



# 5<sup>th</sup> International Conference

On

"Emerging Technologies in Computer Engineering: Cognitive Computing and Intelligent IoT"

(ICETCE-2022)

04<sup>th</sup>-05<sup>th</sup> February, 2022

RTU Recognized Centre of Excellence (CoE)
"INTERNET OF THINGS"

**PUBLICATION PARTNER: Springer CCIS Series (Scopus Indexed)** 

# **Contributors:**

IBM, Infosys Campus Connect, Natural Group





# CONFERENCE REPORT

# Organized By:

**IOT-RC** (Centre of Excellence)

Department of Computer Science & Engineering & Department of Department of Department of Information Technology (NBA Accredited)

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Website: www.icetce.skit.ac.in/2022

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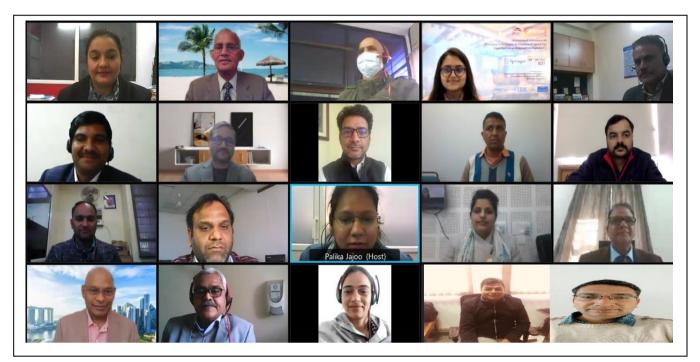
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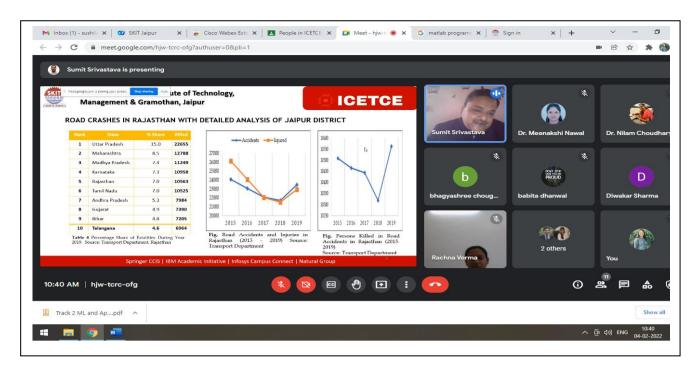
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## **GLIMPSES OF ICETCE-2022**

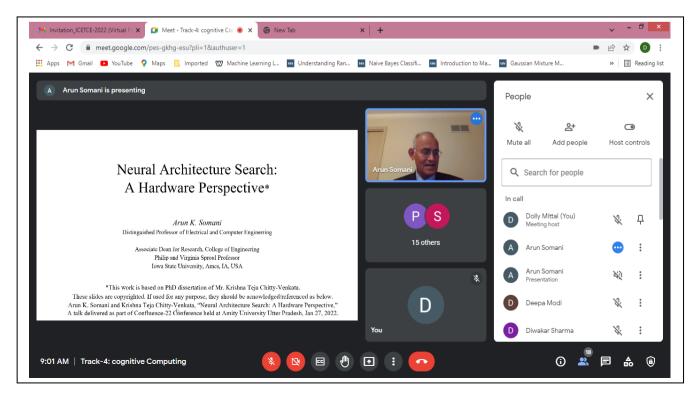


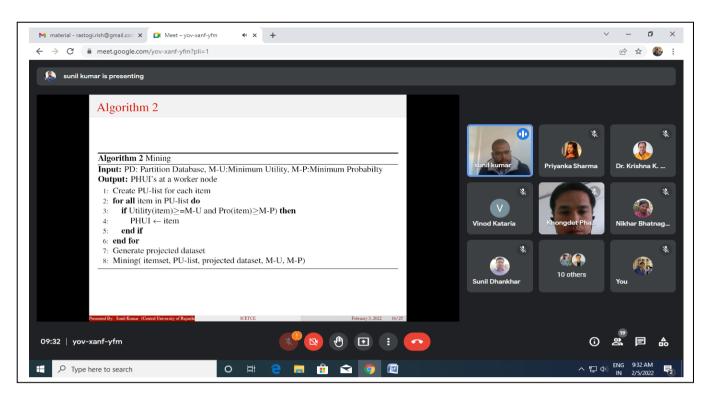


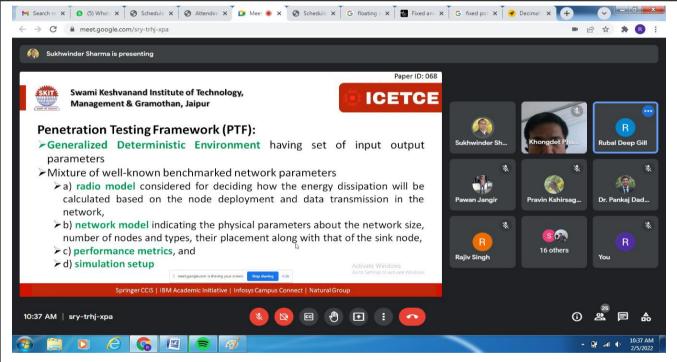












#### **OVERVIEW OF ICETCE-2022**

#### 1. Introduction:

First National Conference started in 2011. This conference aims to provide a stage for expert technical exchanges and exhibition regarding the advanced technologies, equipments, techniques, and innovations applied in the field of Computer Engineering.

It has attracted government officials, multinational experts, managers, researchers and technocrats in a relevant field to discuss together their ideas and experiences.

First International Conference started in 2018. The Organizing Committee of 5<sup>th</sup> International Conference ICETCE-2022, with its utmost sincerity, intends to invite all the related experts and scholars worldwide to attend the Conference and to realize the most extensive exchanges and discussion in this field

## **Vision**

"To contribute to the Research Community through excellence in scientific and technical research; to serve as a valuable resource, platform for industry and society; and remain a source of pride for researchers."

