#### **Continuous Education Program 2020**

An online five day Continuous Education Program on 'Current Aspects and Research Opportunities in Civil Engineering' was organized by the department of Civil Engineering Jaypee University of Information Technology (JUIT), Waknaghat from 20<sup>th</sup> to 24<sup>th</sup> July 2020.

The program was successfully completed under the auspices of

- Prof. Vinod Kumar Vice Chancellor of JUIT Waknaghat and Patron of the organized
   CEP by Civil Engineering Department.
- Prof. SamirDev Gupta Director and Dean of Academics of JUIT Waknaghat
- Major General Rakesh Bassi (Retd.) Registrar and Dean of Students of JUIT
   Waknaghat
- Prof. Ashok Kumar Gupta HOD of Civil Engineering Department of JUIT Waknaghat and Program Chair of the organized CEP by Civil Engineering Department.
- Dr. Rajiv Ganguly Associate Professor of Civil Engineering Department of JUIT Waknaghat and Program Convener of organized CEP by Civil Engineering Department.
- Dr. Aakash Gupta Assistant Professor of Civil Engineering Department of JUIT
   Waknaghat and Program Convener of organized CEP by Civil Engineering Department
- Mr. Anirban Dhulia Assistant Professor of Civil Engineering Department of JUIT
   Waknaghat and Program Convener of organized CEP by Civil Engineering Department

The Continuous Education Program on 'Current Aspects and Research Opportunities in Civil Engineering comprised mainly of invited and guest lecturers from eminent speakers of renowned institutes covering multifaceted aspects on progress, developments and forthcoming research opportunities in Civil Engineering. Table 1 highlights the program schedule of the conducted CEP program including the names and organizations of the speakers along with the title of lectures (talks) delivered by them.



Table 1: Schedule and Details of Lecture presented by different speakers in the CEP program 2020

| Date       | Time         | Name of Resource Person   | Title of Presentation  |
|------------|--------------|---------------------------|--|
| 20/07/2020 | 10.00 -11.30 | Prof. Praveen Agarwal     | Updated Flexible Pavement Design as per IRC.   |
|            | AM           | (NIT Kurukshetra)         |  |
|            | 11.30 AM –   | Dr. Surender Singh        | Assessment of the Recycled Aggregates for  |
|            | 01:00 PM     | (IIT Madras)              | Concrete Pavements.  |
| 21/07/2020 | 10.00 -11.30 | Dr. K. Sitaramanjaneyulu  | Construction and Quality Control of Flexible   |
|            | AM           | (CSIR-CRRI)               | Pavements.   |
|            | 11.30 AM –   | Dr. Pradeep Kumar         | Modern Pavement Evaluation Techniques.   |
|            | 01:00 PM     | (CSIR-CRRI)               |  |
|            | 01.00 PM -   | Dr. Pankaj Munjal         | Engineered Cementitious Composites (ECC) and   |
|            | 02.00 PM     | (National University of   | its applications for strengthening of Masonry  |
|            |              | Singapore)                | Structures.  |
| 22/07/2020 | 10.00 AM-    | Prof. M. Chandrasekhar    | Research in Environmental Engineering and  |
|            | 11.30 AM     | (NIT Warangal)            | Recent Trends.   |
|            | 11.30 AM -   | Mr. Krishanu Saha         | Application of Data Analytics in Civil   |
|            | 01.00 PM     | (Boston Consulting Group, | Engineering.   |
|            |              | USA)                      |  |
| 23/07/2020 | 10.00 AM-    | Mr. Anil Kumar            | Blast Loading on Structures: Fragility Analysis  |
|            | 11.30 AM     | (CCET, Chandigarh)        | and their Mitigation.  |
|            | 11.30 AM -   | Dr. Rajesh Kumar          | Self Compacting Concrete and Factors Affecting   |
|            | 01.00 PM     | (CCET, Chandigarh)        | its Behaviour.   |
| 24/07/2020 | 10.00 AM-    | Dr. Indrajit Ghosh        | Surrogate safety measures for traffic safety   |
| 21/07/2020 | 11.30 AM     | (IIT Roorkee)             | assessment under heterogeneous traffic conditions  |
|            | 4            | (                         | and the second s |
|            | 11.30 AM -   | Dr. Arpit Goyal (Coventry | Corrosion of Steel in Reinforced Concrete  |
|            | 01.00 PM     | University, UK)           | Structures Structures  |

The CEP was conducted mainly to gain knowledge on the current opportunities in civil engineering and to know about the developing research areas so as to improve the performance of the Civil Engineering faculty members and the participants in different specializations. It was conducted so that the faculty members and the different participants could get more acquainted with recent developments and prevailing opportunities for research in Civil Engineering which if required could be incorporated in up gradation of existing courses or development of new courses to make the students more aware. The program started at 10 AM in the morning and continued till 2.00 PM in the afternoon with minimum of two lectures per day followed by question-answer sessions presented by different eminent speakers of reputed institutes covering a variety of subjects. A detail summary of the topic discussed during the entire CEP program is summarized in Table 1.

The participation in the CEP was overwhelming with a large number of participants from outstation locations with some participants joining from Karnataka, Gujarat, Chhattisgarh and other such states. The overall summary of the participants present in the CEP program is summarized in Table 2.

**Table 2**: Summary of participation Details in the CEP program 2020

| Total Number of Registered participants | 108 |
|---|-----|
| Total Number of external participants   | 65  |

Session wise summary of participants is presented in Table 3 below

**Table 3**: Session wise summary of participation Details in the CEP program 2020

| Date       | Time     | Name of Resource Person | Title of Presentation | Maximum<br>number of<br>participants | Minimum<br>number of<br>participants | Percenta<br>ge of<br>external<br>participa<br>nts | Percenta<br>ge of<br>internal<br>participa<br>nts |
|------------|----------|-------------------------|-----------------------|--------------------------------------|--------------------------------------|---|---|
| 20/07/2020 | 10.00 -  | Prof. Praveen           | Updated               | 80+                                  | 50+                                  | 50%   | 50%   |
|            | 11.30 AM | Agarwal                 | Flexible              |                                      |                                      |   |   |
|            |          | (NIT                    | Pavement              |                                      |                                      |   |   |
|            |          | Kurukshetra)            | Design as per         |                                      | (A)                                  | FINFORMA  |   |
|            |          |                         | IRC.                  |                                      | THE THINKS                           | QAC OF  |   |

|            | 11.30 AM | Dr. Surender  | Assessment of  | 80+ | 50+           | 50%            | 50%   |
|------------|----------|---------------|----------------|-----|---------------|----------------|-------|
|            | -01:00   | Singh         | the Recycled   |     |               |                |       |
|            | PM       | (IIT Madras)  | Aggregates for |     |               |                |       |
|            |          |               | Concrete       |     |               |                |       |
|            |          |               | Pavements.     |     |               |                |       |
| 21/07/2020 | 10.00 -  | Dr. K.        | Construction   | 75+ | 50+           | 50%            | 50%   |
|            | 11.30 AM | Sitaramanjan  | and Quality    |     |               |                |       |
|            |          | eyulu         | Control of     |     |               |                |       |
|            |          | (CSIR-CRRI)   | Flexible       |     |               |                |       |
|            |          |               | Pavements.     |     |               |                |       |
|            | 11.30 AM | Dr. Pradeep   | Modern         | 75+ | 50+           | 50%            | 50%   |
|            | -01:00   | Kumar         | Pavement       |     |               |                |       |
|            | PM       | (CSIR-CRRI)   | Evaluation     |     |               |                |       |
|            |          |               | Techniques.    |     |               |                |       |
|            | 01.00 PM | Dr. Pankaj    | Engineered     | 75+ | 50+           | 50%            | 50%   |
|            | - 02.00  | Munjal        | Cementitious   |     |               |                |       |
|            | PM       | (National     | Composites     |     |               |                |       |
|            |          | University of | (ECC) and its  |     |               |                |       |
|            |          | Singapore     | applications   |     |               |                |       |
|            |          |               | for            |     |               |                |       |
|            |          |               | strengthening  |     |               |                |       |
|            |          |               | of Masonry     |     |               |                |       |
|            |          |               | Structures.    |     |               |                |       |
| 22/07/2020 | 10.00    | Prof. M.      | Research in    | 75+ | 50+           | 50%            | 50%   |
|            | AM-      | Chandrasekh   | Environmental  |     |               |                |       |
|            | 11.30 AM | ar            | Engineering    |     |               |                |       |
|            |          | (NIT          | and Recent     |     |               |                |       |
|            |          | Warangal)     | Trends.        |     |               |                |       |
|            | 11.30 AM | Mr. Krishanu  | Application of | 75+ | 50+           | 50%            | 50%   |
|            | -01.00   | Saha          | Data Analytics |     |               |                |       |
|            | PM       | (Boston       | in Civil       |     |               |                |       |
|            |          | Consulting    | Engineering.   |     | Self/         | OF INFORMATION |       |
|            |          | Consulting    | Engineering.   |     | A SANGE UNION | IQAC AKNAGHK** | RCHNO |

|            |          | Group)        |                |     |     |     |     |
|------------|----------|---------------|----------------|-----|-----|-----|-----|
| 23/07/2020 | 10.00    | Mr. Anil      | Blast Loading  | 75+ | 50+ | 50% | 50% |
|            | AM-      | Kumar         | on Structures: |     |     |     |     |
|            | 11.30 AM | (CCET,        | Fragility      |     |     |     |     |
|            |          | Chandigarh    | Analysis and   |     |     |     |     |
|            |          |               | their          |     |     |     |     |
|            |          |               | Mitigation.    |     |     |     |     |
|            | 11.30 AM | Dr. Rajesh    | Self           | 75+ | 50+ | 50% | 50% |
|            | -01.00   | Kumar         | Compacting     |     |     |     |     |
|            | PM       | (CCET,        | Concrete and   |     |     |     |     |
|            |          | Chandigarh)   | Factors        |     |     |     |     |
|            |          |               | Affecting its  |     |     |     |     |
|            |          |               | Behaviour.     |     |     |     |     |
|            |          |               |                |     |     |     |     |
| 24/07/2020 | 10.00    | Dr. Indrajit  | Surrogate      | 70+ | 50+ | 50% | 50% |
|            | AM-      | Ghosh         | safety         |     |     |     |     |
|            | 11.30 AM | (IIT Roorkee) | measures for   |     |     |     |     |
|            |          |               | traffic safety |     |     |     |     |
|            |          |               | assessment     |     |     |     |     |
|            |          |               | under          |     |     |     |     |
|            |          |               | heterogeneous  |     |     |     |     |
|            |          |               | traffic        |     |     |     |     |
|            |          |               | conditions     |     |     |     |     |
|            |          |               |                |     |     |     |     |
|            | 11.30 AM | Dr. Arpit     | Corrosion of   | 70+ | 50+ | 50% | 50% |
|            | -01.00   | Goyal         | Steel in       |     |     |     |     |
|            | PM       | (Coventry     | Reinforced     |     |     |     |     |
|            |          | University)   | Concrete       |     |     |     |     |
|            |          |               | Structures     |     |     |     |     |
|            |          |               |                |     |     |     |     |



#### **Other Salient Features**

- Video Recording of all lectures by the speakers for the CEP available with the organizing committee.
- Presentation slides of all lectures by the speakers for the CEP available with the organizing committee and has been distributed to participants
- Certificates of participation issued to all registered participants.
- Certificates of resource persons issued to all the listed speakers
- Feedback collected from participants for further improvement in conducting such future online CEP programs
- Feedback collected from speakers for their inputs in conducting such future online CEP programs

Summary Statistics of Feedback received from Participants and Speakers are summarized below in Tables 4 and 5 respectively.

Table 4: Participant feedback details of the CEP program 2020

| Total number of participants feedback | 86                                     |
|---------------------------------------|--|
|                                       | Excellent (70%);                       |
|                                       | Very Good (27%);                       |
| Overall average feedback score        | Good (3%)                              |
|                                       | Based on a 5 point scale rating system |
|                                       | (1-5; [poor to excellent])             |

**Table 5**: Speaker feedback details of the CEP program 2020

| Total number of Speaker feedback | 9                                      |
|----------------------------------|--|
|                                  | Excellent (67%);                       |
|                                  | Very Good (33%);                       |
| Overall average feedback score   | Based on a 5 point scale rating system |
|                                  | (1-5; [poor to excellent])             |
|                                  |  |
|                                  | OF WEOR.                               |

#### WHO CAN REGISTER?

- > Faculty members from Universities and Engineering Colleges.
- > Industry Professionals from IT Industries.
- > Students with Engineering background, Researchers and Programmers.

#### **REGISTRATION FEE**

A nominal fee of Rs. 300/- should be paid towards registration fees by participants. One can register himself/herself through payment *via* Online Transfer/ Google Pay/ Paytm.

| Beneficiary Name     | Punjab National Bank             |
|----------------------|----------------------------------|
| Branch Name          | Shimla                           |
| Complete Address     | THE MALL, SHIMLA, H.P., INDIA    |
| N CD C               | Jaypee University of Information |
| Name of Beneficiary  | Technology, Waknaghat            |
| Account No.          | 0427002100682105                 |
| NEFT Code/ IFSC Code | PUNB0042700                      |
| MICR Code            | 171024002                        |

#### **IMPORTANT NOTES**

# Last Datefor Registration: 26th July, 2020

Registration includes:

- 1. To attend Expert Lectures
- 2. To attend Hands-on
- 3. E-Certificate (After submitting the assignment and feedback)

#### RESOURCE PERSONS

Experts from reputed research &, academic institutions, and Industries such as NIT, TIET, Amity, CMREC, NVEST, ICFAI, IKGU will deliver the sessions and hands-on. Two weeks sessions are planned for the systematic conduction of the programme to help participants in implementing best practices to meet the current industry demand in the field of Cloud Computing, Deep Learning, Network Security, Distributed Computing, etc.

