | EFFECTS OF HEAVY METALS TOXICITY ON TISSUES OF FISH: A CASE STUDY FROM DEHRADUN REGION | Beena Joshi Bhatt and Deepali Rana | Deptt of Zoology, Dolphin Institute of Biomedical and Natural Sciences, Dehradun |
| 5 | A short review on Data Visualization and its Tools Used by Business | Quzee ¹ , Dr Amreen Ahmad ¹ and Gagan Anand ² | Chandigarh University, University of petroleum and energy studies, Bhidoli. |
| 6 | Psychology and business ethic | Rohit Kumar,, Amreen Ahmad, Parveen Tyagi | Chandigarh University |

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| 7 | THE CLOUD-A NEW MODEL FOR LIBRARY AUTOMATION | Surya Dutta Sharma, Vishwajeet Shankar Goswami, Aashima Bangia | Chandigarh University |
| 8 | Data Visualization | Sunny Mehrotra, Gurpreet Singh, Amreen Ahmad | Chandigarh University |
| 9 | A review of programming paradigms used in R | NIVED KRISHNA PRAKASH, Sonia | Chandigarh University |
| 10 | Analysis of formation of ice nucleating particles | PARUSH SHARMA, JATINDER SAINI | Chandigarh University |
| 11 | Mathematical calculator: A GUI using Python | VISHAKHA CHOUDHARY, JATINDER SAINI | Chandigarh University |
| 12 | Humam boon or boom to Nature | Ms. Gargi Gogia, Dr. Neetu Tripathi | MKP PG College, Dehradun |
| 13 | Green energy | Ritika Kanswal, Dr Neetu Tripathi | MKP PG College, Dehradun |



RISE-Project display by local school, college, and university Students

5. DAY 4

The sustainability cluster, UPES hosted the 4th day of sustainability fair on October 14, 2022 kickstarted with nature walk on the Himalayan trail. The function began at 10:00 h. The fest was chaired by Prof. D.K. Avasthi and Prof S.M. Tauseef for the plenary session on innovative approaches towards energy transition and sustainable future (SUS AND EN).

Further, panel discussion was presided over by Prof. Manish Kumar, Head of, the sustainability cluster on the topic “Braving Tides!! Roles of Women in Sustainability”.



UPES Sustainability Cluster

Sustainability Fair 2022
11-14th October 2022

in | | | |

PLENARY SPEAKER
Prof. Damià Barceló
Director, Catalan Institute for Water Research (ICRA), Spain

The flyer features a portrait of Prof. Damià Barceló on the left. The background is light blue with a faint image of water being poured into a glass. Logos for UPES Sustainability Cluster and the Sustainability Fair are in the top corners. Social media icons for LinkedIn, Twitter, Facebook, and Instagram are in the top center.



UPES Sustainability Cluster

Sustainability Fair 2022
11-14th October 2022

in | | | |

PLENARY SPEAKER
Prof. Christian Sonne
Aarhus University Department of Environmental Science, Roskilde, Denmark

The flyer features a portrait of Prof. Christian Sonne on the left. The background is light blue with a faint image of a polar bear on an ice floe. Logos for UPES Sustainability Cluster and the Sustainability Fair are in the top corners. Social media icons for LinkedIn, Twitter, Facebook, and Instagram are in the top center.



UPES Sustainability Cluster

Sustainability Fair 2022
11-14th October 2022

in | | | |

PLENARY SPEAKER
Prof. Su Shiung Lam
Professor, Universiti Malaysia Terengganu, Kuala Terengganu, Malaysia

The flyer features a portrait of Prof. Su Shiung Lam on the left. The background is light blue with a faint image of a chemistry laboratory. Logos for UPES Sustainability Cluster and the Sustainability Fair are in the top corners. Social media icons for LinkedIn, Twitter, Facebook, and Instagram are in the top center.

Flyers for plenary speakers @Day 4



Panel discussion on “Braving Tides!! Roles of Women in Sustainability”

We intentionally selected 6 women to represent the human being that is blessed with 'Six Senses'. It was so mesmerised by extraordinary convictions, braving differences, and thought process. We did conclude that children desperately need to be inculcated with great sense of responsibilities towards sustainability and thus the role of women in SDG plan becomes indispensable. Another motivating aspect was to know in their own words 'Making of Them

This panel discussion was sponsored by Kaizzen PR and was part of mega event Sustainability Fair 2022, organized by the Sustainability Cluster UPES, UPES School of Engineering (SOE), UPES, on 14th Oct, 2022.