# Mission

"To advance the state of the art in Computer Engineering and to bring those advances in benefit of Society's businesses."

#### 5<sup>th</sup> INTERNATIONAL CONFERENCE

2. Two Days International Conference on "Emerging Technologies in Computer Engineering: Cognitive Computing and Intelligent IoT" (ICETCE-2022).  $(04^{th}-05^{th}$  Feb. 2022).

#### **INAUGURAL CEREMONY**

**CONFERENCE CHAIR - Prof. (Dr.) Arun K. Somani,** Associate Dean for Research, College of Engineering, Iowa State University, Ames, USA.

**GENERAL CHAIR - Prof. Seeram Ramakrishna,** Vice President Research Strategy, Professor, Faculty of Engineering National University of Singapore (NUS), Singapore.

**CHIEF GUEST** - **Prof.** (**Dr.**) **R. A. Gupta**, Hon'ble Vice-Chancellor, Rajasthan Technical University, Kota

**GUEST OF HONOUR – Dr. Mani Madhukar**, Program Manager, Global University Programs, IBM Research

#### **INAUGRATION**

The inaugural ceremony on the first day of the 5<sup>th</sup> International Conference on "Emerging Technologies in Computer Engineering: Cognitive Computing and Intelligent IoT"

At the start, Welcome Note given by Prof. (Dr.) S. L. Surana - Director (Academics), SKIT, Jaipur then the Journey of ICETCE presented by Prof. (Dr.) Arun K. Somani, Conference Chair, followed by Conference Introductory Speech by Prof. (Dr.) Anil Chaudhary, Organizing Chair, ICETCE-2022. Motivational Talks were given by Chief Guest Prof. (Dr.) R. A. Gupta, Hon'ble Vice-Chancellor, Rajasthan Technical University, Kota, Guest of Honor Dr. Mani Madhukar, and Prof. Seeram Ramakrishna, General Chair, ICETCE-2022. At the end of the inaugural, a Vote of Thanks was given by Prof. (Dr.) C. M. Choudhary, Organizing Chair, ICETCE-2022. With a focus on the health of the research environment and of the research literature, the theme of the Conference is Cognitive Computing and Intelligent IoT.

#### PLENARY TALKS

Plenary Talk-I on the topic 'How to Optimize ROI' was given by Conference Chair- Prof. (Dr.) Arun K. Somani, Associate Dean for Research, College of Engineering, Iowa State University, Ames, USA.

Plenary Talk-II on the topic 'Lessons via COVID19 Lens' was given by General Chair- Prof. Seeram Ramakrishna, Vice President Research Strategy, Professor, Faculty of Engineering National University of Singapore (NUS), Singapore.

#### Track-1

#### **Track-1: Internet of Things (IoT)**

#### **Keynote Session**

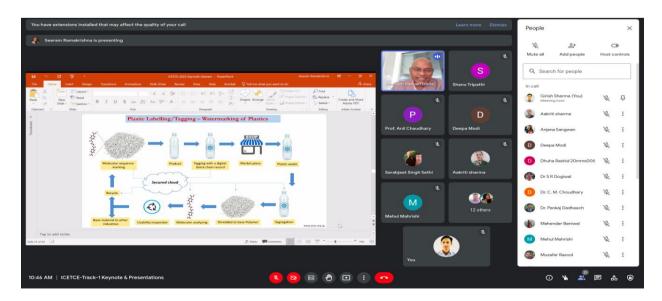
**Track-1: Internet of Things (IoT)** 

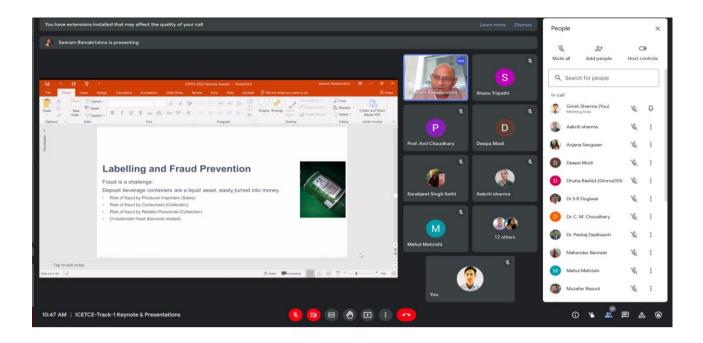
**Keynote** (10:30 am - 11:00 am): **Prof. Seeram Ramakrishna**, Vice President Research Strategy, Professor, and Faculty of Engineering National University of Singapore (NUS).

Topic of Talk: BioTech Befriending Circular Economy.



- Prof. Seeram has talked about the multidisplinary domains such as ML, IoT, Fraud Detection and security.
- He has discussed that how a computer program can detect people who are at higher risk of developing depression.
- He has also talked about the some new concepts like ESG, Zero Carbon society and Greenwashing.
- He has emphasized about the plastic waste management & wearable device in healthcare.

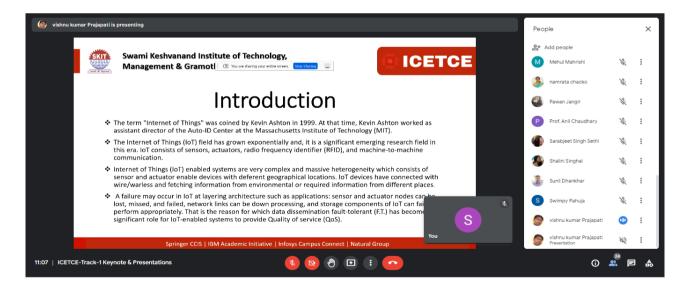




#### **Technical Session Chaired by:**

- 1. Dr. ManjuKaushik, Associate Professor, Amity Institute of Information Technology (AIIT)
- 2. Dr. Abhishek Verma, Assistant Professor, IIIT Jabalpur, Madhya Pradesh, India.

#### SCREENSHOTS OF THE PRESENTATIONS



• 10 Papers were presented in this Track of Technical Session.