#### **CHIEF PATRONS**

Prof. (Dr.) Vinod Kumar, Vice Chancellor, JUIT, Waknaghat

Prof. (Dr.) Samir Dev Gupta, Dean of Academics & HoD, CSE&IT, JUIT, Waknaghat

Maj. Gen Rakesh Bassi (Retd.), Registrar and Dean of Students, JUIT, Waknaghat

#### ORGANIZING COMMITTEE

Dr. Hemraj Saini, JUIT, Waknaghat

Dr. Himanshu Jindal, JUIT, Waknaghat

 $Dr.\ Monika\ Bharti,\ JUIT,\ Waknaghat$ 

Dr. Aman Sharma, JUIT, Waknaghat

Dr. Geetanjali, JUIT, Waknaghat

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JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY Waknaghat-173234

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY Waknaghat-173234

(Established under H.P. Legislative Assembly Act No. 14 of 2002 and Approved by UGC under section 2(f))

# National Level Two Weeks Faculty Development Programme

01

"Ambient Technologies: State-of-Art, Challenges, and Future Directions"





27<sup>th</sup> July, 2020 – 8<sup>th</sup> August, 2020



••••

# Eminent Expertise



## Dr. Dinesh Kumar Saini

Sohar University, Oman **Topic: Security is Moving Target** 



# Dr. Sushma Jain

Thapar Institute of Engg. & Technology, Patiala, India
Topic: Deep Architecture, Learning Algorithms & CNN



# Dr. Sandeep Kumar Panda

ICFAI University Hyderabad, India

Topic: Blockchain Technology and Applications using Ethereum, Solidity



# Dr. Rakesh Goyal

IK Gujral Punjab Technical University, Kapurthala, India **Topic: Blended Learning with Open Broadcaster Software** 



#### Dr. Mohit Saini

National Institute of Technology, Jalandhar, India **Topic: Cloud Computing and its Applications** 



# **Dr. Amritpal Singh**

National Institute of Technology, Jalandhar, India
Topic: Probabilistic Data Structures



## Dr. Vandana Bhatia.

Amity University, Noida, India **Topic: Big Data Analytics** 



National Institute of Technology, Jalandhar, India **Topic: Cloud Computing and Virtualisation** 



#### Dr. Prashant Kumai

National Institute of Technology, Jalandhar, India

Topic: Opportunistic Networking and Device to Device

Communication



# Dr. Ashima Singh

Thapar Institute of Engineering & Technology, Patiala, India

Topic: Distributed Architecture, Cloud Computing Architectures,

Hadoop Architecture, and Map Reduce



#### Mr. Tushar Sharma

NVEST Bangalore, India

Topic: Blockchain Technology and Applications using Ethereum,



#### Dr. Gautam Kumar

CMR Engineering College, Hyderabad, India

Topic: ECC and Non-Commutative Cryptography with Formal Verifications



# Dr. Bhan

Department of Higher Homeation, Haryan India

Topic: Sensor Data Analytics

Saracca



|          | Inauguration Ceremony   |  |  |  |  |  |  |
|----------|---|--|--|--|--|--|--|
| 10:30 AM | Online Joining to FDP Link  |  |  |  |  |  |  |
| 11:00 AM | Speech by <b>Prof.</b> ( <b>Dr.</b> ) <b>Vinod Kumar Vice Chancellor</b> , Jaypee University of Information Technology, Waknaghat, India        |  |  |  |  |  |  |
| 11:30 AM | Speech by <b>Prof.</b> ( <b>Dr.</b> ) <b>Samir Dev Gupta, Dean of Academics</b> , Jaypee University of Information Technology, Waknaghat, India |  |  |  |  |  |  |
| 12:00 PM | Summary and Thanks  |  |  |  |  |  |  |
| 12:15 PM | FDP Open for participants   |  |  |  |  |  |  |



| Date                        | Timing            | Speaker   | Title   |
|-----------------------------|-------------------|---|---|
| 27 <sup>th</sup> July, 2020 | 12:15AM - 01:45PM | Dr. Dinesh Kumar Saini, <i>Sohar</i>  | Security is Moving Target                       |
| 27 July, 2020               | 03:30PM- 04:30PM  | University, Oman  | Discussion of Tools used                        |
|                             | 10:30AM - 12:00PM |   | Deep architecture, learning algorithms & CNN    |
| 28 <sup>th</sup> July, 2020 | 02:00PM - 03:30PM |   | Hands-On  |
|                             | 03:45PM- 04:45PM  | Technology, Patiala, India  | Self-Practice Session                           |
|                             | 10:30AM - 12:00PM |   | Probabilistic data structures                   |
| 29 <sup>th</sup> July, 2020 | 02:00PM - 03:30PM | This title of Teeline 1859,   | Hands-On  |
|                             | 03:45PM- 04:45PM  | Jalandhar, India  | Self-Practice Session                           |
|                             | 10:30AM - 12:00PM | Dr. Mohit Saini, National Institute of Technology,                                    | Cloud Computing and its Applications            |
| 30 <sup>th</sup> July, 2020 | 02:00PM - 03:30PM | Jalandhar, India<br>&   | Cloud Computing and Virtualisation              |
|                             | 03:45PM- 04:45PM  | Dr. Nisha Chaurasiya, <i>National</i><br>Institute of Technology,<br>Jalandhar, India | Self-Practice Session                           |
| 31 <sup>st</sup> July, 2020 | 10:30AM - 12:00PM |   | Blended learning with Open Broadcaster Software |
|                             | 02:00PM - 03:30PM | Dr. Rakesh Goyal, IK Gujral Punjab Technical University, Kapurthala, India            | Hands-On  |
|                             | 03:45PM- 04:45PM  | <b>T</b> , =  | Self-Practice Session                           |
|                             |                   |   | Page 2 of 3                                     |

| Date  | Timing            | Speaker  | Title  |
|---|-------------------|--|--|
|   | 10:30AM - 12:00PM | Dr. Bharti Saneja, <i>Project Officer</i> ,                                  | Sensor Data Analytics  |
| 1 <sup>st</sup> August, 2020                      | 02:00PM - 03:30PM | Department of Higher Education,  | Hands-On   |
|   | 03:45PM- 04:45PM  | Haryana, India   | Self-Practice Session  |
|   | 10:30AM - 12:00PM |  | Big Data Analytics   |
| 3 <sup>rd</sup> August, 2020                      | 02:00PM - 03:30PM | Dr. Vandana Bhatia, <i>Amity</i><br><i>University, Noida, India</i>          | Hands-On   |
|   | 03:45PM- 04:45PM  |  | Self-Practice Session  |
|   | 10:30AM - 12:00PM | Dr. Sandeep Kumar Panda, ICFAI   | Blockchain Technology and Applications using Ethereum,<br>Solidity                             |
| 4 <sup>th</sup> – 5 <sup>th</sup> August,<br>2020 | 02:00PM - 03:30PM | S  | Blockchain Technology and Applications using Ethereum,<br>Solidity                             |
|   | 03:45PM- 04:45PM  | Mr. Tusar Sarma, <i>NVEST Bangalore, India</i>                               | Self-Practice Session  |
|   | 10:30AM - 12:00PM | De Carrier Variant CMD   | ECC and Non-Commutative Cryptography with Formal Verifications                                 |
| 6 <sup>th</sup> August, 2020                      | 02:00PM - 03:30PM | Dr. Gautam Kumar, CMR Engineering College, Hyderabad,                        | Hands-On   |
|   | 03:45PM- 04:45PM  | India  | Self-Practice Session  |
|   | 10:30AM - 12:00PM | Dr. Ashima Singh, Thapar Institute   | Distributed Architecture, Cloud Computing Architectures,<br>Hadoop Architecture and Map Reduce |
| 7 <sup>th</sup> August, 2020                      | 02:00PM - 03:30PM | of Engineering & Technology,<br>Patiala, India                               | Hands-On   |
|   | 03:45PM- 04:45PM  | T unuu, muu  | Self-Practice Session  |
| 8 <sup>th</sup> August, 2020                      | 10:30AM - 12:00PM | Dr. Prashant Kumar, National<br>Institute of Technology, Jalandhar,<br>India | Opportunistic Networking and Device to Device  Communication                                   |
|   | 02:00PM - 03:30PM | Valedictory Session  | NA *MAKNAGHAN * 100  |
|   |                   | ,  | Page 3 of 3  |

# Recent Advances in Computational Intelligence for Signal Processing (RACISP-2020)

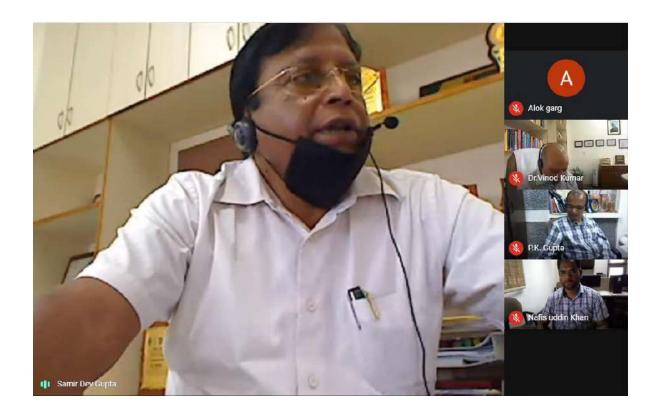
#### **REPORT**

Department of Electronics and Communication Engineering organized one week online short term course on "Recent Advances in Computational Intelligence for Signal Processing (RACISP-2020)". The program was scheduled from 10<sup>th</sup> -15<sup>th</sup> August, 2020. This short term course was coordinated by Dr. Sunil Datt Sharma and Dr. Vikas Baghel. Dr. Nafis Uddin Khan was the convener of the course.

The program was inaugurated by honourable Vice –chancellor (**Prof. Vinod Kumar**) and Dean Research (**Prof. Samir Dev Gupta**). They highlighted the importance of computational techniques in signal processing and motivated the participants. More than 110 faculty members, research scholars from various universities/institutes and industry professionals from different organizations participated in this course.

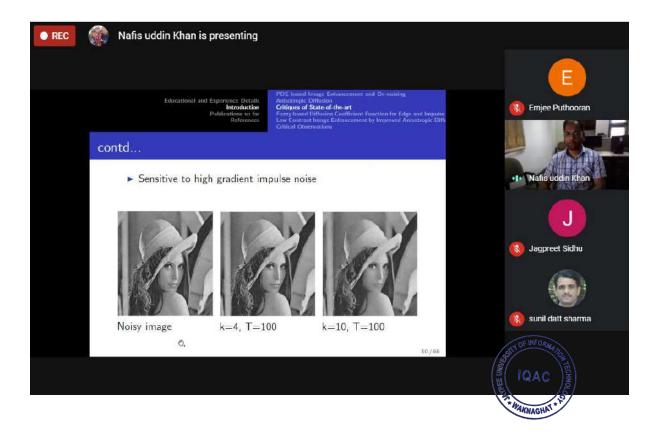




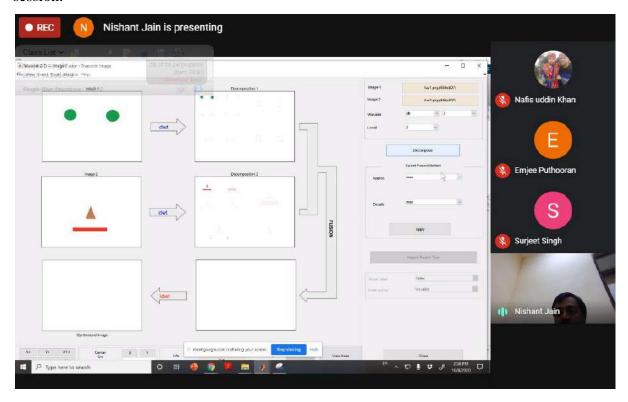


# **Expert Sessions:**

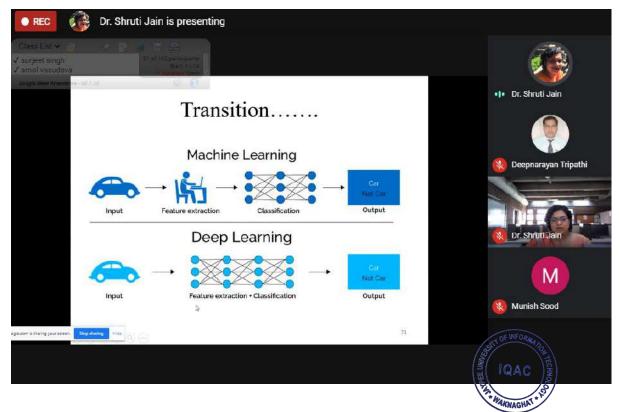
First session was taken by **Dr. Nafis Uddin Khan** and he focussed on Fuzzy inference based edge detection in digital image processing and also highlighted on the open research problems in this area.



**Dr. Nishant Jain** discussed about the fusion of biomedical imaging modalities in the second session.



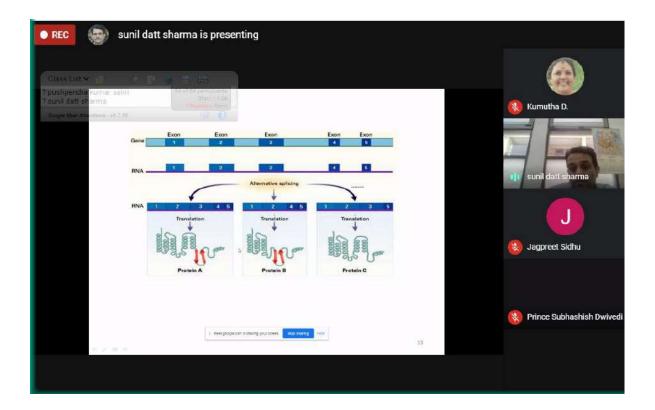
Third Session was conducted by **Dr. Shruti Jain, Associate Professor,** and she highlighted the area of biomedical engineering, time and frequency characterisation of bio signals and bio signal processing. She also motivated the participants to do the research in this area.



**Dr. Harsh Sohal** discussed the FPGA based digital signal processing and their implementation in fourth session.

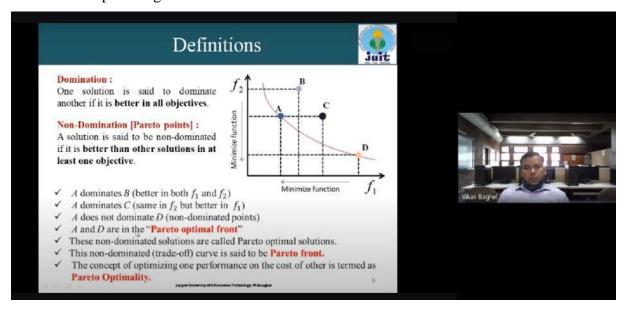


Fifth session & Sixth session were taken by **Dr. Sunil Datt Sharma** with **Mr. Pardeep Garg** and they discussed about the importance genomics signal processing in coming era and also discussed the open research research directions in this area.

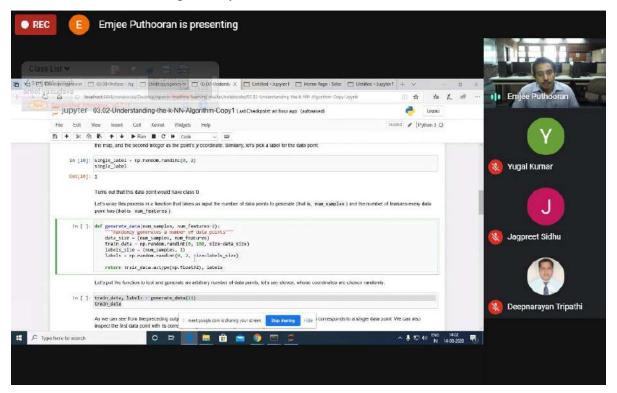




Session seven was taken by **Dr. Vikas Baghel** and he discussed the fundamentals and evolutionary methods for multi-objective optimization. He also conducted hand-on-session on the same topic in eighth session.

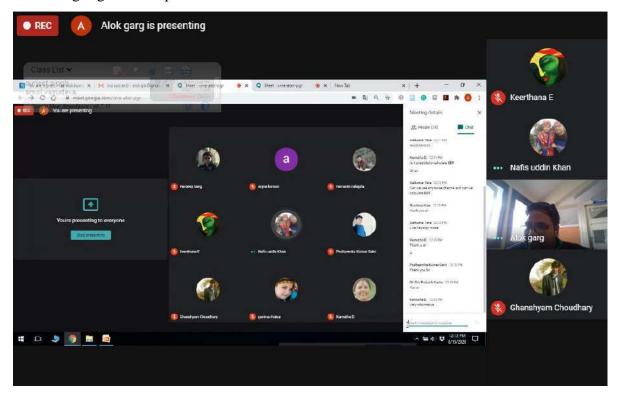


**Dr. Emjee Puthooran** conducted talk and hands on session machine learning using python in ninth and tenth session respectively.





Eleventh session was taken by **Dr. Alok Kumar** on role of threshold in spectrum sensing and he also highlighted on open research directions in this area.



In the last session of the course, queries of the participants were answered by all speakers and suggestions from the participants were taken.

The short term course was concluded with valedictory function. The highlights of the course were given by **Dr. Vikas Baghel**. The valedictory speech was given by **Dr. Nafis U. Khan**. The vote of thanks was given by **Dr. Sunil Datt Sharma**. He highlighted the immense contribution of the Organizing Committee members and experts. He presented a special thanks to **Prof. Vinod Kumar**, Vice—chancellor, **Prof. Samir Dev Gupta**, Dean Research and **Dr. Rajiv Kumar**, Program chair & HoD ECE. He also showed his gratitude towards all speakers for their wonderful talks. He also thanked all the participants who made this event a grand success by participating wholeheartedly.

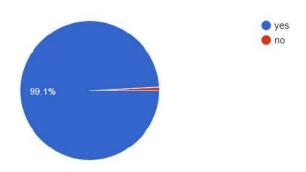
## **Feedback by Participants:**

Most participants felt that the correct direction and knowledge for conducting scientific research was obtained in the short term course.

# What is your rating of the following aspects of STC? 100 Very Good Good Fair Poor Very Poor 75 Selection of Topics Presentations Questions and discussions Overall Organization

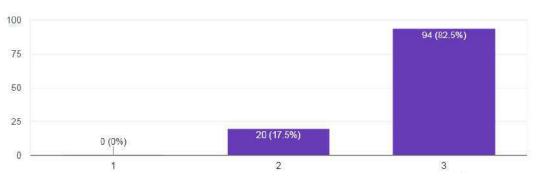
#### Did the STC meet your learning and research objectives?