Sessions on 4th Day

| SESSION | TOIPC | VENUE |
|---------|--|----------------------|
| 9 | Water Resource Management (WATER II) | America, MDC, UPES |
| 10 | Extreme events and Climate Change (CLIMATE) | Asia, MDC, UPES |
| 11 | Air Pollution: Monitoring and abatement (AIR) | Australia, MDC, UPES |
| 12 | Industrial Safety and Management (INDSAFE I) | Europe, MDC, UPES |
| 13 | Revolutionizing Sustainability through Robotics (ROBO) | America, MDC, UPES |
| 14 | Industrial Safety and Management (INDSAFE II) | Asia, MDC, UPES |
| 15 | Climate Resilient Agriculture (AGRI II) | Australia, MDC, UPES |
| 16 | Advanced Remedial Approaches for Environmental | Europe, MDC, UPES |



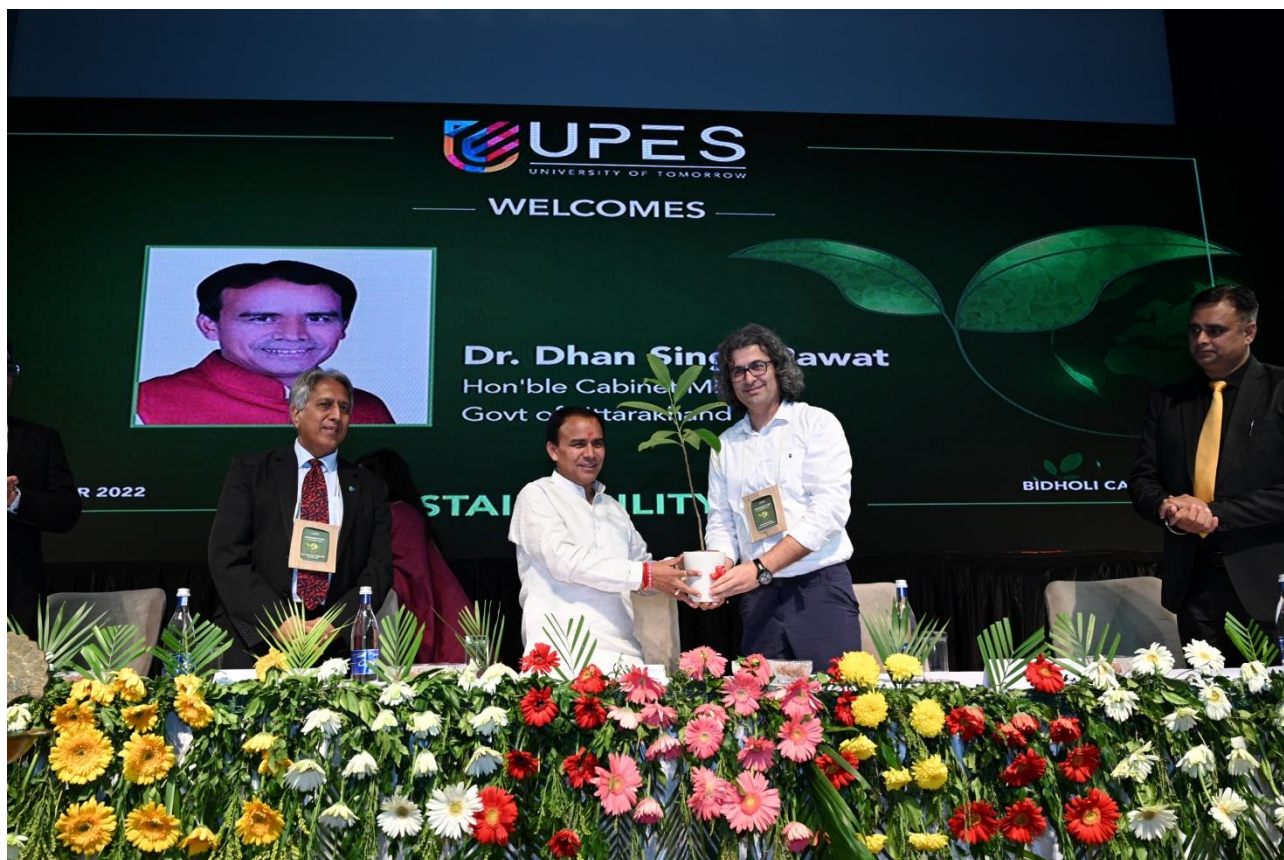
Some glimpse of the events [Left to right: professor Manish Kumar interacting with the plenary speakers Professor Aminabhavi, Professor Ashok Pandey, and Professor Methika; Honourable Governor of Uttarakhand is releasing the Sustainability Reports; Panel discussion on the role of women in Environment sustainability].



Project Display by Local Industries, NGOs, and start-ups at Sustainability Fair 2022

6. Valedictory session

The function was attended by students and faculty from various departments. Post lunch, The chief guest of the day was Dr. Dhan Singh Rawat, Education and health minister, govt of Uttarakhand. Dr. Tabasum Abbasi and Dr. Madhuben Sharma of UPES were the comperes for the event. The function was attended by students and faculty from various departments. The function began at 14:00 h with lamp lighting followed by a welcome note from prof. Ram Sharma, Pro-Vice-chancellor, UPES. He extended his warm greetings to everyone present at the occasion. He spoke about the achievements of Dr. Dhan Singh Rawat and his contribution towards the development of Uttarakhand. It was followed by a prize distribution for the events of the sustainability fair. A memento was awarded to Dr. Dhan Singh Rawat as a token of gratitude and appreciation by Dr Gurvinder Singh Virk, UPES. Dr. Suvendu Manna, sustainability cluster, UPES delivered the vote of thanks. The function concluded at 17:00 hr.



Token of souvenir presented to Mr. Dhan Singh Rawat, Cabinet Minister, Govt. of Uttarakhand, by Dr. Ram Sharma, Pro-VC, UPES

THANK YOU.