#### Track-2

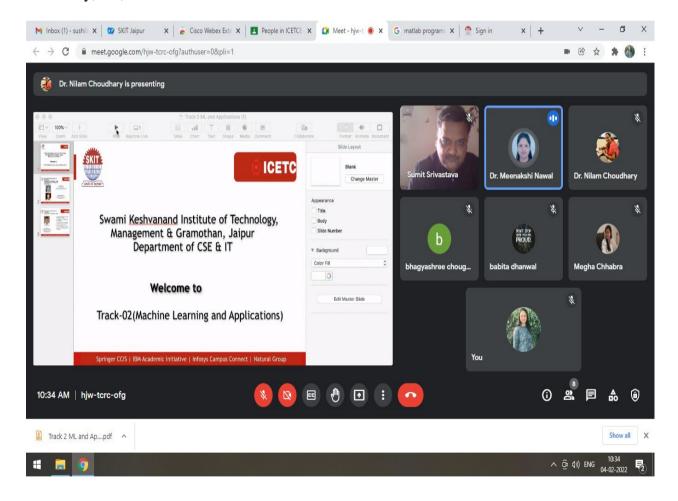
#### **Machine Learning and Applications**

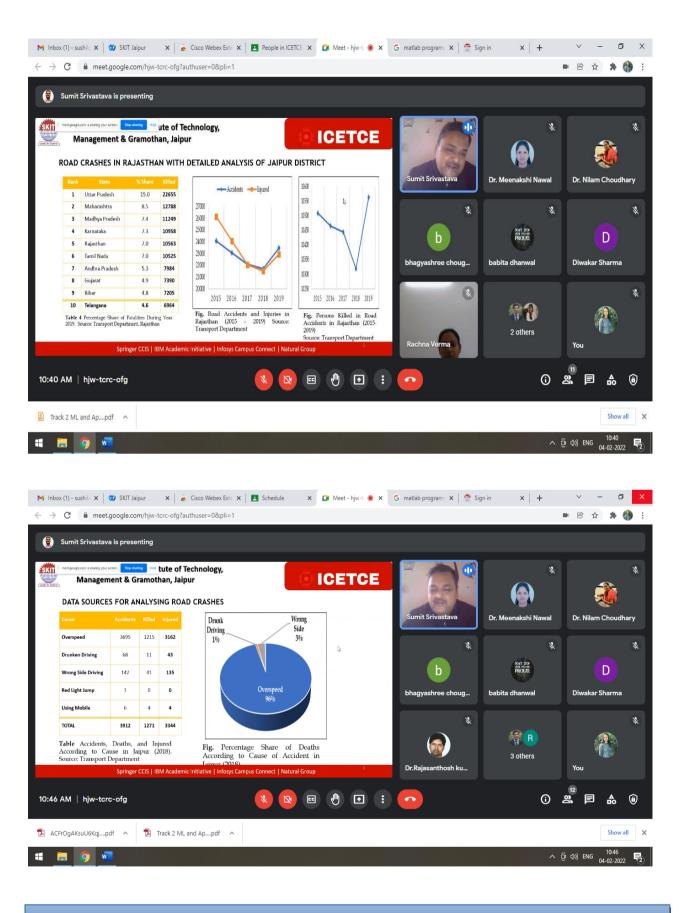
**Keynote by- Dr. Sumit Srivastava**, Professor, Manipal University, Jaipur & Senior Member, IEEE Delhi Section (10:30-11:00).

**Topic:** Machine Learning Model for the Road Accidents.

#### **Technical Session Chaired by:**

- **1. Dr. Sudha Morwal,** Associate Professor, Department of Computer Science, Banasthali Vidhyapith, Rajasthan, India.
- **2. Dr. Megha Chhabra Grover,** Assistant professor, Department of Computer Science, Sharda University, UP, India





• 13 Papers were presented in this Track of Technical Session.