#### 114 responses



#### What is your overall evaluation of the short term course?

#### 114 responses





# Workshop on Waste Management – Issues and Concerns 2020

An online two day Workshop on 'Waste Management – Issues and Concerns' was organized by the department of Civil Engineering Jaypee University of Information Technology (JUIT), Waknaghat from 20<sup>th</sup> to 21<sup>st</sup> August 2020.

The program was successfully completed under the auspices of

- Prof. Vinod Kumar Vice Chancellor of JUIT Waknaghat and Patron of the organized Workshop by Civil Engineering Department.
- Prof. SamirDev Gupta Director and Dean of Academics of JUIT Waknaghat
- Major General Rakesh Bassi (Retd.) Registrar and Dean of Students of JUIT
   Waknaghat
- Prof. Ashok Kumar Gupta HOD of Civil Engineering Department of JUIT Waknaghat and Program Chair of the organized Workshop by Civil Engineering Department.
- Dr. Rajiv Ganguly Associate Professor of Civil Engineering Department of JUIT Waknaghat and Program Convener of organized Workshop by Civil Engineering Department.
- Dr. Rishi Rana Assistant Professor of Civil Engineering Department of JUIT Waknaghat and Program Convener of organized Workshop by Civil Engineering Department
- Mr. Kaushal Kumar Assistant Professor of Civil Engineering Department of JUIT Waknaghat and Program Coordinator of organized Workshop by Civil Engineering Department

The Workshop on 'Waste Management – Issues and Concerns comprised mainly of invited and guest lecturers from eminent speakers of renowned institutes covering multifaceted aspects on progress, developments, legislations and existing drawbacks in Waste Management. Table 1 highlights the program schedule of the conducted Workshop including the names and organizations of the speakers along with the title of lectures (talks) delivered by them.



Table 1: Schedule and Details of Lecture presented by different speakers in the Workshop 2020

| Date       | Time          | Name of Resource Person     | Title of Presentation                            |
|------------|---------------|-----------------------------|--|
|            | 10.30 -11.00  | Inaugural Session           | Inaugural Lecture                                |
|            | AM            |                             |  |
|            | 11.00 AM –    | Prof. Babu Alappat          | Rapid Characterization Of MSW For Integrated     |
|            | 12:00 AM      | (IIT Delhi)                 | Waste Processing Systems.                        |
|            | 12.30 -01.30  | Dr. Anoop Verma             | Application of waste material towards            |
| 21/08/2020 | PM            | (Thapar University)         | environmental remediation; Value addition to the |
| 21/06/2020 |               |                             | waste.   |
|            | 01.30 -02.30  | Prof. M. Chandrasekhar      | Estimation of Indices for Assessment of Quality  |
|            | PM            | (NIT Warangal)              | of Compost Derived from Municipal Solid Waste.   |
|            | 02.30 -03.30  | Ms. Nidhi Sharma/Etosha     | Waste management in Sensitive Ecosystems –       |
|            | PM            | Chatterjee (Waste Warriors, | Success and Challenges.                          |
|            |               | Dharamshala)                |  |
|            | 10.00 -11.00  | Sh. S.K Shandil             | Waste Management: Rules and regulations          |
|            | AM            | (Environmental Engineer,    |  |
|            |               | Himachal Pradesh Pollution  |  |
|            |               | Control Board, Shimla)      |  |
|            |               | Dr. Shakti Arora            | Solid Waste Management                           |
| 22/08/2020 |               | (PEC Chandigarh)            |  |
|            | 12.00 - 01.00 | Sh. Pradeep Sangwan         | Waste Management Issues in Himachal Pradesh      |
|            | PM            | (National University of     |  |
|            |               | Singapore)                  |  |
|            | 01:00 -       | Prof. Ashok Kumar Gupta     | Valedictory Session and Closure                  |
|            | 01:30 PM      | (HOD CE – JUIT)             |  |

The workshop was conducted mainly to gain knowledge on the current practices of waste management and to provide a platform for interaction between academicians, senior scientists, research scholars, NGO's and all other personals involved in MSW management at different levels. Further, the workshop was conducted so that the faculty members and the different participants could get more acquainted with recent developments and prevailing opportunities for research in waste management with additional and pertinent information waste management could

be incorporated in up gradation of existing courses or development of new courses to make the students more aware. The program started at 10.30 AM in the morning and continued till 3.30 PM in the afternoon on the first day with minimum of three lectures per day followed by question-answer sessions on the topics presented by different eminent speakers. A detail summary of the topic discussed during the entire Workshop program is summarized in Table 1.

The participation in the Workshop was overwhelming with a large number of participants from outstation locations with some participants joining from Karnataka, Gujarat, Chhattisgarh and other such states. Further, there were more than 15 foreign participants who had joined to attend the program. The overall summary of the participants present in the Workshop program is summarized in Table 2.

**Table 2**: Summary of participation Details in the Workshop 2020

| Total Number of Registered participants | 246 |
|---|-----|
| Total Number of external participants   | 200 |

Session wise summary of participants is presented in Table 3 below.

**Table 3**: Session wise summary of participation Details in the Workshop program 2020

| Date       | Time                      | Name of Resource Person              | Title of Presentation  | Maximum<br>number of<br>participants | Minimum<br>number of<br>participants | Percenta<br>ge of<br>external<br>participa<br>nts | Percentage<br>of internal<br>participant<br>s |
|------------|---------------------------|--------------------------------------|--|--------------------------------------|--------------------------------------|---|---|
| 20/08/2020 | 10.30 -<br>11.00 AM       | Inaugural<br>Session                 | Inaugural Lecture  | 100+                                 | 65+                                  | 75%   | 25%   |
|            | 11.00 AM<br>- 12:00<br>AM | Prof. Babu<br>Alappat<br>(IIT Delhi) | Rapid Characterization Of MSW For Integrated Waste Processing Systems. | 100+                                 | 65+                                  | 75%   | 25%   |
|            | 12.30 -<br>01.30 PM       | Dr. Anoop<br>Verma                   | Application of waste material  | 90+                                  | 55+                                  | 75%   | 25%   |

|            |          | (Thapar       | towards           |     |                                       |           |     |
|------------|----------|---------------|-------------------|-----|---------------------------------------|-----------|-----|
|            |          | University)   | environmental     |     |                                       |           |     |
|            |          |               | remediation;      |     |                                       |           |     |
|            |          |               | Value addition to |     |                                       |           |     |
|            |          |               | the waste.        |     |                                       |           |     |
|            | 01.30 -  | Prof. M.      | Estimation of     | 90+ | 55+                                   | 75%       | 25% |
|            | 02.30 PM | Chandrasekh   | Indices for       |     |                                       |           |     |
|            |          | ar            | Assessment of     |     |                                       |           |     |
|            |          | (NIT          | Quality of        |     |                                       |           |     |
|            |          | Warangal)     | Compost Derived   |     |                                       |           |     |
|            |          |               | from Municipal    |     |                                       |           |     |
|            |          |               | Solid Waste.      |     |                                       |           |     |
|            | 02.30 -  | Ms. Nidhi     | Waste             | 90+ | 55+                                   | 75%       | 25% |
|            | 03.30 PM | Sharma/Etos   | management in     |     |                                       |           |     |
|            |          | ha Chatterjee | Sensitive         |     |                                       |           |     |
|            |          | (Waste        | Ecosystems –      |     |                                       |           |     |
|            |          | Warriors,     | Success and       |     |                                       |           |     |
|            |          | Dharamshala   | Challenges.       |     |                                       |           |     |
|            |          | )             |                   |     |                                       |           |     |
| 21/08/2020 | 10.00 -  | Sh. S.K       | Waste             | 80+ | 50+                                   | 75%       | 25% |
|            | 11.00 AM | Shandil       | Management:       |     |                                       |           |     |
|            |          | (Environment  | Rules and         |     |                                       |           |     |
|            |          | al Engineer,  | regulations       |     |                                       |           |     |
|            |          | Himachal      |                   |     |                                       |           |     |
|            |          | Pradesh       |                   |     |                                       |           |     |
|            |          | Pollution     |                   |     |                                       |           |     |
|            |          | Control       |                   |     |                                       |           |     |
|            |          | Board,        |                   |     |                                       |           |     |
|            |          | Shimla)       |                   |     |                                       |           |     |
|            | 11.00 AM | Dr. Shakti    | Solid Waste       | 80+ | 50+                                   | 75%       | 25% |
|            | - 12:00  | Arora         | Management        |     |                                       |           |     |
|            | PM       | (PEC          |                   |     | * * * * * * * * * * * * * * * * * * * |           |     |
|            |          | Chandigarh)   |                   |     | SELT OF INFO                          | RMATION   |     |
|            |          |               |                   |     | IQA                                   | C RECHNOO |     |

| 12.00 -  | Sh. Pradeep   | Waste       | 80+ | 50+ | 75% | 25% |
|----------|---------------|-------------|-----|-----|-----|-----|
| 01.00 PM | Sangwan       | Management  |     |     |     |     |
|          | (National     | Issues in   |     |     |     |     |
|          | University of | Himachal    |     |     |     |     |
|          | Singapore)    | Pradesh     |     |     |     |     |
| 01:00 -  | Prof. Ashok   | Valedictory | 80+ | 50+ | 75% | 25% |
| 01:30 PM | Kumar Gupta   | Session and |     |     |     |     |
|          | (HOD CE –     | Closure     |     |     |     |     |
|          | JUIT)         |             |     |     |     |     |

#### **Other Salient Features**

- Video Recording of all lectures by the speakers for the Workshop available with the organizing committee.
- Presentation slides of all lectures by the speakers for the Workshop available with the organizing committee and has been distributed to participants
- Certificates of participation issued to all registered participants.
- Certificates of resource persons issued to all the listed speakers
- Feedback collected from participants for further improvement in conducting such future online Workshops
- Feedback collected from speakers for their inputs in conducting such future online Workshops

Summary Statistics of Feedback received from Participants and Speakers are summarized below in Tables 4 and 5 respectively.

**Table 4**: Participant feedback details of the Workshop 2020

| Total number of participants feedback | 153                                    |
|---------------------------------------|--|
|                                       | Excellent (71%);                       |
|                                       | Very Good (26%);                       |
| Overall average feedback score        | Good (3%)                              |
|                                       | Based on a 5 point scale rating system |
|                                       | (1-5; [poor to excellent)              |

 Table 5: Speaker feedback details of the Workshop 2020

| Total number of Speaker feedback | 7                                      |
|----------------------------------|--|
|                                  | Excellent (71%);                       |
|                                  | Very Good (29%);                       |
| Overall average feedback score   | Based on a 5 point scale rating system |
|                                  | (1-5; [poor to excellent])             |

Rajiv Ganguly
Associate Professor
Department of Civil Engineering
JUIT Waknaghat



#### WHO CAN REGISTER?

- > Faculty Members
- > Research Scholars

#### REGISTRATION

There is no registration fee for the participants to attend the FDP. E-certificate will be provided to all participants after successful completion of FDP.

You can registered with the following link:

https://forms.gle/peQCiAhQQVVSuMsd9

#### **IMPORTANT DATE**

**Last Date for Registration:** 29<sup>th</sup> August, 2020

#### RESOURCE PERSONS

Dr. Vijay Kumar, NIT Hamirpur, HP

Dr. CS Azad, NIT Jamshedpur Jharkhand

Dr. BK Sarkar, BIT Mesra, Ranchi

Dr. Mukta Muzamdar, University of North Bengal

Dr. Parneeta Sidhu, Manav Rachna University, Faridabad

Dr. Sumit Gupta, Amity University, Noida

Dr. Vijinder Singh, UPES Dehradun

Dr. Meenakshi, NITTTR Chandigarh

Mr. Deepesh Kumar, TCS Kolkata

Dr. Sudeep Kumar, Nirma University Gujarat

Dr. Manoj Diwakar, Graphics Era University Dehradun

\*Other resource persons are from Jaypee University of Information Technology, Waknaghat, Solan (H.P.), India.

#### **CHIEF PATRONS**

Prof. (Dr.) Vinod Kumar, Vice Chancellor, JUIT, Waknaghat

Prof. (Dr.) Samir Dev Gupta, Dean of Academics & HoD, CSE&IT, JUIT, Waknaghat

Maj. Gen Rakesh Bassi (Retd.), Registrar and Dean of Students, JUIT, Waknaghat

#### **CONVENORS**

Dr. Yugal Kumar, JUIT Waknaghat Dr. Pardeep Kumar, JUIT Waknaghat

#### COORDINATORS

Dr. Jagpreet Sidhu, JUIT Waknaghat

Dr. Amit Kumar, JUIT Waknaghat

Dr. Mrityunjay Singh, JUIT Waknaghat

#### ADDRESS FOR COMMUNICATION

Dr. Yugal Kumar,

JUIT, Waknaghat, Solan (H.P.)-173234

Mob: 9897709834

Dr. Mrityunjay Singh,

JUIT, Waknaghat, Solan (H.P.)-173234

Mob: 9045372346

E-mail: citml.juit@gmail.com



JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY Waknaghat-173234

# JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY Waknaghat-173234

(Established under H.P. Legislative Assembly Act No. 14 of 2002 and Approved by UGC under section 2(f))

# One Week Faculty Development Program

or

"Computational Intelligence Techniques for Machine Learning"



August 31st - 5th September, 2020

•••



| S.No. | Date      | Time          | Topic   | Faculty               | Venue |
|-------|-----------|---------------|---|-----------------------|-------|
| 1     | 22-Dec-20 | 10:30 - 12:30 | Introduction to MIT app Inventer              | Dr. Vikash Baghel     | CL-1  |
| 2     | 22-Dec-20 | 14:30 - 16:30 | Bulding Mobile application                    | Dr. Vikash Baghel     | CL-1  |
| 3     | 23-Dec-20 | 10:30 - 12:30 | Interfacing with Arduino                      | Dr. Vikash Baghel     | CL-1  |
| 4     | 23-Dec-20 | 14:30 - 16:30 | Creation of a new project in MIT app Inventer | Dr. Vikash Baghel     | CL-1  |
| 5     | 29-Dec-20 | 10:30 - 12:30 | Tinkercad                                     | Mr.Munish Sood        | CL-1  |
| 6     | 30-Dec-20 | 10:30 - 12:30 | Tinkercad                                     | Mr.Munish Sood        | CL-1  |
| 7     | 31-Dec-20 | 9:30 - 12:30  | Interaction with the lab staff                | Dr.Salman Talluri     | ECL-5 |
| 8     | 31-Dec-20 | 16:00- 16:30  | Interaction with the lab staff                | Dr.Salman Talluri     | ECL-5 |
| 9     | 02-Jan-21 | 15:00 - 17:00 | Lab view for Digital Signal Processing Lab    | Dr. Sunil Datt Sharma | CL-1  |
| 10    | 04-Jan-21 | 15:00 - 17:00 | Lab view for Digital Signal Processing Lab    | Dr. Sunil Datt Sharma | CL-1  |
| 11    | 05-Jan-21 | 10:30 - 12:30 | Python Programming                            | Dr. Emjee Puthooran   | CL-1  |
| 12    | 03-Jan-21 | 14:30 - 16:30 | r yuloli Flografillillig                      | Dr. Emjee Futhooran   | CL-1  |
| 13    |           | 09:30 - 12:30 | WiCOMM-T SDR kit.                             | Dr. Shweta Pandit     | ECL-8 |
| 13    | 07-Jan-21 |               |   |                       |       |
| 14    |           | 15:30 - 16:30 | Experiments of Electrical Science Lab         | Dr. Shweta Pandit     | ECL-1 |
| 15    | 08-Jan-21 | 10:30 - 12:30 | Signals and Communication Systems with        | Mr. Pradeep Garg      | CL-1  |
| 16    | 00-Jan-21 | 14:30 - 16:30 | MATLAB  | Mir. Fraucep Garg     | CL-1  |
|       |           |               |   |                       |       |
| 17    |           |               |   |                       | CL-1  |
| 1 /   | 09-Jan-21 |               | Verilog HDL                                   | Dr. Harsh Sohal       | CL-1  |
|       |           | 12:00 - 13:30 |   |                       |       |
| 18    |           | 14:00 - 16:30 |   |                       | CL-1  |



# Faculty Development Program on 'Waste management for Sustainable Development'

An online one week Faculty Development Program on 'Waste Management for Sustainable Development' was organized by the department of Civil Engineering Jaypee University of Information Technology (JUIT), Waknaghat from 4<sup>th</sup> to 8<sup>th</sup> January 2021.

