

### I. K. Gujral Punjab Technical University Jalandhar, Punjab, India

### **International Conference**

on

### Computing, Networks & Renewable Energy (CNRE-2021) August 05<sup>th</sup> – 07<sup>th</sup>, 2021

### **About IKGPTU**

IKGPTU was established in the honor to Late Sh. Inder Kumar Gujral, former Indian Prime Minister by Punjab government in 1997 to promote technical education in the state. University is creating skilled manpower for industry and academia in the region by running a number of UG, PG doctoral programmes in different streams of engineering, management, architecture, and pharmacy. At present University has 121 AICTE and 65 UGC institutes affiliated with it. IKGPTU ranked 96<sup>th</sup> in 2019 NIRF India ranking and 3<sup>rd</sup> in Punjab.

### **About CNRE-2021**

This conference aims to provide platform to researcher, faculty members, and industry persons publish their original research in the conference proceedings. The eminent speakers will share the knowledge to the participants with the state-of-the-art work in their field of research. The objectives of this International Conference on Computing, Networks & Renewable Energy (CNRE-2021) is therefore to provide platform to Academia, Research Organizations and Industry in the form of Technical Sessions, Panel Discussions, Industry Forum, Keynote Speeches, Invited & Submitted papers, Special Sessions on Selected Topic. Since the conference aims to provide platform to present their original work, Participants would gain knowledge about the recent trends in the field aligned to the theme of conference. For more details visit: <a href="https://conference.ptu.ac.in">https://conference.ptu.ac.in</a>

### **Important Dates**

Regular Paper Submission: May 15, 2021
Acceptance Notification: May 31, 2021
Early Registration Deadline: June 15, 2021
Camera Ready Submission: July 30, 2021

### **Submission Guidelines**

Prospective author(s) is/are invited to submit their original research work that has not been previously submitted or presented. Online manuscript submission through Easy Chair Conference Solution:

Easy Chair login: <a href="https://easychair.org/cfp/cnre2021">https://easychair.org/cfp/cnre2021</a>

### **Conference Tracks**

Technical papers describing original, previously unpublished research, not currently under review by another conference or journal, are solicited. CNRE 2021 invites academicians & researchers to submit their original contributions in the following tracks (but not limited to):

1	Soft Computing Techniques	9	Grid-Integration Renewable Energy Systems
2	Artificial Intelligence	10	Power Electronics application in Power System
3	Optical Communication Systems	11	Control & Automation Engineering
4	Application of Internet of Things	12	Power Quality & Harmonics Analysis
5	Energy Storage & Electric vehicle	13	Cloud and Mobile Computing
6	Smart/Micro Grid & DG	14	Electricity Market & Power Systems Economics
7	Deep Machine Learning	15	Hybrid and Renewable Energy Sources
8	Data Networks & Securities	16	Power System, Protection & Relaying

### **Registration Fees**

Delegates	Early Bird (Round-1)	Regular (Round-2)
UG/PG/Ph.D. Scholars	INR 2000	INR 2500
Faculty	INR 3000	INR 4000
Industry	INR 5000	INR 6000
Without Paper	INR 1000	INR 1000
Foreign Delegates	USD 100	USD 150

A discount of 20% is admissible to all authors for  $2^{nd}$  and subsequent papers submission provided that they register with same author name and Email ID.

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I. K. Gujral Punjab Technical University Jalandhar, Main Campus, Kapurthala-144603, Punjab, India

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### **2021 International Conference on**

## COMPUTING, NETWORKS & RENEWABLE ENERGY

**Editors** 

Satvir Singh Naveen Kumar Sharma





I.K. Gujral Punjab Technical University

Jalandhar-Kapurthala Highway, Kapurthala-144603 (Punjab) India

### **2021 International Conference on**

### COMPUTING, NETWORKS & RENEWABLE ENERGY

**CNRE-2021** 

05th-07th August, 2021

**Editors** 

Satvir Singh Naveen Kumar Sharma



I.K. Gujral Punjab Technical University

Jalandhar-Kapurthala Highway, Kapurthala-144603 (Punjab) India

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### **Preface**

Participation in national and international conferences presents opportunities to teachers, students, and industry personnel to learn state-of-the-art technology from each other. I. K. Gujral Punjab Technical University, Kapurthala is also putting efforts to uplift educational standards in the region since its establishment as first technical university of Punjab state established in 1997. University's well-qualified and experienced faculty is serving our nation by producing quality engineers and researchers.