#### Track 3

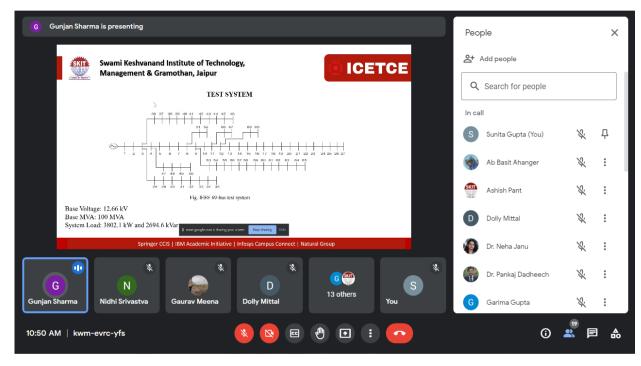
#### **Soft Computing**

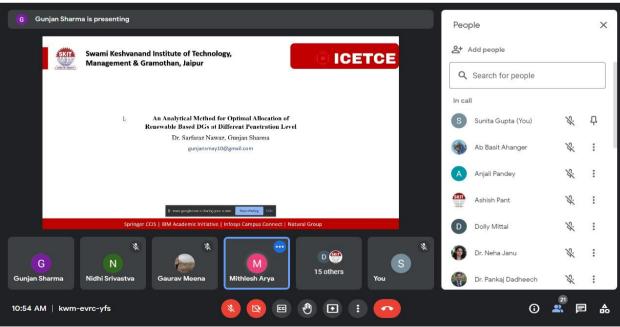
#### **Technical Session (10:30-1:30)**

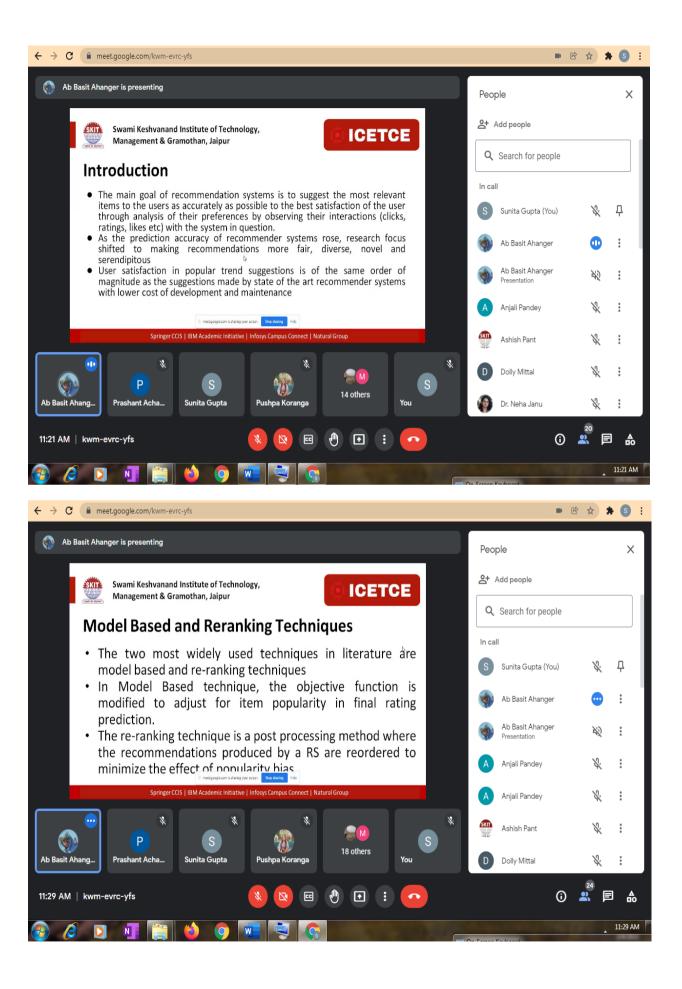
Total 12 papers were presented in this session.

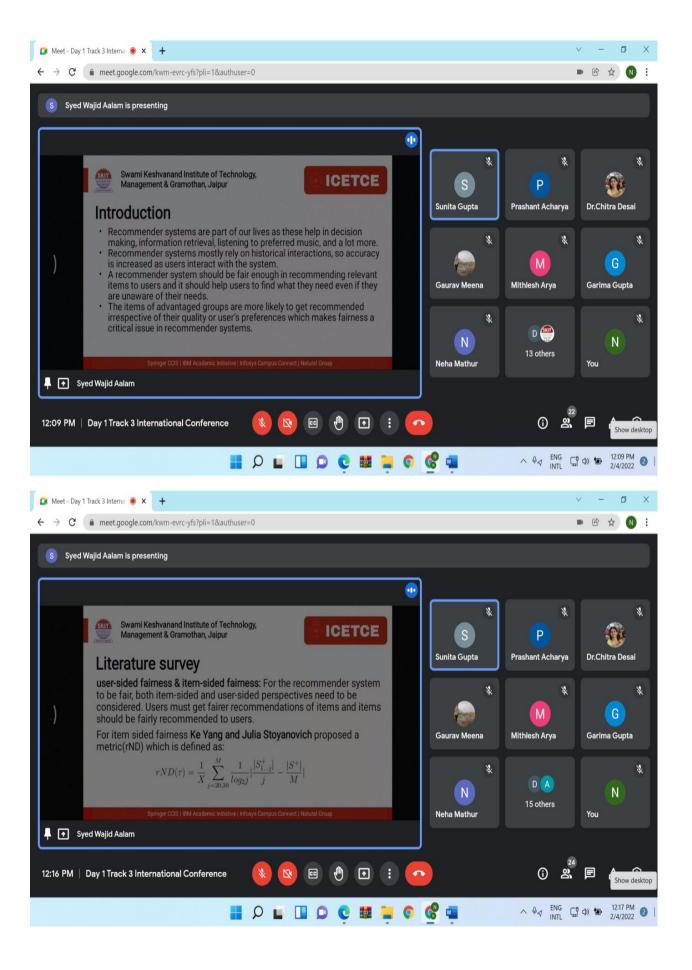
#### **Technical Session Chaired by:**

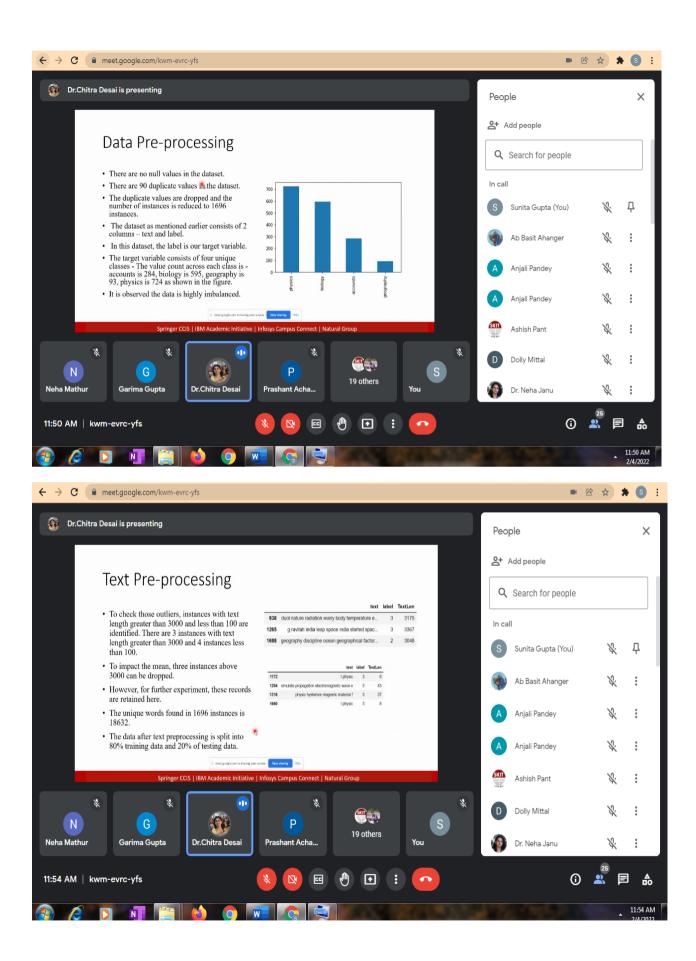
- 1. Dr. Mithlesh Arya, Poornima College of Engineering, Jaipur, Rajasthan, India.
- 2. Mr. Gaurav Meena, Assistant Professor, Central University of Rajasthan, India.