The program was successfully completed under the auspices of

- Prof. Vinod Kumar Vice Chancellor of JUIT Waknaghat and Patron of the organized
   FDP by Civil Engineering Department.
- Prof. Samir Dev Gupta Dean of Academics of JUIT Waknaghat
- Major General Rakesh Bassi (Retd.) Registrar and Dean of Students of JUIT Waknaghat
- Prof. Ashok Kumar Gupta HOD of Civil Engineering Department of JUIT Waknaghat
   and Program Chair of the organized Workshop by Civil Engineering Department.
- Dr. Rishi Rana Assistant Professor of Civil Engineering Department of JUIT Waknaghat
   and Program Convener of organized Workshop by Civil Engineering Department
- Mr. Kaushal Kumar Assistant Professor of Civil Engineering Department of JUIT
   Waknaghat and Program Convener of organized Workshop by Civil Engineering
   Department

The FDP on 'Waste Management for Sustainable Development' comprised mainly of invited and guest lecturers from eminent speakers of renowned institutes covering multifaceted aspects on progress, developments, legislations and existing drawbacks in Waste Management. Table-1 highlights the program schedule of the conducted FDP including the names and organizations of the speakers along with the title of lectures (talks) delivered by them.



**Table 1**: Schedule and Details of Lecture presented by different speakers in the FDP 2021

| Date                      | Time                  | Name of Resource Person   | Title of Presentation   |
|---------------------------|-----------------------|---|---|
| 04/01/2021<br>(Monday)    | 10:30AM-<br>10:45 AM  | Inaugural Session   | Inaugural Lecture   |
|                           | 10:45AM-<br>12:00PM   | <b>Dr. Bharat Bhushan</b> , IOSH, CWMP, IWM, Consultant, Splash International, Kolkata                    | Household Hazardous and<br>Sanitary Waste Management  |
|                           | 12:00PM-<br>01:15PM   | <b>Dr. Nitin Goyal</b> , Principal Scientist, CSIR-NEERI, Mumbai Zonal Centre, Mumbai                     | Air Quality Management to<br>Achieve the Sustainable<br>Development Goals in India                |
| 05/01/2021                | 10:00 AM-<br>11:15 AM | <b>Prof. N S Maurya</b> , Dept. of Civil Engg., NIT Patna   | Human excreta: A key<br>resource for sustainable<br>development                                   |
| (Tuesday)                 | 11:15 AM-<br>12:30 PM | Mr. Aloysius CC, Consultant, POLUCHEM Laboratories Pvt. Ltd., Kalamassery, Kerala                         | Significance of Effluent<br>Treatment Plant in<br>Slaughterhouse and Meat<br>Processing Units     |
| 06/01/2021<br>(Wednesday) | 10:00 AM-<br>11:15 AM | <b>Dr. Nikhil Saboo</b> , Assistant<br>Professor, Dept. of Civil Engg.,<br>IIT(BHU) Varanashi             | Mix Design of Reclaimed<br>Asphalt Pavement Materials   |
|                           | 11:15 AM-<br>12:30 PM | Prof. Meena Kumari<br>Sharma, Head Dept. of Civil<br>Engg., Manipal University,<br>Jaipur                 | Waste Management<br>Techniques in Non-Sewered<br>Areas  |
| 07/01/2021                | 10:00 AM-<br>11:15 AM | <b>Dr. Amit Kumar</b> , Assistant<br>Professor, Dept. of Civil Engg.,<br>NIT Jaipur                       | Machine Learning in Waste<br>Management   |
| (Thursday)                | 11:15 AM-<br>12:30 PM | <b>Dr. Himangana Gupta</b> ,<br>Postdoctoral Fellow, United<br>Nations University, Tokyo                  | National Greenhouse Gas<br>Emissions from the Waste<br>Sector                                     |
| 08/01/2021                | 10:00AM-<br>11:15AM   | Dr. Kamalpreet Kaur, Environmental and Sustainability Consultant Analyst (R&D), Vinz Inc, Toronto, CANADA | Waste Management for<br>Sustainable Development"<br>with main focus on<br>Plastics/Micro-plastics |
| (Friday)                  | 11:15AM-<br>12:30PM   | Shalini Goyal Bhalla, M D,<br>International Council for<br>Circular Economy, Delhi                        | Circular Economy and its competitive advantage  |
|                           | 12:30PM-<br>01:00PM   | <b>Prof. A.K. Gupta</b> , HOD CE, JUIT  | Closing Ceremony  |

The FDP was conducted mainly to gain knowledge on the current practices of waste management and to provide a platform for interaction between academicians, senior scientists, research scholars, NGO's and all other personals involved in waste management and legislations at different levels. Further, the FDP was conducted so that the faculty members and the different participants could get more acquainted with recent developments and prevailing opportunities for research in waste management with additional and pertinent information which if required could be incorporated in up gradation of existing courses or development of new courses to make the students more aware. The program started at 10.30 AM in the morning and continued till 2.30 PM in the afternoon on the first day with minimum of three lectures per day followed by question-answer sessions on the topics presented by different eminent speakers. A detail summary of the topic discussed during the entire FDP program is summarized in Table 1.

The participation in the FDP was overwhelming with a large number of participants from outstation locations with some participants joining from Karnataka, Gujarat, Chhattisgarh and other such states. Further, there were more than 15 foreign participants who had joined to attend the program. The overall summary of the participants present in the Workshop program is summarized in Table 2.

**Table 2**: Summary of participation Details in the FDP 2021

| Total Number of Registered participants | 108 |
|---|-----|
| Total Number of external participants   | 76  |

#### **Other Salient Features**

- Video Recording of all lectures by the speakers for the FDP available with the organizing committee.
- Presentation slides of all lectures by the speakers for the FDP available with the organizing committee and has been distributed to participants
- Certificates of participation issued to all registered participants.



- Certificates of resource persons issued to all the listed speakers Feedback collected from participants for further improvement in conducting such future online FDPs
- Feedback collected from speakers for their inputs in conducting such future online FDPs.

Summary Statistics of Feedback received from Participants and Speakers are summarized below in Tables 3 and 4 respectively

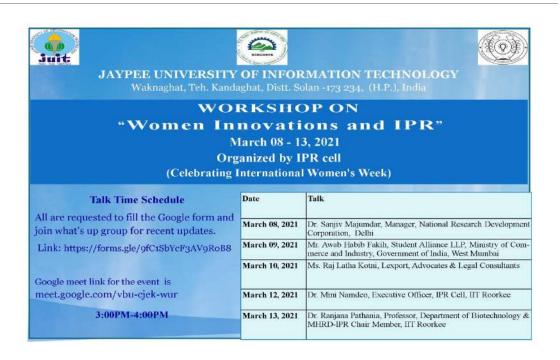
Table 3: Participant feedback details of the FDP 2021

| Total number of participants feedback | 63                                     |  |  |
|---------------------------------------|--|--|--|
|                                       | Excellent (75%);                       |  |  |
| Overall average feedback score        | Very Good (22%);                       |  |  |
|                                       | Good (3%)                              |  |  |
|                                       | Based on a 5 point scale rating system |  |  |
|                                       | (1-5; [poor to excellent])             |  |  |

Table 4: Speaker feedback details of the FDP 2021

| Total number of Speaker feedback | 10   |
|----------------------------------|--|
| Overall average feedback score   | Excellent (71%);  Very Good (29%);  Based on a 5 point scale rating system  (1-5; [poor to excellent]) |





# Report

#### "Women Innovations and IPR"

IPR Cell JUIT organized a one week workshop on "Women Innovations and IPR" in Jaypee University of Information Technology in collaboration with Himachal Pradesh Council for Science, Technology & Environment (HIMCOSTE) from March 08 - 13, 2021.





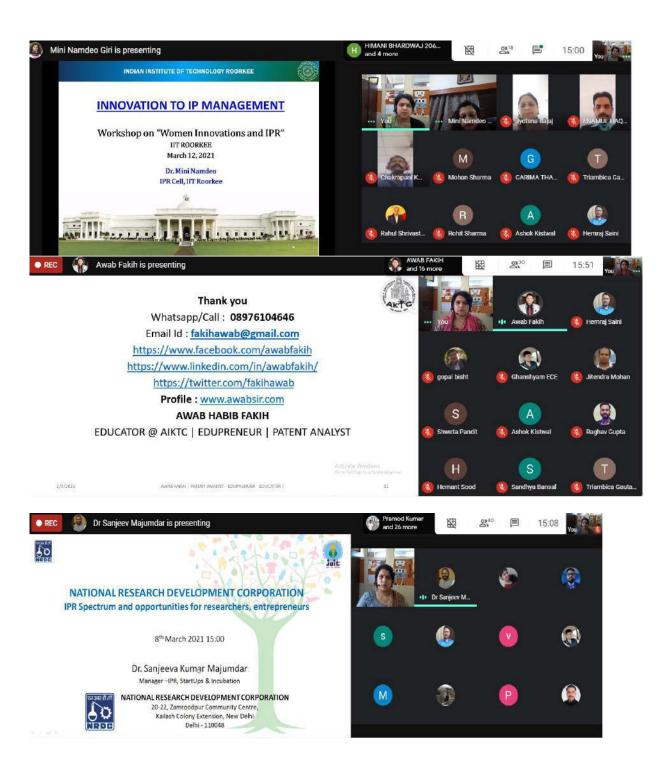


Details of the events of workshop are:

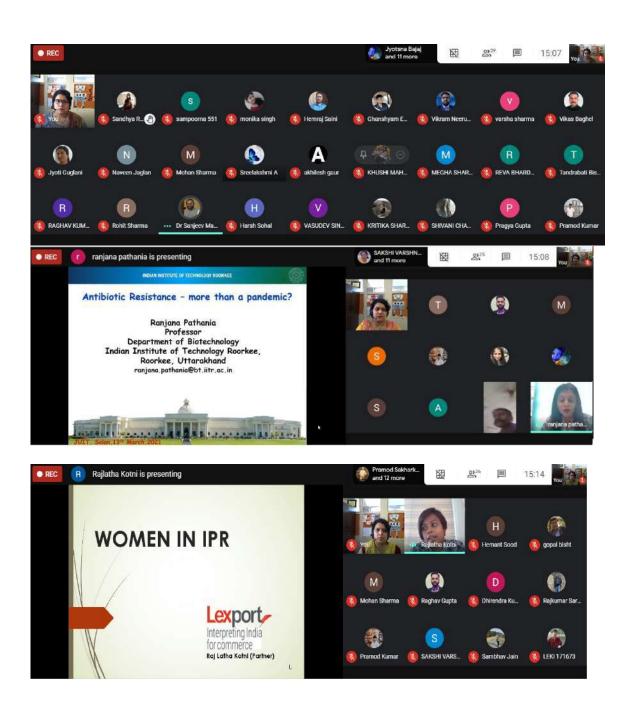
| Date           | Events  | Title   |
|----------------|---|---|
| March 08, 2021 | Dr. Sanjiv Majumdar, Manager Manager in StartUp<br>Activities & Intellectual Property Division, National<br>Research Development Corporation, Delhi | IPR Spectrum and opportunities for researchers, entrepreneurs |
| March 09, 2021 | Mr. Awab Habib Fakih, Student Alliance LLP,<br>Ministry of Commerce and Industry, Government of<br>India, West Mumbai                               | Basic of IPR & Indian Patent Filling Procedure                |
| March 10, 2021 | Ms. Raj Latha Kotni, Lexport, Advocates & Legal<br>Consultants  | Women in IPR  |
| March 12, 2021 | Dr. Mini Namdeo, Executive Officer, IPR Cell IIT<br>Roorkee   | Innovation to IP Management                                   |
| March 13, 2021 | Dr. Ranjana Pathania, Professor, Department of<br>Biotechnology & MHRD-IPR Chair Member, IIT<br>Roorkee   | Antibody Resistance- more than a Pandemic.                    |

We received overwhelming responses not only from Himachal Pradesh but also from the states of Punjab, Tamil Nadu, Orrisa, Gujarat, Maharashtra, Telangana, and Karnataka. The total no. of entries received for the workshop was 40. E-certificates have been given to all active participants.

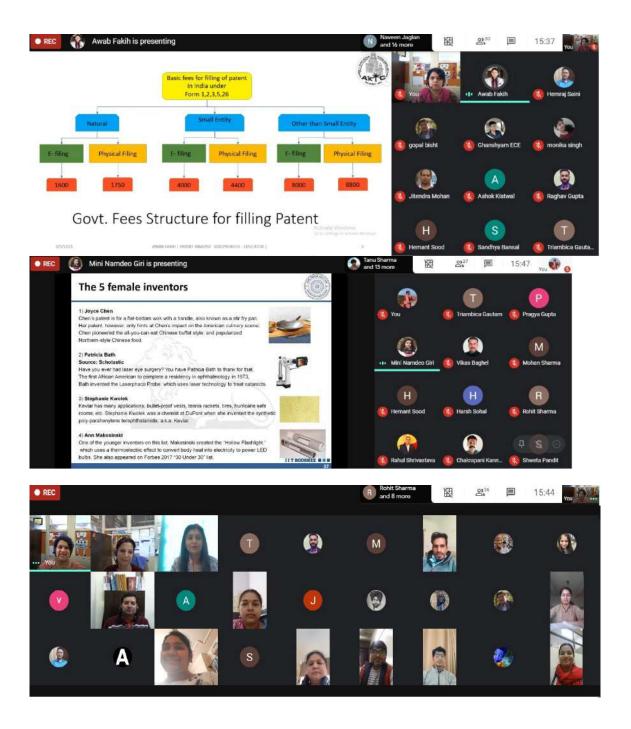












The workshop was ended with the vote of thanks by IPR cell co-coordinator Dr. Shruti Jain.





# Jaypee University of Information Technology, Waknaghat, Solan, H.P.



# RESEARCH AND INNOVATION SHOWCASE (RAISE)

## Organized by

# IPR CELL

Industry and Academia personnel are invited to submit an INNOVATION PROPOSAL Step-1: Abstract submission (300-350 words).

Step-2: Shortlisted participants should submit a Poster and a short video of 5 minutes.