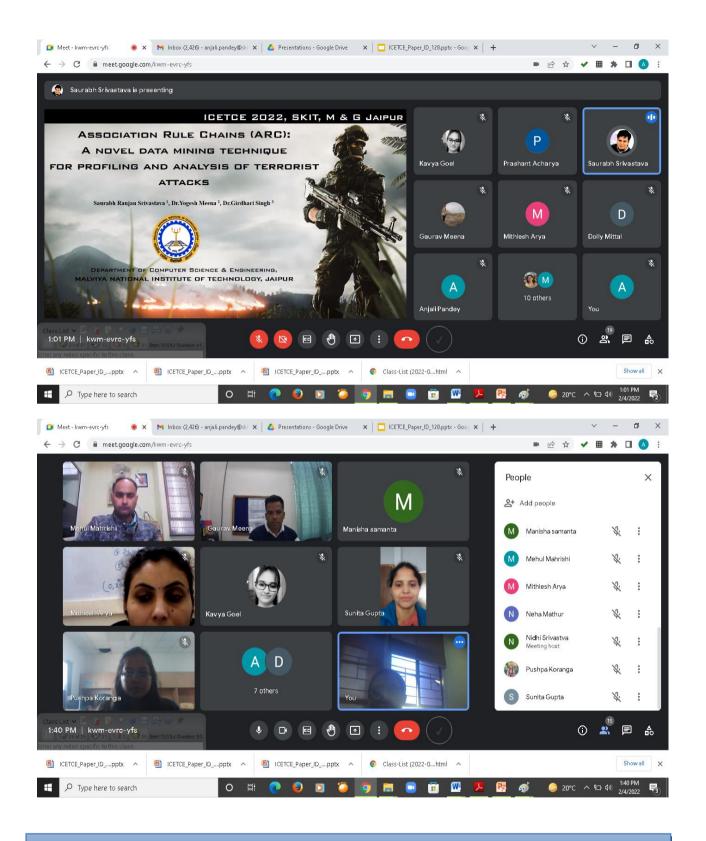












• 12 Papers were presented in this Track of Technical Session.

#### Track 4

#### **Cognitive Computing**

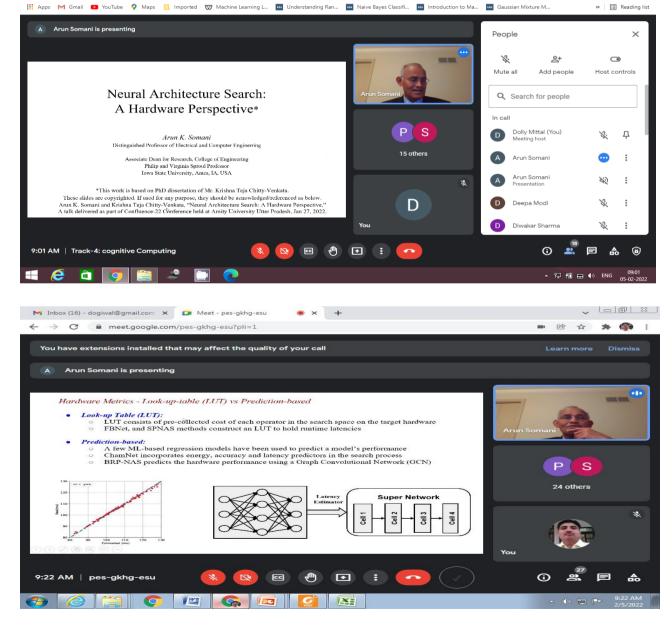
Keynote (9:00 am - 09:30 am) by Prof. (Dr.) Arun K. Somani, Associate Dean for Research, College of Engineering, Iowa State University, Ames, USA.

- 1. He started the session with the basics of Hardware Perspective of Neural Architecture Search.
- 2. He explained the neural network processing hardware.

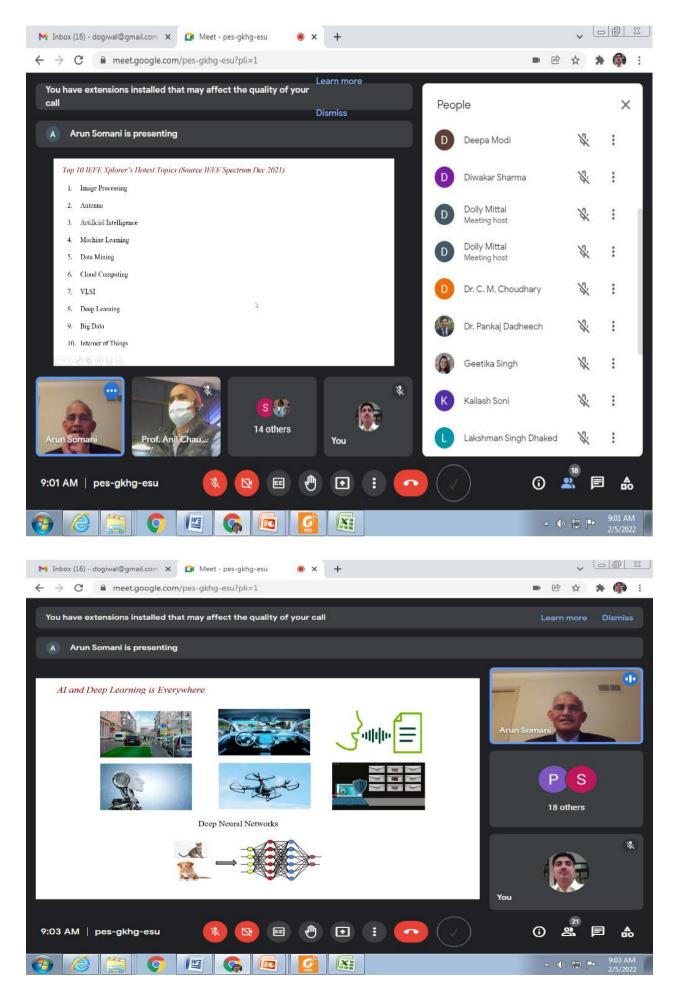
Met - Track-4: cognitive Co: ● X

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- 3. He also talked about Image and weight reuse without layer fusion.
- 4. He also discussed various case studies on this like ASIC: Accelerator Aware NAS. .
- 5. At the end a very healthy question answer session also took place. Different questions were asked by the participants related to various application of Deep learning in Image Processing.