#### Themes of RAISE

- Electronics & Communication Engineering.
- ➤ Computational Biology & Bioinformatics
- ➤ Computer Science Engineering
- Civil Engineering
- ➤ Basic Sciences
- > Other Interdisciplinary Areas

#### Important Dates:

- Abstract submission by March 20, 2021
- Declaration of result of first phase March 22, 2021
- Poster and video submission by March 24, 2021

#### Mechanisms and Benefits of R.A.I.S.E.

- Declaration of final result by March 25, 2021
- > e-Certificates will be given to all the participants.
- > Exciting three Cash Prizes

1st - Rs. 2000/-, 2nd - Rs. 1500/-3rd - Rs. 1000/-

#### E-mail your Entries at-

Dr. Shruti Jain

shruti.jain@juitsolan.in

Dr. Hemraj Saini

hemraj.saini@juitsolan.in

# Report

# "Research and Innovation Showcase (RAISE)"

The IPR Cell, Jaypee University of Information Technology, Solan in collaboration with Himachal Pradesh Council for Science, Technology & Environment (HIMCOSTE) organized **Research and Innovation Showcase (RAISE)** from March 20 - 25, 2021. The aim of this event is to bring together the industry and academia. The themes for R.A.I.S.E. includes:

- i. Electronics & Communication Engineering.
- ii. Computational Biology & Bioinformatics
- iii. Computer Science Engineering
- iv. Civil Engineering
- v. Basic Sciences
- vi. Other Interdisciplinary Areas



We have received in total **23 innovations** from Chennai, Tamil Nadu, West Bengal, and Himachal Pradesh. Details are :

|      | Research And Innovation Showcase (RAISE) |  |                                       |   |  |  |
|------|--|--|---------------------------------------|---|--|--|
| S.No | PARTICIPANT<br>NAME                      | UNIVERSITY/SCH<br>OOL  | STATE                                 | Title   |  |  |
| 1    | Ramneek<br>Khurana                       | 3rd year,<br>Biotechnology and<br>Bioinformatics<br>department, JUIT                                 | Himachal<br>Pradesh                   | Trouble in the Paradise:<br>Stubble Burning   |  |  |
| 2    | Irene Michelle                           | KCG College of<br>Technology   | Karapakkam,<br>Chennai,<br>Tamil Nadu | Smart Sentry  |  |  |
| 3    | Subash.S                                 | SRM Valliammai<br>Engineering College  | Kattankulath<br>ur, Tamil<br>Nadu     | A multitasking robot based<br>on a combination of IoT,<br>Machine Learning and<br>Embedded Systems for<br>farmers                           |  |  |
| 4    | Amrisha Vivinya<br>P M<br>A. Prasanth    | PSNA College of<br>Engineering and<br>Technology,  | Tamilnadu                             | Smart Electric Pole System  |  |  |
| 5    | Vishnu.R                                 | PSNA College of<br>Engineering and<br>Technology,  | Tamilnadu                             | Smart Irrigation and Water<br>Draining System   |  |  |
| 6    | Lokesh V                                 | College of Engineering Guindy, Anna University,  | Chennai                               | Prediction And Forecasting Epilepsy Based on Advanced Machine Learning Algorithms With Feature Extraction                                   |  |  |
| 7    | Vansheika                                | M.Tech Construction<br>Management, JUIT  | Himachal<br>Pradesh                   | An Innovative Empirical<br>Model for Assessing the<br>Effects of Future Pandemics<br>On Status Of Female Labors<br>in Construction Industry |  |  |
| 8    | Saurabh Tomar                            | B.Tech Civil Engg,<br>Jaypee University of<br>Information<br>Technology,<br>Waknaghat,<br>Solan(H.P) | Himachal<br>Pradesh                   | Screw – In Foundation For<br>Street Lights  |  |  |
| 9    | Ishita Satija                            | B.Tech Biotechnology<br>Engg, Jaypee<br>University of<br>Information<br>Technology,                  | Himachal<br>Pradesh                   | LOSTO IQAC  |  |  |

|    |   | Waknaghat,<br>Solan(H.P)   |                                      |   |
|----|---|--|--------------------------------------|---|
| 10 | Anmol Sharma  | B.Tech IT Engg, Jaypee University of Information Technology, Waknaghat, Solan(H.P) | Himachal<br>Pradesh                  | Nomad Maps  |
| 11 | Nayanika Sharma, Pranjal Bhatia, Rahul Shrivastava Rahul Shrivastava  Deptt of Biotechnology & Bioinformatics, Jaypee University of Information Technology, Waknaghat, Solan(H.P) |  | Himachal<br>Pradesh                  | Big Data Analyis of<br>Alzheimer's Disease using<br>Sorting   |
| 12 | Kirthana.K<br>Mythrayee.G<br>Punithajothi.N   | SRM Valliammai<br>Engineering College  | Kattankulath<br>ur                   | Real Time Water Quality<br>Monitoring System using<br>IoT   |
| 13 | Soma Banerjee   | Dept. of Education   | Purulia, West<br>Benagl              | The Analytic Aspect of<br>Phyto-Chemicals of <i>Aloe</i><br>vera Medicinal Plant of<br>Khetri Region, Rajasthan |
| 14 | Dipak Kr.<br>Mandal,  | Dept. of English   | Purulia, West<br>Benagl              | Antimicrobial Effects of<br>Medicinal Plant Extracts on<br>Human Pathogenic<br>Microorganisms                   |
| 15 | Athilingam R<br>Vivitha E<br>Shenbagadevi M   | Deptt of ECE, Nadar<br>Saraswathi College of<br>Engineering and<br>Technology      | Theni, Tamil<br>Nadu                 | Real Time Barcode/QR<br>Code Reader using Python  |
| 16 | Vaishnavi T.V,  | PSNA College of<br>Engineering and<br>Technology                                   | Dindigul,<br>Tamil Nadu-<br>624 622. | Smart Refrigerator Using AI and IOT   |
| 17 | Shrivaishnavi V   | SRMIST   | Ramapuram,<br>Chennai 89             | Determining the Proportion of Plastic In Plastic Roads  |
| 18 | Raga Varshini<br>Sneha K<br>Sowmiya M<br>Karthikeyan K  | Bannari Amman<br>Institute of<br>Technology  | Tamil Nadu                           | automated gas stove   |

| 19 | Sunainy Ajrawat,<br>Chhavi Thakur<br>Dr Hemant Sood | Jaypee University of<br>Information<br>Technology,<br>Waknaghat | Himachal<br>Pradesh | In silico profiling of bioactive compounds of Bauhinia variegata and exploring its pharmacological properties   |
|----|---|---|---------------------|---|
| 20 | Amanjot Singh<br>Malhotra                           | Jaypee University of<br>Information<br>Technology,<br>Waknaghat | Himachal<br>Pradesh | Artificial Intelligence: A legitimate enforcement for Health Care System  |
| 21 | Chhavi Thakur                                       | Jaypee University of<br>Information<br>Technology,<br>Waknaghat | Himachal<br>Pradesh | Application of Artificial Intelligence in Bioinformatics and Drug Discovery   |
| 22 | Sathya V  | V Muthayammal Engineering College, Biomedical Engineering       |                     | Basic Sciences  |
| 23 | Monisha S   |   |                     | A Wireless Sensor<br>Networks based Patient<br>Monitoring System using<br>Integrated ECG module,<br>Pulse Oximeter, Blood<br>Pressure and Temperature<br>Sensor |

All the innovations which were received were recommendable. The first round was based on Abstract Submission of app 300-350 words which defines the motivation and outcome of the work. March 20, 2021 was the submission date of the abstracts. The committee member comprises Dr. Shruti Jain, Dr. Hemraj Saini and Dr. Hemant Sood has shortlisted 12 innovations. Declaration of the result of first phase has been done by March 22, 2021. It was difficult to further shortlist the innovations. Round 2 is Poster Submission. IPR members have given a fixed template for designing the poster and it has to be submitted by March 24, 2021. Based on the parameters like innovative idea, poster design and benefit to society committee members came up with final decision. The final result was declared on March 25, 2021 and as follows:

| RESULT | PARTICIPANT<br>NAME | Title                                      | Amount   |
|--------|---------------------|--|----------|
| First  | Anmol Sharma        | Nomad Maps                                 | Rs. 2000 |
| Second | Saurabh Tomar       | Screw – In Foundation For Street<br>Lights | Rs. 1500 |
| Second | Ishita Satija       | Lenfo                                      | Q&C15    |

| Third       | Vaishnavi T.V,   | Smart Refrigerator using AI   | Rs. 1000                                    |
|-------------|--|---|---|
| Third       | Raga Varshini<br>Sneha K<br>Sowmiya M<br>Karthikeyan K | Automated Gas Stove   | Rs. 1000                                    |
| Consolation | Amrisha Vivinya P M                                    | Smart Electric Pole System  | Participation certificate mentioning result |
| Consolation | Sunainy Ajrawat,<br>Chhavi Thakur<br>Hemant Sood       | In Silico Exploration of Medicinal<br>Compounds of Bauhinia Variegata | Participation certificate mentioning result |

E-certificates have been given to all active participants.





## Fwd: Tech Interaction with JUIT Solan for G Suite Implementation

3 messages

Raiinder Sandhu <raiinder.sandhu@iuitsolan.in>

6 August 2020 at 17:03

7 August 2020 at 14:56

To: Nishant Jain <nishant.jain@juitsolan.in>, Narendra Kumar <narendra.kumar@juitsolan.in>, Saurabh Srivastava <saurabh.srivastava@juitsolan.in>, Vineet Sharma <vineet.sharma@juitsolan.in>, anupriya.kaur@juit.ac.in, Niraj Singh Parihar <nirajsingh.parihar@juitsolan.in>
Cc: Sunil Kumar Khah <sunil.khah@juitsolan.in>

Please find the Link for tomorrow training

### Tech Interaction with JUIT Solan for G Suite Implementation

When Fri 7 Aug 2020 11:30am – 12:30pm India Standard Time - Kolkata

Joining info Join with Google Meet

meet.google.com/pvc-zhxg-znb

Join by phone

(US) +1 423-781-1274 (PIN: 719892238)

Who • admin@juitsolan.in- organiser

Rajinder Sandhu <rajinder.sandhu@juitsolan.in>

To: admin@juitsolan.in, sachin@marginfotech.com
Cc: gsuite\_core <gsuite\_core@juitsolan.in>, Sunil Kumar Khah <sunil.khah@juitsolan.in>

Dear Sachin

It was a wonderful session and I think the stream option will be beneficial for us a lot. Rest we have covered I think most of the things on our end. Also, thanks for sharing links for resources which we can use. Please share the recording of the session.

The following points need to be addressed:

- 1. To add my name in the CSE faculty group.
- 2. We will try to use Google Attendance with Google Stream also.
- 3. Multi-device login was successful, but we will further try to practice it.
- 4. You need to set settings that students should not be able to start google meetings without the faculty. Also, as you mentioned, faculty will leave last from the meet and make sure everyone logs out of the class.
- 5. You will look for some resources which can be used to teach mathematics.

Everyone, if you have any further questions, please let me know.

#### Regards

## Dr. Rajinder Sandhu

On Thu, 6 Aug 2020 at 17:00, <admin@juitsolan.in> wrote:

Please find the Link for tomorrow

## Tech Interaction with JUIT Solan for G Suite Implementation

[Quoted text hidden]

--Regards Dr. Rajinder Sandhu Assistant Professor CSE/IT

You received this message because you are subscribed to the Google Groups "gsuite\_core" group.

To unsubscribe from this group and stop receiving emails from it, send an email to gsuite\_core+unsubscribe@juitsolan.in.

To view this discussion on the web visit https://groups.google.com/a/juitsolan.in/d/msgid/gsuite\_core/CAN%3DJEv%3DOpLMRhR4\_dCS2oft0qee3SCowrm%2BTMz\_SkKvSHS8uVQ%40mail.gmail.com.

For more options, visit https://groups.google.com/a/juitsolan.in/d/optout.

Saurabh Bansal <saurabh.bansal@juitsolan.in>
To: Nishant Jain <nishant.jain@juitsolan.in>

IQAC PARAMAGHATA

4 June 2023 at 12:35

Faculty In-Charge, JUIT Alumni Cell Member, IQAC, Board of Studies Dept. Biotechnology & Bioinformatics Jaypee University of Information Technology

Waknaghat-173234

Solan, Himachal Pradesh, India

https://www.juit.ac.in/faculty.php?id=264&dep=bio&page=0

91-1792-239222, 9882194150

**ORCID ID:** https://orcid.org/0000-0002-0574-4063

Scopus ID: https://www.scopus.com/authid/detail.uri?authorld=21740782200

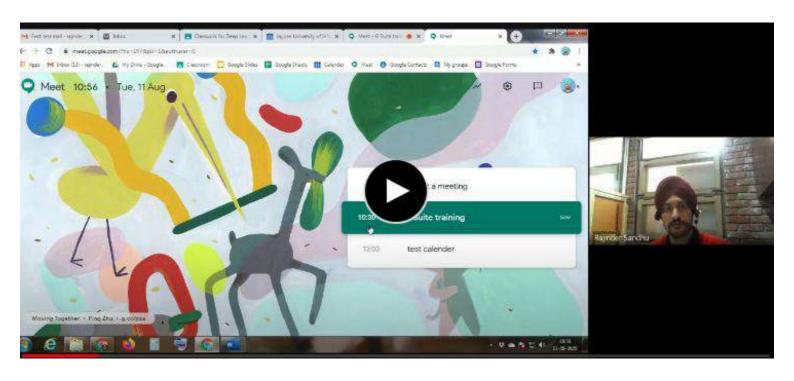
Google Scholar ID: https://scholar.google.co.in/citations?user=u5VNU6sAAAAJ&hl=en&authuser=2

Publon ID: https://publons.com/researcher/2172440/saurabh-bansal/ IRINS ID: JUIT (irins.org)

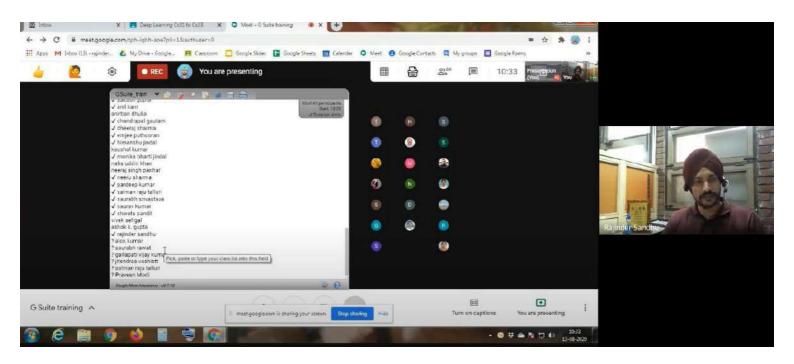
From: Sunil Kumar Khah <sunil.khah@juitsolan.in>
Date: Sat, 3 Jun 2023 at 18:01
Subject: Fwd: Tech Interaction with JUIT Solan for G Suite Implementation
To: Saurabh Bansal <saurabh.bansal@juitsolan.in>

[Quoted text hidden]













## **Intraction with Mercer Mettle**

2 messages

Sunil Kumar Khah <sunil.khah@juitsolan.in>
To: ALLFaculty <allfaculty@juitsolan.in>

18 May 2021 at 12:56

Cc: Samirdev Gupta <samirdev.gupta@juit.ac.in>, vinod.kumar@juit.ac.in

Dear ALL

Mercer Mettle will have an intraction with all faculty members regarding paper setting on Mettle platform tomorrow at 3.00 pm. (19-05-2021) The link will be shared by today with you.

Before the training please go through this link https://support.mettl.com/portal/en/kb/induslynk-training-services-p-ltd/client1/examine

Sunil

Sunil Kumar Khah <sunil.khah@juitsolan.in>

18 May 2021 at 20:18

To: ALLFaculty <allfaculty@juitsolan.in>
Cc: Samirdev Gupta <samirdev.gupta@juit.ac.in>, vinod.kumar@juit.ac.in

Dear ALL

The intraction is shifted to 20-05-2021. The time will be same.

Regards

[Quoted text hidden]



## Exit Report of

## Workshop on Industrial Revolution 4.0 3rd July 2021 to 4th Sep 2021

The Department of Electronics and Communication Engineering, JUIT has organized a Workshop on Industrial Revolution 4.0 with one session organized every Saturday from 3rd July 2021 to 4th Sep 2021.

Industrial Revolution 4.0 comes with the concept of making industries smart and includes technologies like artificial intelligence (AI), robotics, the Internet of Things (IoT), cyber-physical systems, 3D printing, genetic engineering, quantum computing, and many others. Due to the very wide scope of applications, it attracts students, researchers, educators and industrialists from different backgrounds. This workshop will help the participants working or aspiring to work in the field of IoT, Robotics, Smart Home, Cloud Computing, remote sensing, Biomedical, etc. It will help the participants to explore new dimensions for their academic and research activities. Topics to be covered in the workshop are the following: Industry 4.0 technology, Internet of Thing (IoT), Design of Smart Sensors, Cyber Physical Systems, Advanced Robotics, Quantum Cryptography for Internet of Things Security, Wireless Communication for IoT, Industry practices in Artificial Intelligence, and Introduction to Cloud Computing.