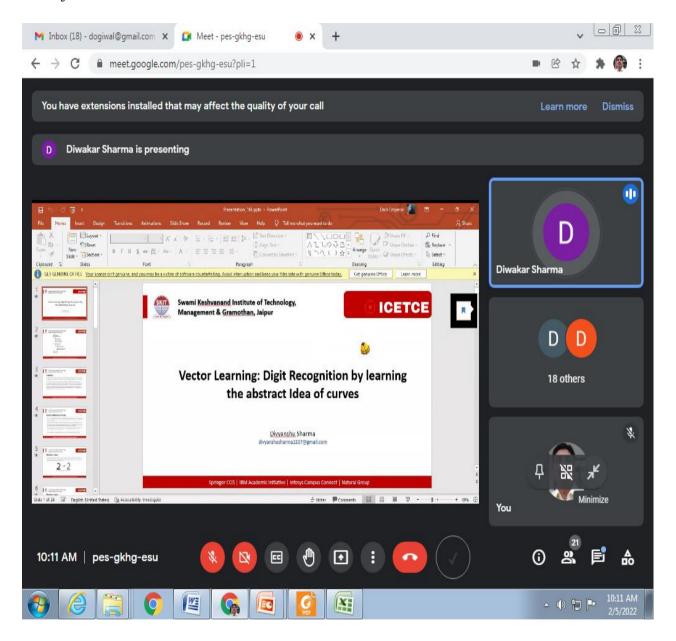


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#### **Technical Session Chaired by:**

- **1. Dr. Linesh Raja**, Assistant Professor, Department of Computer Applications, Manipal University Jaipur, Rajasthan, India.
- **2. Dr. Kamal Kant Hiran,** Associate Professor, Sir Padmapat Singhania University, Udaipur, Rajasthan.



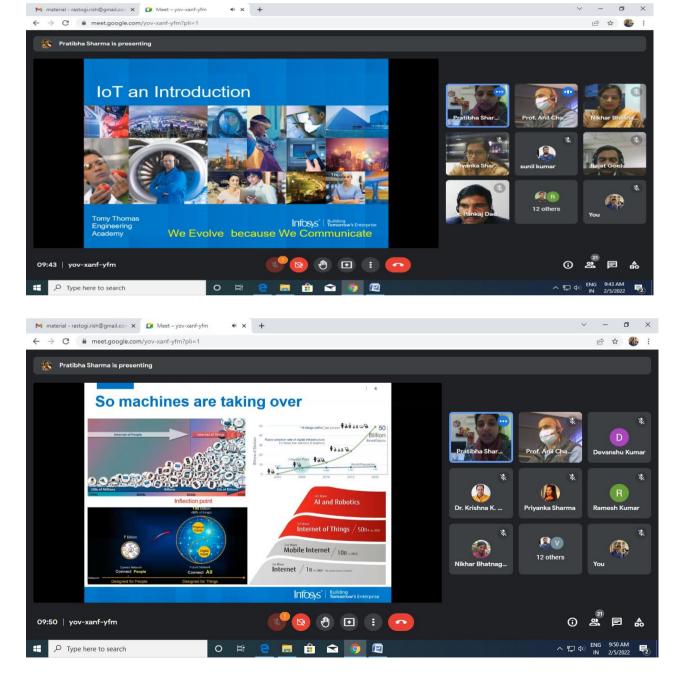
• 8 Papers were presented in this Track of Technical Session.

#### Track 5

#### **Data Science & Big Data Analytics**

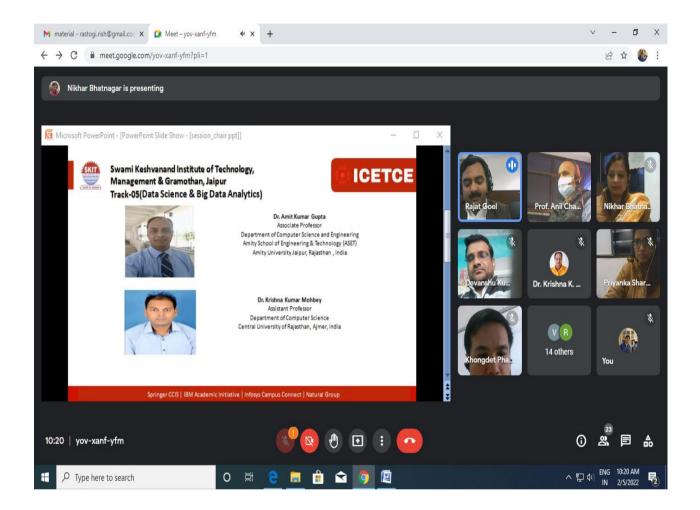
Keynote (9:30 am - 10:00 am) by Ms. Pratibha Sharma, Technical Test Lead, Infosys Ltd.

- 1. Session was taken by Ms. Pratibha Sharma, Technical Test Lead, Infosys Ltd.
- 2. She started the session with a brief introduction on IoT, Internet of Things.
- 3. She talked about different waves of technologies like IoT, AI and Robotics.
- 4. She explained the 3 A's of IoT namely Aware, Autonomous & Actionable.
- 5. She also explained the elements of IoT namely Identification, sensing, communication, computation and data visualization.
- 6. At the end a very healthy question answer session also took place where different questions were asked by the participants related to the various applications of IoT.



#### **Technical Session Chaired by:**

- 1. **Dr. Amit Kumar Gupta,** Associate Professor, Department of Computer Science and Engineering, Amity School of Engineering & Technology (ASET), Amity University Jaipur, Rajasthan, India.
- **2. Dr. Krishna Kant Mohbey**, Assistant Professor, Department of Computer Science, Central University of Rajasthan, Ajmer, India.



• 6 Papers were presented in this Track of Technical Session.

#### Track 6

#### **Blockchain and Cyber Security**

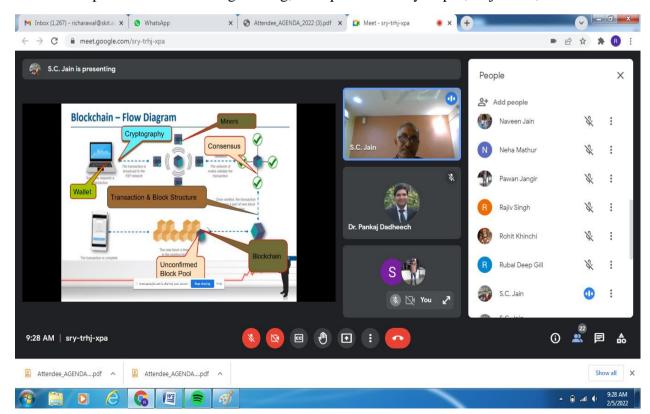
#### Track – 6 (Presentation link: https://meet.google.com/sry-trhj-xpa)

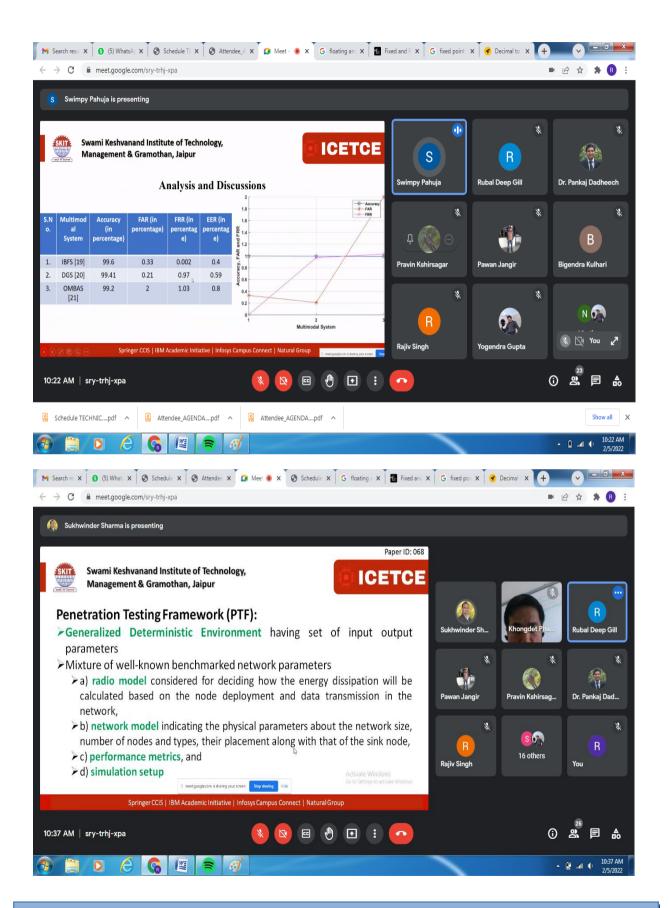
Keynote (9:00 am - 09:30 am) by Prof. (Dr.) S. C. Jain, Professor, Computer Science & Engineering, Rajasthan Technical University, Kota, Rajasthan.

- 1. Session was taken by **Prof.** (**Dr**). **S. C. Jain**, Professor ,Department of Computer Science & Engineering, Rajasthan Technical University, Kota, Rajasthan.
- 2. He started the session with the basics of Bank transactions and cyber crimes and security measures.
- 3. He explains the topics and various techniques of Blockchain Generations from 1 to 4.
- 4. He also talked about Blockchain 4 emerges in business application and also discussed Blockchain as Service (Baas).
- 5. He also explains the various challenges faced by these techniques and also discuss latest emerging areas.
- 6. At the end a very healthy question answer session also took place. Different questions were asked by the participants related to various application of Blockchain and its Applications.

#### **Technical Session is Chaired by:**

- 1. **Dr. Rajiv Singh**, Associate Professor, Department of Computer Science, Faculty of Mathematics and Computing, Banasthali Vidyapith.
- 2. **Dr. Pravin R. Kshirsagar**, Professor, Faculty of Engineering, G.H Raisoni College of Engineering, Nagpur, India.
- 3. **Dr. Vijendra Singh**, Associate Professor, Faculty of Engineering, Department of Computer Science and Engineering, Manipal University Jaipur, Rajasthan, India.





• 9 Papers were presented in this Track of Technical Session.

#### WRAP UP AND VALEDICTORY SESSION

In the Valedictory Session key persons, practitioners and chair members shared their experiences of the conference. Ms. Anjana Sangwan, Secretary (ICETCE-2022) presented the summary report of the conference. The certificates was awarded for the best paper and to the coordinators and volunteers by Prof. (Dr.) San Murugesan, Adjunct Professor, Western Sydney University; Director, BRITE Professional Services; Golden Core Member, IEEE, Dr. Pankaj Dadheech (Technical Program Chair), Dr. Mehul Mahrishi (Technical Program Chair), Ms. Sanju Choudhary (Secretary) and Ms. Priyanka (Secretary) ICETCE-2022. Vote of thanks was given by Prof. (Dr.) Anil Chaudhary (Organizing Chair). The conference was a success and served as a source to gain and give knowledge, it also fostered the professional and personal growth of students as they got the opportunity interact with such learn dignitaries.

#### **CONFERENCE OUTCOMES**

The next generation of research and development must be faster, enhanced, intelligent, integrated and secured. The conference helped the researchers and technocrats to deepen the understanding of Machine Learning and Applications, Internet of Things (IoT) Applications and Technologies, Big Data Analytics, Security, Privacy and Trust, Big Data Organization, Retrieval and Indexing Using Deep Learning, Machine Learning to Real Time Processing of Microservice Events and many more research areas and upcoming technologies.

Students were also benefited and updated their skills on the latest technologies to understand how next generation computing can contribute to deliver faster and integrated commercial viabilities.