Schedule of the workshop was as follows:

| Session | Date      | Time         | Session Title   | Speaker  |
|---------|-----------|--------------|---|--|
| 1       | 3rd July  | 11:00 -13:00 | Introduction to Industry<br>4.0 technology              | Prof. Ghanshyam Singh,<br>Professor, University of<br>Johannesburg             |
| 2       | 10th July | 11:00 -13:00 | Introduction to IoT:<br>Research Issues &<br>Challenges | Dr. Vijay Chaurasiya, Associate<br>Professor, IIIT Allahabad                   |
| 3       | 17th July | 11:00 -13:00 | Design of Smart<br>Sensors                              | Dr. Sandeep Hanwate, Assistant<br>Professor, College of Engineering<br>Pune    |
| 4       | 24th July | 11:00 -13:00 | Development of IoT applications                         | Mr. Harmesh per Purector,<br>Embsoft Products Research and<br>Development IQAC |

| 5  | 31st July | 11:00 -13:00 | Cyber Physical<br>Systems – An insight   | Dr. Sahaj Saxena, Assistant<br>Professor, Thapar Institute of Engg<br>& Technology            |
|----|-----------|--------------|--|---|
| 6  | 7th Aug   | 11:00 -13:00 | Advanced Robotics and Automation   | Mr. Utkarsh Srivastava,<br>Acalvio Technologies, Bengaluru                                    |
| 7  | 14th Aug  | 11:00 -13:00 | Quantum Key<br>Distribution  | Mr. Vivek Kumar, Senior Research<br>Engineer, Centre for Development<br>of Telematics (C-DOT) |
| 8  | 21st Aug  | 11:00 -13:00 | Data Protocols in IoT<br>Networks  | Dr. Pyari Mohan Pradhan,<br>Associate Professor, IIT Roorkee                                  |
| 9  | 28th Aug  | 11:00 -13:00 | Recent Trends in Data<br>Clustering Algorithms<br>And Their Applications<br>in IoT | Dr. Satyasai Jagannath Nanda,<br>Assistant Professor, MNIT Jaipur                             |
| 10 | 4th Sep   | 11:00 -13:00 | Cloud computing<br>Overview – Key to the<br>success of Industry 4.0                | Mr. Sanjay Singh, Project<br>Manager, Infosys Ltd.  |

Following students and Faculty were the part Organizing Team :

| S.No. | Email ID                | Name                             | Responsibility  | Faculty<br>Coordinator             |
|-------|-------------------------|----------------------------------|---|------------------------------------|
| 1     | 191034@juits<br>olan.in | Falguni<br>Bharadwaj             | Certificate and End Video designing                               | Dr. Nishant                        |
| 2     | 191040@juits<br>olan.in | Sanskriti                        | Reporting of sessions 1,& 2 for website and social media coverage | Dr. Vikas & Dr.<br>Shweta          |
| 3     | 191043@juits<br>olan.in | SRI naga sai<br>kartik vinnakota | Video editing of Session 1 & 2 for Youtube                        | Dr. Nishant                        |
| 4     | 191002@juits<br>olan.in | Sagrika Gargya                   | Hosting all 10 Sessions<br>with Shweta Maam and<br>Pragya Maam    | Dr. Shweta and Lt.<br>Pragya Gupta |
| 5     | 191038@juits<br>olan.in | Devansh Gupta                    | Feedback form collection and maintaining attendance sheet         | Dr. Vikas                          |
| 6     | 191004@juits<br>olan.in | Pragya Tiwari                    | Hosting all 10 Sessions<br>with Shweta Maam and<br>Pragya Maam    | Dr. Shweta and Lt.<br>Pragya Gupta |
| 7     | 191028@juits<br>olan.in | Ritika tiwari                    | Reporting of sessions 3 & 4 for website and social                | Dr. Vites & Dr. Shwella IQAC       |

|    |                         |                  | media coverage   |                          |
|----|-------------------------|------------------|--|--------------------------|
| 8  | 191048@juits<br>olan.in | Prajjwal Shukla  | Video editing of Session 3 & 4 for Youtube                         | Dr. Nishant              |
| 9  | 191012@juits<br>olan.in | Shikhar Trivedi  | Reporting of sessions 5 & 6 for website and social media coverage  | Dr. Vikas & Lt<br>Pragya |
| 10 | 191039@juits<br>olan.in | Ambar tiwari     | Video editing of Session 5 & 6 for Youtube                         | Dr. Nishant              |
| 11 | 191021@juits<br>olan.in | Shubham jha      | Reporting of sessions 7 & 8 for website and social media coverage  | Dr. Vikas & Lt<br>Pragya |
| 12 | 191045@juits<br>olan.in | Anjali rana      | Video editing of Session 7 & 8 for Youtube                         | Dr. Nishant              |
| 13 | 191018@juits<br>olan.in | Pratham bhardwaj | Reporting of sessions 9 & 10 for website and social media coverage | Dr. Vikas & Lt<br>Pragya |
| 14 | 191046@juits<br>olan.in | Stuti Roy        | Video editing of Session 9<br>& 10 for Youtube                     | Dr. Nishant              |

Total of 240 Registrations were received from across the globe.

| Category                  | No. of Participants |
|---------------------------|---------------------|
| Female                    | 60                  |
| Participants from JUIT    | 50                  |
| Participants from outside | 144                 |
| Participants from abroad  | 9                   |
| Employee in Industry      | 15                  |
| Entrepreneurs             | 2                   |
| Faculty                   | 87                  |
| Research Scholar          | 25                  |
| Student (UG)              | 58                  |
| Technical staff           | 5                   |

All the sessions were conducted through Google Meet. Feedback was collected from the participants after every session of the workshop. At the end of the workshop 74 participants with more than 80% attendance were given the e-Certificates. e-Certificate were also given to our keynote speakers as a token of appreciation.

Dr. Nishant Jain, Dr. Shweta Pandit, Dr. Vikas Baghel, and Lt. Pragya Gupta, Assistant Professors in ECE, JUIT were the coordinators for this workshop.



## **Exit Report**

of

## Workshop on Image Processing with Deep Learning (22nd - 26th March 2022)

The Department of Electronics and Communication Engineering and Department of CSE/IT, JUIT, Solan hass organised a Workshop on Image Processing with Deep Learning between 22nd - 26th March 2022. Deep Learning networks on Image Processing finds its application in biomedical, forensic science, remote sensing, agriculture, and in many more. Due to its wide area of applications, it attracts students, researchers, educators and industrialists from different backgrounds like Electronics and Communication Engineering, Computer Science Engineering, Biotechnology and Bioinformatics Engineering and others. This workshop was organized with the aim to help the participants working or intend to work in the area of computer vision, biomedical engineering, forensic analysis, remote sensing images and telemedicine; and to help the participants to explore the new dimensions for their academic and research activities.

Workshop was conducted in hybrid both (both Offline and Online Mode). All the lectures were delivered remotely by keynote speakers, whereas hands-on sessions were conducted by experts in the Lab. All the sessions were made available through googlemeet for the Online Participants

A total of 373 participants had registered for this workshop. We had received registrations from India and globally from countries like Australia, Denmark, and South Africa. Among the registered participants, 180 were Faculty, 67 were research Scholars, 31 were PG students, 9 registrations were from Industry, 5 were scientists and the remaining registration were UG students. Participants affiliated from premium institutes like Queensland University of Technology, University of Johhanesburg, IIT Bombay, IIT Rookee, NIT Raipur, NIT Srinagar, IIIT Allahabad, DTU, and NSUT Delhi had registered in the workshop. Some participants were from companies like Bharti Airtel, Philips Health Care, HFCL Limited, etc.

In the workshop to clarify the fundamentals, we had 4 lectures on the fundamentals of image processing and deep learning along with 4 hands-on sessions. We also had 5 lectures on research topics that helped the participants to implement the concepts of image processing and deep learning in their area of interest. All the handon session were conducted on Google Colab platform.

Feedback was collected from the participants after every session of the workshop. At the end of the workshop 118 participants with more than 80% attendary were given the

e-Certificates. e-Certificate were also given to our keynote speakers as a token of appreciation.

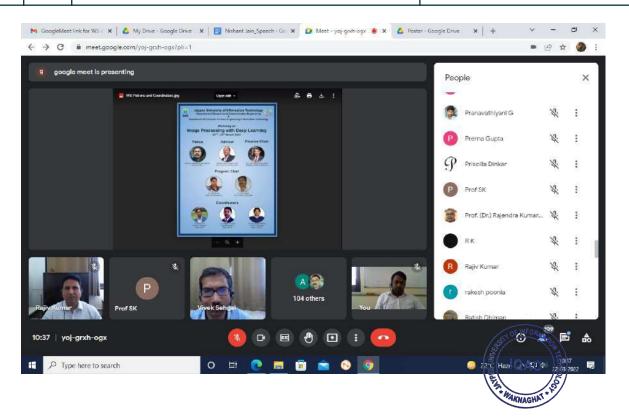
Dr. Nishant Jain, Assistant Professors in ECE, JUIT; Dr. Emjee Puthooran, Assistant Professors in ECE, JUIT and Dr. Vipul Kumar Sharma, Assistant Professors in CSE/IT, JUIT were the coordinators for this workshop.

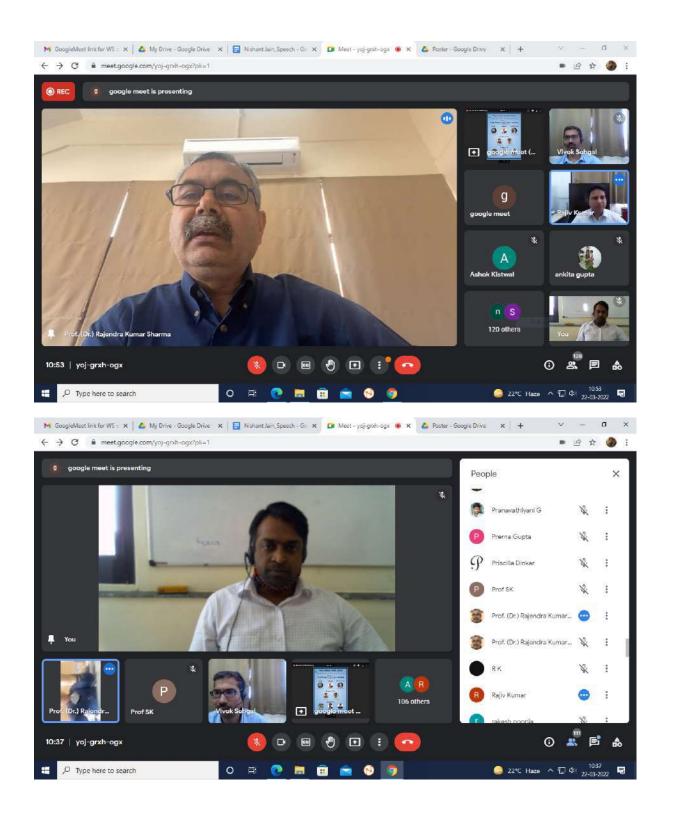
Schedule and weblinks of the Recordings and Materials (speakers allowed to share) of all the lectures and hands-on sessions conducted in the Workshop on Image Processing with Deep Learning 2022 is as follows:

|                                    |                     | Schedule  | Recorded Lecture and Supported Files   |
|------------------------------------|---------------------|---|--|
|                                    | 10:30               | Inauguration  |  |
| Day 1                              | 11:00               |   |  |
| 22 <sup>nd</sup>                   | 11:00               | Lecture: Introduction to Image Processing and its Applications  | https://youtu.be/Ekfzeta3T8I   |
| March                              | 12:00               | <b>Keynote Speaker</b> : Dr. Nishant Jain, Assistant Professor, Department of ECE, JUIT   |  |
| (Tuesday<br>)                      | 12:00<br>-13:0<br>0 | Lecture: Deep Learning for Computer Vision Keynote Speaker: Dr. Subrahmanyam Murala, Associate Professor, Electrical Engineering Department, IIT Ropar                        | https://drive.google.com/file/d/1cOQhN<br>5iUSgfH2Qa8vdHkNg1bzYriQ14g/view?<br>usp=sharing |
|                                    | 13:00               | Lunch   |  |
|                                    | 14:30<br>-16:3<br>0 | Hands-on Session: Implementation of Image Processing using Python.  Expert: Dr. Nishant Jain, Assistant Professor, Department of ECE, JUIT                                    | https://youtu.be/7TxUQXD7w3w https://github.com/nishantjain86/lmage -Processing            |
| Day 2                              | 10:15<br>-11:1<br>5 | Lecture: Feature Extraction Methods for the classification of images.  Keynote Speaker: Dr. Nishant Jain, Assistant Professor, Department of ECE, JUIT                        | https://youtu.be/wYZzpE1pPn0   |
| Day 2<br>23 <sup>rd</sup><br>March | 11:15<br>-<br>11:30 | Tea Break   |  |
| (Wednes<br>day)                    | 11:30<br>-12:3<br>0 | Lecture: Application of Deep Learning Networks on Medical Images. Keynote Speaker: Dr. Narendra D. Londhe, Associate Professor, Electrical Engineering Department, NIT Raipur | https://drive.google.com/file/d/1tMgQN<br>ZehhXfzvYlgvM8Rnc3_THJ1OZPx/view<br>?usp=sharing |
|                                    | 12:30<br>-<br>14:00 | Lunch   | OF INFORMATO   |

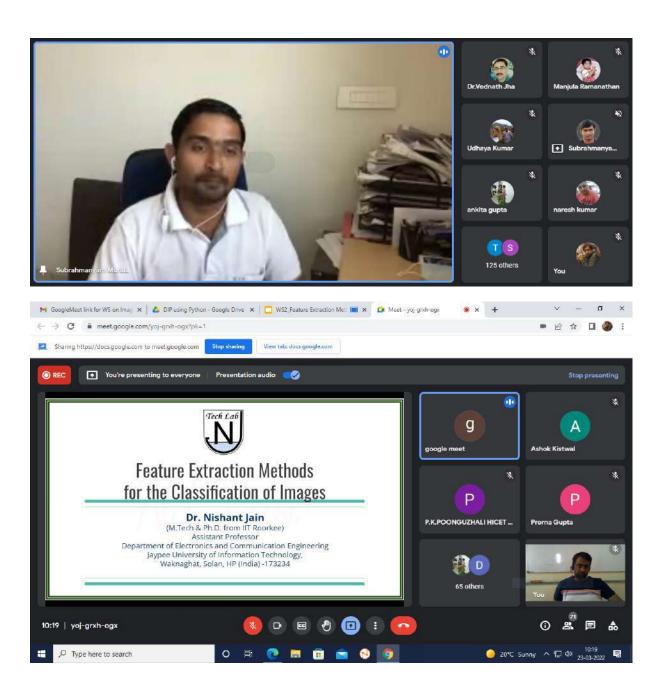
|                                    |                     | ·   |   |
|------------------------------------|---------------------|---|---|
|                                    | 14:00<br>-16:0<br>0 | Hands-on Session: Feature Extraction methods and training of Neural Network using Python.  Expert: Dr. Nishant Jain, Assistant Professor, Department of ECE, JUIT                       | https://youtu.be/wIEaHjqifIA  https://github.com/nishantjain86/Image -Processing  |
| Day 3                              | 10:15<br>-11:1<br>5 | Lecture: Feature Extraction and Classification of Liver Ultrasound Images Keynote Speaker: Dr. Jitendra Virmani, Senior Technical Officer, Indo-Swiss Training Centre (ISTC), CSIR-CSIO | https://drive.google.com/file/d/1jA2lfsj0<br>usLGdK3jwWIFf9ppOE9goX3S/view?u<br>sp=sharing  |
| March<br>(Thursda                  | 11:15               | Tea Break   |   |
| y)                                 | 11:30               |   |   |
|                                    | 11:30<br>-12:3<br>0 | <b>Lecture:</b> Image Compression using Machine Learning <b>Keynote Speaker:</b> Dr. Emjee Puthooran, Assistant Professor, Department of ECE, JUIT                                      | https://drive.google.com/file/d/1jA2lfsj0<br>usLGdK3jwWlFf9ppOE9goX3S/view?u<br>sp=sharing  |
|                                    | 12:30               | Lunch   |   |
|                                    | -<br>14:00          |   |   |
|                                    | 14:00<br>-16:0<br>0 | Hands-on Session: Implementation of Machine Learning Algorithms using Python Expert: Dr. Vikas Baghel, Assistant Professor, Department of ECE, JUIT                                     | https://drive.google.com/file/d/16hElzB<br>_VyaWgBGPHBYqo_vAYCfm-rlfk/view?<br>usp=sharing  |
|                                    |                     |   | Task1: https://colab.research.google.com/drive/1ryes3HAgjhoxuHYhm1Z-CdN3oN3p7fEF?usp=sharing  |
|                                    |                     |   | Task2: https://colab.research.google.com/drive/1h5ylt9cK6fDepo9XwE1NUToAlHNc0ons?usp=sharing  |
|                                    |                     |   | Task3: https://colab.research.google.com/driv e/1IKli0RZP1ZPtV9hP5Yct8kOZK1allm Bg?usp=sharing  |
| Day 4<br>25 <sup>th</sup><br>March | 10:15<br>-11:1<br>5 | Lecture: Introduction to Convolutional Neural Networks Keynote Speaker: Dr. Vipul Kumar Sharma, Assistant Professor, Department of CSE/IT, JUIT   | https://drive.google.com/file/d/1G-w2K<br>T1Ja2qX7DhbjH_SYdNrt4B26f2V/view?<br>usp=sharing  |
| (Friday)                           |                     |   | https://docs.google.com/presentation/<br>d/1gtcTJQSf1eqSfrMmqPnrL5oQXiYPp<br>FFi/edit?usp=sharing&ouid=110182110<br>977450671877&rtpof=true&sd=true |
|                                    | 11:15               | Tea Break   |   |
|                                    | -<br>11:30          |   |   |
|                                    | 11:30<br>-12:3<br>0 | Lecture: Automatic Radiology Report Generation using Deep Learning Keynote Speaker: Dr. Chandresh Kumar Maurya,   | https://drive.google.com/file/d/1G-w2K<br>T1Ja2qX7/200 H_SWNrt4B26f2V/view?<br>usp=sharing  |
|                                    |                     |   | *MANAGHAT *   |