#### **NEWS & MEDIA**

इस दौरान मौजूद मरीजों को फलों की टोकरी भी भेंट की गई।

एसकेआइटी में 5वीं अंतरराष्ट्रीय कॉन्फ्रेंस आयोजित

जयपुर | स्वामी केशवानंद इंस्टीट्यूट ऑफ टेक्नोलॉजी (एसकेआइटी) में ऑनलाइन प्लेटफार्म पर दो दिवसीय 5वीं अंतरराष्ट्रीय कॉन्फ्रेंस 'इमर्जिंग टेक्नोलॉजी इन कंप्यूटर इंजीनियरिंगः कॉग्निटिव कम्प्यूटिंग एंड इंटेलिजेंट' आईबीएम, इंफोसिस (कैंपस कनैक्ट) और नेचुरल ग्रुप के संयुक्त तत्वावधान में शुरू की गई। कार्यक्रम के मुख्य अतिथि राजस्थान टेकनिकल यूनिवर्सिटी के वाइस चांसलर डॉ. आरए गुप्ता रहे। कॉलेज ऑफ इंजीनियरिंग आयोवा स्टेट यूनिवर्सिटी, अमेरिका के एसोसिएट डीन डॉ. अरुण सोमानी ने कहा कि इस बार इसमें 8 देशों से



229 रिसर्च पेपर प्राप्त हुए एवं 58 को सेलेक्ट किया गया जो स्प्रिंगर सी सी आई एस सीरीज में प्रकाशित किए जाएंगे। कार्यक्रम की गेस्ट ऑफ ऑनर डॉ. मनी मधुकर (प्रोग्राम मैनेजर, ग्लोबल यूनिवर्सिटी प्रोग्राम, आई बी एम) ने कांफ्रेंस की थीम को सटीक बताया। इस मौके पर प्रो. सीएम चौधरी, प्रो. एस.एल. सुराणा, जयपाल मील, डॉ. रमेश पचार, डॉ. अनिल चौधरी, डॉ. मुकेश गुप्ता आदि मौजूद रहे।

# एसकेआईटी में दो दिवसीय अंतरराष्ट्रीय कॉन्फ्रेंस शुरू

(कासं.)। स्वामी जयपुर केशवानंद इंस्टीट्यूट ऑफ टेक्नोलॉजी में ऑनलाइन प्लेटफार्म पर दो दिवसीय 5वीं अंतरराष्ट्रीय कॉन्फ्रेंस 'इमर्जिंग टेक्नोलॉजी इन कंप्यूटर इंजीनियरिंगः कॉग्निटिव कम्प्यूटिंग एंड इंटेलिजेंट IoT (ICETCE 2022)' आईबीएम, इंफोसिस (कैम्पस कनैक्ट) और नेचुरल ग्रुप के संयुक्त तत्वावधान में शुरू की गई। कार्यक्रम के मुख्य अतिथि डॉ आर ए गुप्ता (वाइस चांसलर, राजस्थान टेकनिकल यूनिवर्सिटी) ने एसके आईटी के सेंटर ऑफ एक्सीलेंस की प्रशंसा करते हुए इसे इनोवेशन हब बताया और क्वालिटी रिसर्च को आज की जरूरत बताया। उन्होंने कहा कि इस तरह की कॉन्फ्रेंस को बार बार ऑगेर्नाइज करना चाहिए। प्रो.



एस.एल. सुराणा (डायरेक्टर, एकेडिमक्स), जयपाल मील(डायरेक्टर) एवं डा. रमेश पचार (प्रिंसिपल), आईटी हेड डा. अनिल चौधरी और हेड कंप्यूटर इंजीनियरिंग, डा. मुकेश गुप्ता ने सभी आगुंतको का स्वागत किया। डाक्टर अरुण सोमानी (एसोसिएट डीन, कॉलेज ऑफ इंजीनियरिंग आयोवा स्टेट यूनिवर्सिटी, अमेरिका) ने कांफ्रेंस के महत्व के बारे में बताते

हुए कहा कि इस बार इसमें 8 देशों से 229 रिसर्च पेपर प्राप्त हुए एवं 58 को सेलेक्ट किया गया जो स्प्रिंगर सी सी आई एस सीरीज में प्रकाशित किए जायेंगे। कॉलेज के प्रो सीएम चौधरी ने प्रतिभागियों को कांफ्रेंस प्रोग्राम के बारे में जानकारी दी गेस्ट ऑफ ऑनर डाक्टर मनी मधुकर (प्रोग्राम मैनेजर, ग्लोबल यूनिवर्सिटी प्रोग्राम, आई बी एम) ने कांफ्रेंस की थीम को सटीक बताया।



# महानगर टाइम्स

जयपुर। स्वामी केशवानंद इंस्टीट्यूट ऑफ टेक्नोलॉजी में ऑनलाइन प्लेटफार्म पर दो दिवसीय 5 वीं अंतरराष्ट्रीय कॉन्फ्रेंस ' इमर्जिंग टेक्नोलॉजी इन कंप्यूटर इंजीनियरिंगः कॉग्निटिव कम्प्यूटिंग एंड इंटेलिजेंट' मे की गई कांफ्रेंस समापन शनिवार को हुआ। कांफ्रेंस समापन शनिवार को हुआ। कांफ्रेंस के दौरान 58 पेपर्स प्रेजेंट 6 कैटेगरी में प्रेजेंट किए गए। इस मौके पर प्रो. सिंग्रेवेल मुर्गेसन ने अपने प्लेनरी टॉक मैं कंप्यूटर हिस्ट्री बताते हुए इसके डेवलपमेंट को रीयल लाइफ से जोड़ते हुए बताया कि कैसे अब यह हर सेक्टर में उपयोग हो रहा है। 6 ट्रेक से अलीमुल, हेमा, सौरभ श्रीवास्तव, गीतिका सिंह, सुनील कुमार, सुखविंदर शर्मा के पेपर को बेस्ट डिक्लेयर किया। अंजना सांगवान ने कांफ्रेंस को समराइज किया और आईटी हेड अनिल चौधरी ने वोट ऑफ थैंक्स प्रस्तुत किया।