|   |                     | Assistant Professor, Computer Science & Engineering Department, IIT Indore  |   |
|---|---------------------|---|---|
|   | 12:30<br>-13:1<br>5 | Lecture: Application of AI and Image processing for Defence Systems Keynote Speaker: Dr. Anita Singh, Scientist 'E', IRDE, DRDO, Ministry of Defence, Govt. of India, Dehradun                    | https://drive.google.com/file/d/1awrOQ<br>EzB 5eRG LXy-G-fbwESyb1x2yZ/view<br>?usp=sharing  |
|   | 12:30<br>-<br>14:00 | Lunch   |   |
|   | 14:00<br>-18:0<br>0 | Trip to Shimla  |   |
| Day 5  26 <sup>th</sup> March (Saturda y) | 10:15<br>-12:3<br>0 | Hands-on Session: Implementation of CNN using python along with Dimensionality reduction, and feature Engineering Expert: Dr. Vipul Kumar Sharma, Assistant Professor, Department of CSE/IT, JUIT | https://drive.google.com/file/d/1oA5_6d 4wau1vAwHHLEtivblkbBRDeax5/view? usp=sharing https://drive.google.com/file/d/1mCcjZ pOvaSep4wny3f8Z0qLN_4ZiPoeJ/view ?usp=sharing https://drive.google.com/file/d/1ydE8M KqqHiyWvHDPsix4dRnc9eei8gXs/view ?usp=sharing https://drive.google.com/file/d/1yhcOk UGHFe2Qcy8tPhuxCRT8NQGJWCHd/v iew?usp=sharing |
|   | 12:30               | Valedictory followed by Lunch   |   |
|   | -<br>14:00          |   |   |

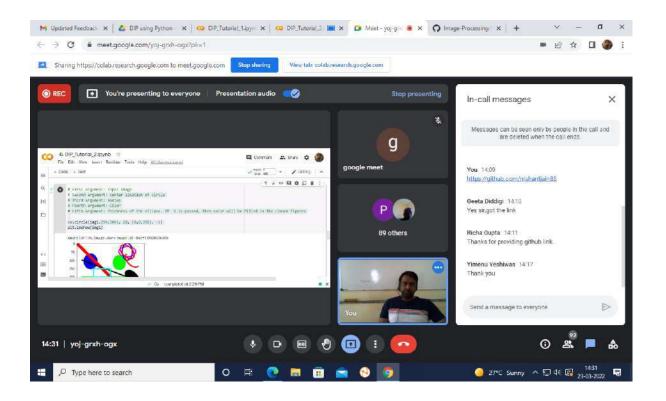






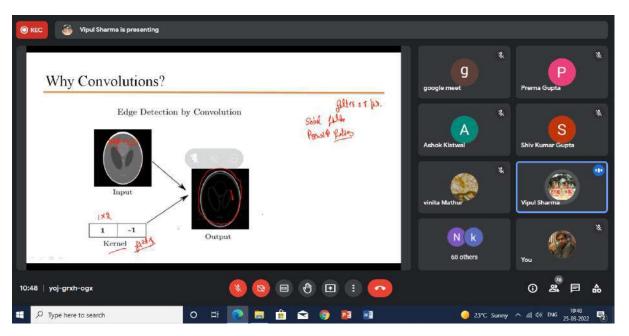


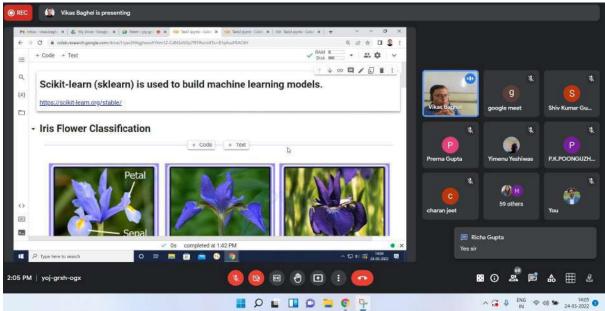














# Jaypee University of Information Technology Department of Electronics & Communication Engineering



Workshop on Image Processing with Deep Learning (22nd - 26th March 2022)



# Keynote Speaker

Title: Implementation of Machine Learning
Algorithms using Python



Dr. Vikas Baghel
Assistant Professor
Department of ECE, JUIT

Date: 24th March, 2022, Time: 14:00 - 16:00 IST

Medium: Google Meet





## Fw: Re: Moodle Implementation - BTBI

2 messages

saurabh.bansal@juit.ac.in <saurabh.bansal@juit.ac.in>

To: nishant.jain@juitsolan.in

4 June 2023 at 12:39

----Forwarded by saurabh.bansal/Juit on 06/04/2023 12:39PM ----

To: all\_faculty\_bibt@juit.ac.in From: raj.kumar/Juit Date: 12/28/2021 11:14AM

Subject: Re: Moodle Implementation - BTBI

Gentle Reminder.

Dr. Raj Kumar, Ph.D. Assistant Professor (Grade-I),

Department of Biotechnology and Bioinformatics, 2nd Floor, Vivekananda Bhawan, Jaypee University of Information Technology, Waknaghat, Solan - 173 234 Himachal Pradesh, India Phone: 01792 - 239351-Extension:305, +917876254267

-----raj.kumar/Juit wrote: -----| To: all\_faculty\_bibt@juit.ac.in

From: raj.kumar/Juit
Date: 12/24/2021 12:50PM

Subject: Re: Moodle Implementation - BTBI

Dear All,

As per directions of our HoD Sir, I will conduct Second Demo for Moodle activity.

1. Uploading class lecture material: Completed on 20.11.2021

2. Creating and evaluating Quizes: Pending

The Second Demo is scheduled on coming Tuesday, 28.12.2021 at 3:30PM.

Google Link: https://meet.google.com/yjd-scch-cxo

Regrds,

Dr. Raj Kumar, Ph.D.

Assistant Professor (Grade-I),

Department of Biotechnology and Bioinformatics, 2nd Floor, Vivekananda Bhawan, Jaypee University of Information Technology, Waknaghat, Solan - 173 234 Himachal Pradesh, India Phone: 01792 - 239351-Extension:305, +917876254267

----raj.kumar/Juit wrote: -----

To: all\_faculty\_bibt@juit.ac.in From: raj.kumar/Juit

Date: 11/22/2021 09:41AM

Subject: Re: Moodle Implementation - BTBI

Dear All

Please find recorded session of Moodle Demo-1.

https://drive.google.com/file/d/1y3kjlj7heEf6To622i1shAvazWcpdqxC/view?usp=sharing

Dr. Raj Kumar, Ph.D.

Assistant Professor (Grade-I),

Department of Biotechnology and Bioinformatics, 2nd Floor, Vivekananda Bhawan, Jaypee University of Information Technology, Waknaghat, Solan - 173 234 Himachal Pradesh, India Phone: 01792 - 239351-Extension:305, +917876254267

----raj.kumar/Juit wrote: -----

To: all\_faculty\_bibt@juit.ac.in From: raj.kumar/Juit Date: 11/17/2021 09:51AM

Subject: Re: Moodle Implementation - BTBI

Dear colleagues,

I hope that you have logged into your MOODLE account and changed your password.

As per directions of our HoD Sir, I will conduct two Demos for Moodle activities as follows:

- 1. Uploading class lecture material.
- 2. Creating and evaluating Quizes.

The first Demo is scheduled on coming Saturday, 20.11.2021 at 3:30PM.

Google Link: https://meet.google.com/yjd-scch-cxo

You may explore more using following useful links:

https://www.youtube.com/watch?v=n3uitciAhjw https://docs.moodle.org/311/en/Working\_with\_files

https://www.ispringsolutions.com/blog/getting-started-with-moodle



Best Regards, ~~Rai

Dr. Raj Kumar, Ph.D.

Assistant Professor (Grade-I),

Department of Biotechnology and Bioinformatics, 2nd Floor, Vivekananda Bhawan, Jaypee University of Information Technology, Waknaghat, Solan - 173 234 Himachal Pradesh, India Phone: 01792 - 239351-Extension:305, +917876254267

----raj.kumar/Juit wrote: ----To: all\_faculty\_bibt@juit.ac.in From: raj.kumar/Juit Date: 10/18/2021 05:32PM

Subject: Moodle Implementation - BTBI

Dear all,

University ranking bodies such as NIRF specify upto 30% weightage for 'Teaching-learning & resources (TLR)'. A learning management system (LMS) comes under the category of TLR and forms integral part of a modern education system globally. Moodle is a free and open-source learning management system which can be customized by any Institution and uses local hardware and networking.

#### The committee:

Recently, a 'Moodle Implementation Committee' has been formed which is headed by the honorable vice chancellor (VC), Prof. (Dr.) Rajendra Kumar Sharma. This Committee includes faculty representatives from each department and the members of IT team. The Committee is dedicated for the complete implementation of Moodle at JUIT before the beginning of upcoming semester starting January, 2022. I, Dr. Raj Kumar, am representing the Department of Biotechnology & Bioinformatics (BTBI) and will monitor the progress of Moodle implementation in the department.

#### Implementation:

- 1. Moodle space has been created on the main JUIT website at the following link: http://moodle.juit.ac.in:81/moodle/
- 2. The IT team will create your account and share the Login details with you via email.
- 3. You must Login and change your password at the first Login itself.
- 4. You must share the details of your course including 'course name, course code, and batches' in the course with the IT team.
- 5. IT team will create respective cohorts for each subject into which you may upload the class materials.
- 6. Starting upload activity.

#### Activity:

**1. Upload every class lecture material**, e.g. PPTs, video lecture, important links, other e-resources containing related NPTEL lectures. This practice is similar to the activity we already are performing in 'Google Classroom'.

#### Useful links:

https://www.youtube.com/watch?v=n3uitciAhjw https://docs.moodle.org/311/en/Working\_with\_files https://www.ispringsolutions.com/blog/getting-started-with-moodle

## 2. Creating and starting class Tutorials and Quizes.

You must create quizes in the respective courses only. Students must join the Moodle courseroom, perform the quiz and submit it there only (Similar practice as Google forms and Mettl).

#### Useful links:

https://docs.moodle.org/27/en/Building\_Quiz https://www.ispringsolutions.com/blog/how-to-create-a-moodle-quiz

#### Creating Simple Quizes:

https://www.youtube.com/watch?v=GqIECZJD4fE&ab\_channel=Moodle https://www.youtube.com/watch?v=CevOZV5Y9vg&ab\_channel=KateHayden

#### Creating Quizes, different types of questions

 $\label{lem:https://www.youtube.com/watch?v=gCm-LBMJgdg&t=1359s&ab\_channel=RussellStannard%28TeacherTrainingVideos%29 \\ \label{lem:https://www.youtube.com/watch?v=ErgH6\_G5Ofs&ab\_channel=RussellStannard%28TeacherTrainingVideos%29 \\ \label{lem:https://watchannel-RussellStannard%28TeacherTrainingVideos%29 \\ \label{lem:https://watchannel-RussellStannard%29$ 

#### How To Import A Quiz From Word Document To Moodle

https://www.youtube.com/watch?v=iLPVsqJYjzk&t=514s&ab\_channel=FacultyWorkshop

You may explore above links before the actual implementation.

For more information, you may contact me between 3-5pm on Mondays and Tuesdays.

#### Best Regards,

Dr. Raj Kumar

Dr. Raj Kumar, Ph.D.

Assistant Professor (Grade-I),

Department of Biotechnology and Bioinformatics, 2nd Floor, Vivekananda Bhawan,

Jaypee University of Information Technology, Waknaghat, Solan - 173 234

Himachal Pradesh, India Phone: 01792 - 239351-Extension:305, +917876254267



4 June 2023 at 12:41



## Workshop on Moodle platform

1 message

Emjee Puthooran <emjee.puthooran@juitsolan.in>
To: all\_faculty\_ece <all\_faculty\_ece@juitsolan.in>
Co: Rajiv Kumar <rajiv.kumar@juitsolan.in>, Sunil Datt Sharma <sunildatt.sharma@juitsolan.in>

26 October 2021 at 15:14

Dear Sir/ Madam,

As the University is planning to introduce Moodle, which is an open source learning management system (LMS) from next semester onwards, an online workshop is being organized on 28-10-2021 at 4:00 PM. You are requested to make it convenient to attend the same.

Google meet link: https://meet.google.com/skj-fzia-dky

With Best Regards, Dr. Emjee Puthooran Assistant Professor (SG), ECE JUIT Waknaghat, Ext: 243

IQAC PERMANDOL TECHNOLOGY

Reply Reply To All **Forward** More New

#### FIRE SAFETY TRAINING DEMONSTRATION

registrar

Monday, June 06, 2022 09:26AM

**Show Details** 

Dear All

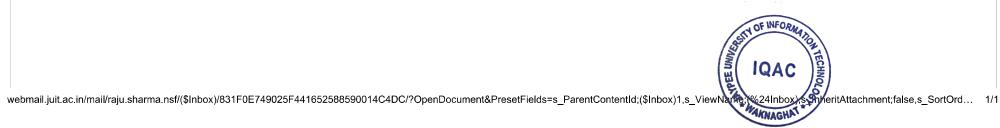
Fire Safety Training demonstration will be conducted by JUIT Fire Consultant on 08 June 2022 at 1215 hours in the area of Mughal Garden. All Faculty and Staff are required to be kindly present for the same.

Regards

Major General Rakesh Bassi, SM (Retd) Registrar and Dean of Students

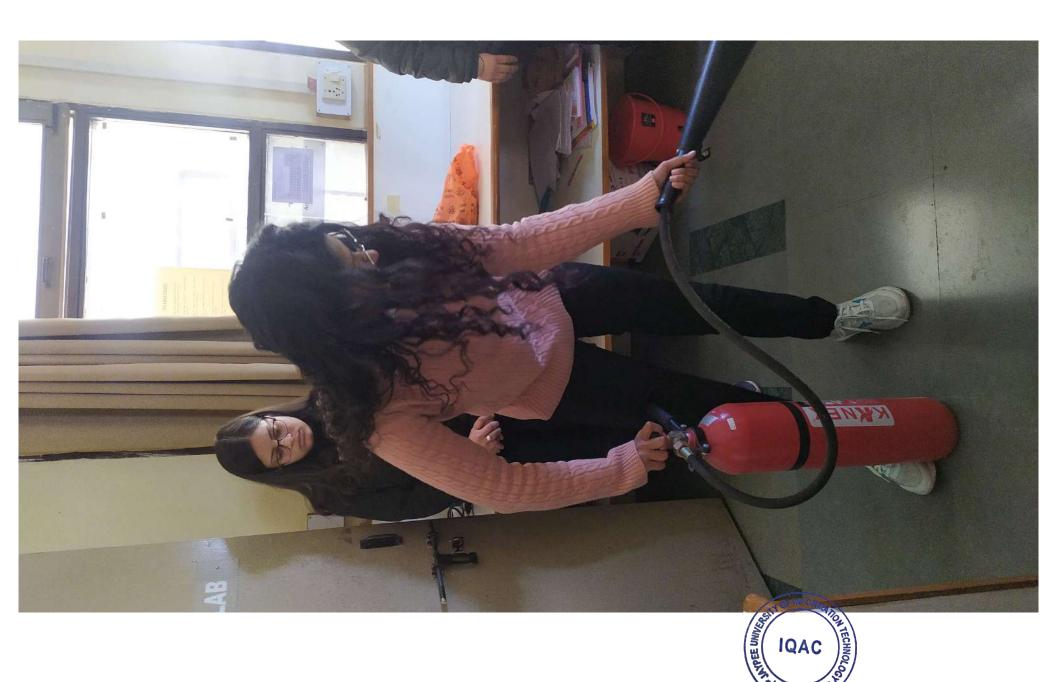
Office 01792-239203 Mob 8626816777

To: juit\_all@juit.ac.in













## Workshop Report on "Environment and Sustainability"

Dept. of Biotechnology, JIIT, Noida, and Dept. of Biotechnology and Bioinformatics, JUIT jointly organized a workshop on "Environment and Sustainability". The workshop was scheduled on June 9th, 2022, at Aryabhatt Bhavan III (JIIT) and Board Room (JUIT). Dr. Garlapati Vijay Kumar served as the coordinator for the workshop for JUIT and Dr. Indira was coordinator from JIIT. The program was started with the welcome speech by Prof. S.C. Saxena (Pro-Chancellor, JIIT), followed by Prof. B.R. Mehta (Director, DIRD, JIIT), Prof. Pammi Gauba (HOD, BT, JIIT) and Prof. Sudhir Kumar (HOD, BT & BI, JUIT). After that, Prof. Sunil Khare (IIT Delhi) gave a technical speech on "Extremophiles in Biotechnology," followed by the technical sessions of Dr. Sudesh Kumar (CIAB, Mohali) on "Sustainable approaches in Agri-Food Sector" and Prof. S.K.Soni (Punjab University, Chandigarh) on "Recent Trends in Biofuel/Bioenergy". The afternoon session started with the research talks by Prof. S. Krishna Sundari (JIIT), Dr. A.Mathur (JIIT), Prof. Sudhir Kumar (JUIT), and Dr.Garlapati Vijay Kumar (JUIT) on the frontier sections on "Environment and Sustainability". The program was concluded with the discussion and outcomes by Prof. Pammi Gauba (HOD, BT, JIIT) and Prof. Sudhir Kumar (HOD, BT & BI, JUIT) for possible research collaborations between sister institutions (JUIT & JIIT). participants, including Faculty Members (JUIT & JUIT), Research Scholars (JUIT & JIIT), M.Tech, B.Tech, and M.Sc. students have participated (Offline and Virtual modes) in this workshop.

The deliberations helped JIIT and JUIT faculty for near future collaborations in research ventures in the field of Environment and Sustainability.











# DBT Sponsored Third One Week National Workshop on Statistical Techniques in Biological and Medical Sciences STBMS-2022

Interactive Lectures & Lab sessions by Experts On Statistical Tools, Techniques and Their Applications

JUNE 17-23, 2022

## **ABOUT THE WORKSHOP**

Biostatistics has become a defined branch of science that uses an intricate combination of Statistics, Probability, Mathematics and Computation to model and solve real life problems in biological and biomedical sciences. As a discipline designed to yield information, biostatistics may also be considered as a highly-developed stream which in turn forms part of the developing and expanding field of bioinformatics. Consequently, biostatistics draws quantitative methods from fields including statistics, operations research, economics, and mathematics in general applied to research questions in fields such as public health (including epidemiology, nutrition, environmental health, and health services research), genomics, proteomics, population genetics, medicine, and ecology. Research in medicine and public health has beneficiary of this new methodology and a source of new problems. It is anticipated that this workshop will help biologists biotechnologists, biomedical scientists and students from all these streams to gain insight into statistical analyses. It will also help engine and public health as the biologists of the problems of their academic and research activities.

## **OUR SPEAKERS**



PROF. (DR.) AMAR NATH GILL Professor Department of Statistics IIIT, Una, Himachal Pradesh



PROF. (DR.) SURESH SHARMA Professor Department of Statistics Panjab University, Chandigarh



PROF. (DR.) NAVIN SINGH Principal Indian Military Academy, Dehradun, Uttarkhand

## **REGISTRATION FORM**

CLICK HERE (https://forms.gle/qNNdKBVKucRHmZuQ8) to register and apply CLICK HERE (STBMS\_2022\_Brochure.pdf) to download Information Brochure

APPLICATION PROCEDURE

Submit your registration after paying the fee. Send email for any query at: stbms2022@juitsolan.in Last date of submission of May. 31. 2022. May, 31, 2022.



Registration fee includes all working lunches/tea during the program and registration kit along with study material. Accommodation on sharing basis in JUIT hostels will be facilitated subject to availability.

## REGISTRATION FEES AND ACCOMODATION

| Participants                    | Fee without accomodation (Upto JUNE 09, 2022) | Fee with accomodation (Upto JUNE 09, 2022) |
|---------------------------------|---|--|
| Student(UG/PG)                  | 2500/-  | 5000/-                                     |
| Research Fellows (PhD/Post doc) | 3000/-  | 5500/-                                     |
| Faculty                         | 5000/-  | 7500/-                                     |
| Industry/Others                 | 6000/-  | 8500/-                                     |

## **TOPICS TO BE COVERED**

- \* Descriptive and inferential Statistics
- \* Correlation and Regression: Predictors Testing, MLR, Multicollinearity, Variance inflation factor (VIF), Logistic regression
- \* Cohort Case-control and Cross-sectional epidemiological studies
- \* Hypothesis Testing- Parametric and Non- Parametric
- \* Factor, Cluster and Principal Component Analysis (PCA)
- \* Survival analysis and Stochastic Modelling
- \* Clinical trial and dose response studies
- \* One-two and three way ANOVA, ANOVA with repeated trials
- \* CRD, RBD, LSD, IBD, BIBD, Factorial Designs
- \* Multiple comparison procedures
- \* Order Restricted Inference
- \* Case Studies on Biological and Biomedical Data
- \* Extensive exercise and learning on Excel, SPSS, and R

## **ORGANIZING COMMITTEE**





CHIEF PATRON

Prof. (Dr.) Rajendra Kumar Sharma

Vice Chancellor

JUIT



PATRON (Retd.) Maj Gen Rakesh Bassi Registrar and Dean of Students JUIT



PATRON
Prof. (Dr.) Ashok Kumar Gupta
Dean (Academic & Research)
JUIT



Program Chair
Prof. (Dr.) Rakesh Kumar Bajaj
Professor and Head
Department of Mathematics
JUIT



Prof. (Dr.) Sudhir Kumar
Professor and Head
Department of Biotechnology and
Bioinformatics
JUIT



Dr. Tiratha Raj Singh
Associate Professor
Department of Biotechnology and
Bioinformatics
JUIT



Coordinator
Dr. Neel Kanth
Assistant Professor (Senior Grade)
Department of Mathematics
JUIT



MODERATOR
Dr. Ragini Raj Singh
Associate Professor
Department of Physics and
Materials Science



MODERATOR AND SPEAKER Dr. Bhupendra Kumar Pathak



MODERATOR AND SPEAKER Dr. Saurabh Srivastava



TECHNICAL SUPPORT Mrs. Somlata Sharma

Lab Technician



JUIT Assistant Assistant Department of JUIT Professor (Senior Professor (Senior Biotechnology & Grade) Grade) Bioinformatics JUIT Department of Department of Mathematics Mathematics JUIT JUIT

VENUE

Jaypee University of Information Technology

Waknaghat, P.O. Waknaghat, Teh Kandaghat, Distt. Solan

(H.P.), India

PIN-173 234

Ph: +91 -1792-239344, +91- 1792 -239252

Fax -01792-245362

## **GET IN TOUCH**

### **Contact Details**

**n** - ........

Dr. Tiratha Raj Singh - Mobile: +91 8091004695, Phone: 01792-239344
Dr. Neel Kanth - Mobile: +91 8894227228, Phone: 01792-239252

Jaypee University of Information Technology
 Waknaghat, P.O. Waknaghat, Teh Kandaghat, Distt. Solan
 (H.P.), India
 PIN-173 234



Fax: -01792-245362

Email: stbms2022@juitsolan.in





Site designed by Raj, Rohit and Siddhant, JUIT



## Science and Engineering Research Board

(a statutory body of the Department of Science & Technology, Government of India)

5 & 5A, LGF, Vasant Square Mall Sector-B, Pocket-5, Vasant Kunj, New Delhi – 110 070

## Brief report of the organized event

(Financial Assistance to Seminar / Symposia)

Date: 25-07-2022

SERB Sanction / File No: SSY/2022/000176

- Name of Academic Institution / University / Society etc. under whose auspices the Seminar / Conference / Workshop / Symposium etc. was organized: Jaypee University of Information Technology, Waknaghat, Solan-173234, HP
- 2. Title of the Seminar / Conference / Workshop / Symposium etc.: Statistical Techniques in Biological and Medical Sciences (STBMS-2022)
- 3. Duration / Period of the organized event: June 17-23, 2022
- 4. Grant Sanctioned: Rs. 50,000/-
- 5. Summary of the event (Max. 1000 Words):

#### **STBMS 2022**

## Day 1 Inauguration Report (17/06/2022)

Prof. Dr. Rajendra Kumar Sharma (Vice-Chancellor, JUIT), Maj Gen Rakesh Bassi (Retd.) (Registrar and Dean of Students), Prof. Ashok Kumar Gupta, Dean (Academics & Research) and Prof. Suresh Sharma (Guest of Honor) were the dignitaries in the workshop. Participants from various parts of the country joined the workshop which includes H.P, Punjab, U.P., Delhi and NCR, Jammu and Kashmir and Gujarat. Dr. Tiratha Raj Singh (Coordinator: STBM) mentioned the journey of the STBMS and CEHTI. Announcement of the grants received: from the Department of Biotechnology (DBT) and the Department of Science and Engineering (DST) to organize this workshop and mention of successful organization of STMBS 2016 and STBMS 2018 was there. Legacy of STBMS is now very well spread across the country.

Prof. Sudhir Kumar (HoD and Program Chair) introduced the Department of Biotechnology and Bioinformatics. Prof. Rakesh Kumar Bajaj (HoD and Program Chair) speak about the Department of Mathematics. Prof. Ashok Kr. Gupta discussed the importance of statistics. Maj Gen Rakesh Bassi (Retd.) speak about the JUIT academic and administrative process. Prof. Suresh Sharma (Guest of Honor) speaks about the statistics. He mentioned that statistics is the backbone of any field. It is widely used in various sectors and encouraged participants for interactive sessions.

Prof. Dr. Rajendra Kumar Sharma (VC) had spoken about the workshop and explained the importance of statistics and its interaction with emerging techniques such as machine learning, deep learning and artificial intelligence. He cherished this good initiative where two departments are jointly organizing the workshop. Lastly, Dr. Neel Kanth (Coordinator: STBMS) gave the vote of thanks the dignitaries and participants.

## Day 1: Lectures and Lab (Prof. Suresh K. Sharma) (17/06/2022)

**Prof. Suresh K. Sharma, PU, Chandigarh** described the mean, median, mode, standard deviation, categorical variable and continuous variable, Kurtosis, skewness of the data etc. Assignment to all the participants on the IBM® SPSS® software platform for statistical analysis, which includes a vast library of machine learning algorithms, text analysis, open-source extensibility, integration with big data, and seamless deployment into applications were given with a clear and attractive introduction to SPSS. Then all the participants performed various operations which they explored in the theory session.

## Day 2: Lectures and Lab (Prof. Suresh K. Sharma) (18/06/2022)

Logistic Regression, MLR, Odds ratio, risk ratio, and ROC curve were discussed. Correlations and their types such as Karl person, Spearman's Rank, Multiple (R²), Partial Correlation coefficients, Correlation ratio, and Non-linear correlations were discussed in detail along with the different types of scales and measures of association. Prof. Sharma described the Chi-square test etc. Then he described Nominal by nominal, Ordinal by ordinal, Nominal by ordinal, Nominal by interval, etc. Basic regression concept was described for example if the data has multi-collinearly the Ridge regression can be applied. Multiple concepts related to logistic regression were discussed. He has explained Cohort Case-control studies and Cross-sectional epidemiological studies. He demonstrated the True positives, True negatives, false positives, and false negatives. Then in a hands-on session with the data where he has shown different types of error calculations followed by the receiver operating curve construction.

## Day-3: One Day Excursion to Shimla (19.06.2022)

After two days of rigorous learning, a visit to Shimla for all the participants was organized. The participants have visited the Indian Institute of Advanced Studies, Shimla, a historical and heritage building and popular Mall road and Ridge Maidan of Shimla. They were very excited to see this attractive place. After that, they did the tracking and reach the Jakhu Temple which is a historical temple related to the Hindu lord Hanumana with 108 feet high statue of Lord Hanumana.

## Day 4: Lectures and Lab (Prof. Amar Nath Gill) (20.06.2022)

Prof. Gill has covered Correlation and association of attributes, Simple and multiple linear regressions, regression with dummy variables, and others. He also described the Principal Component analysis (PCA) and factor analysis. In the PCA, several examples were given. He calculated the PCA using SPSS and then participants practiced it. He has also shown how one can draw the screen plot using the SPSS. The participants calculated the PCA and did other analyses using SPSS and then the session ended.

## Day 5: Lectures and Lab (Prof. Amar Nath Gill and Dr. Tiratha Raj Singh) (21.06.2022)

Prof. Gill covered idea of multiple comparison procedures and pair-wise comparison with test & control and described proper ways to use these techniques. Prof. Covered Ranking and Selection Problems and Order restricted comparison procedures in great detail the also mentioned that these techniques have several applications in life sciences as well as biomedical data analysis. Since the

processes exhibit randomness and are generally quite complex, the processes need to be simulated to gather information about them.

Dr. Tiratha Raj Singh introduced R programming language to the participants. The participants installed the R and R studio software and practice the R exercise. The lab session has been assisted by Mr. Rohit Shukla. The students solved the exercise and enjoyed the R learning.

## **Day 6: Lectures and Lab (22.06.2022)**

Dr. Tiratha Raj Singh introduced bioinformatics in a very interactive lecture. He has introduced the central dogma of bioinformatics and importance of bioinformatics. Nowadays bioinformatics is a major field to solve biological problems. He has described the systems biology approach, genomics analysis using microarray analysis, structural bioinformatics approach, and others approaches to solve problems in biology.

Dr. Bhupendra Kumar Pathak covered various aspects of statistics such as Probability and Distribution: Random variables, probability mass functions, probability density functions, Binomial, Poisson's, and Normal distributions in good detail. The next session was taken by Dr. Saurabh Shrivastava who covered various tests such as Parametric tests Z, t, F, and Chi-square tests. The hands on lab session by Dr. Bhupendra Kumar Pathak covered various excel techniques to the students to apply statistics.

## Day 7: Lectures and Lab (23.06.2022)

The session by **Dr. Saurabh Shrivastava** covered Non-parametric tests, Sign test, Wilcoxon rank-sum test, Kruskal-Wallis test, Friedman test, and Run test followed by the lab session to ikplement all these techniques.

## Valedictory Function

Prof. Dr. Rajendra Kumar Sharma (Vice-Chancellor) felicitated organizing team which includes Dr. Tiratha Raj Singh, Dr. Neelkantha, Dr. Ragini Raj Singh, etc. Then Hon. VC sir addressed the participants and encouraged them to invent new ideas and suggested to work on them. Certificates were distributed to the external and internal participants by the VC and Dean of JUIT. The appreciation certificates were distributed by the registrar, JUIT to the organizing team.

(Convener Signature)

## **Participation Information:**

| S. No | Participation in the event                    | Nos.                                     |
|-------|---|--|
| I.    | Key-note speakers                             | 5  |
| II.   | Senior Scientist                              | 8  |
| III.  | Young Scientist                               | 10 OF INFORMA                            |
| IV.   | Postgraduate Students                         | 12                                       |
| V.    | Undergraduate Students                        | 2 ( IQAC )                               |
| VI.   | Industry persons                              | - \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ |
| VII.  | Other category (Please specify each category) | 5 (Doctors)                              |
| i     |   |  |

<u>Photographs Section</u>: Please paste high resolution photographs in given spaces below or may be submitted directly on online / email in JPEG format.

## 1. Inaugural Session



## 2. General Photograph





## 3. General Photograph



## 4. General Photograph





(Convener Signature)