I. K. Gujral Punjab Technical University, Kapurthala is organizing an International Conference on Computing, Networks & Renewable Energy (CNRE-2021) to bring together academicians, researchers, and industry professionals to exchange and share research on various aspects of contemporary computing, renewable energy, and their applications.

During planning phase of organizing this conference we set our target to publish only 50 research papers. Every paper has been reviewed by at least two reviews and in some cases, papers were reviewed by four experts. Based on their feedback and the quality of work presented by various researchers, we decided to publish 60 papers out of 126 received research papers.

This is a small step to promote the research in the university and the state. This conference proceedings involves full paper publications with an ISBN number. Further, organizing committee has collaborated with Scopus Indexed journals to recommend selected papers for publications. In continuity, IKGPTU Kapurthala has scheduled second conference CNRE-2022 during 9–11 June 2022, in collaboration with more Scopus & SCI listed journals.

Naveen Kumar Sharma Organizing Chair Satvir Singh Conference Chair

### **Message from Chief Guest**



### Prof. Lalit Kumar Awasthi

Director, Dr B R Ambedkar NIT Jalandhar Ph.D., M.Tech., B.Tech., LMISTE, LMCSI, FIE

It's a matter of great pleasure to be a part of International Conference on Computing, Networks & Renewable Energy (CNRE-2021) being organized that I. K. Gujral Punjab Technical University, Kapurthala.

Renewable energy sources are expanding quickly but not enough to satisfy a strong global electricity demand, which resulted in a sharp rise in the use of coal power that has risks of increasing carbon dioxide emissions from the electricity to record levels in next few years. The electricity demand is set to grow by close to 5% in 2021 and 4% in 2022 according to a report. The majority of the increase is expected to come from the Asia Pacific region, primarily China and India. Therefore, emphasis has to be on new technics for generation and storage of renewable energy.

Similarly, in Computing and Networks the main emphasis has been on new technologies such as Artificial Intelligence (AI) and Machine Learning, Robotic Process Automation (RPA), Edge Computing, Quantum Computing, Virtual Reality and Augmented Reality, Blockchain, Internet of Things (IoT), 5G and Cyber Security.

It is my believe that such conferences are organized to provide a platform to researchers to present their work, interact, to learn and get motivated from each other when they come in contact with each other.

I, Professor Lalit Kumar Awasthi, Director of Dr B R Ambedkar National Institute of Technology, Jalandhar, Punjab extend my best wishes for the grand success of CNRE-2021 and hope everyone stays safe during COVID-19 pandemic.

Jai Hind! Jai Bharat!

(Lalit Kumar Awasthi)

### **Message from Chairman Board of Governors**



**Dr. S.K. Salwan**Chairman- Board of Governor (BOG)
I.K. Gujral Punjab Technical Universityi

It's a matter of pride that I K Gujral Punjab Technical University, Kapurthala is organizing an International Conference on the theme of "Computing, Networks & Renewable Energy" (CNRE-2021) during August 05-07, 2021. Its goal is to provide a unified platform for academicians, professionals, students, and researchers to publish their expert theoretical, technological, and multi-disciplinary studies of intelligent computing methods for various applications in the field of Electrical, Electronic Engineering, and Energy Systems. In addition, the emphasis is placed on interdisciplinary research to assist modern societies. The renowned speakers will share their research knowledge with participants, motivating and enlightening other researchers' study directions.

I, as Chairman BOG of I K Gujral Punjab Technical University extend my best wishes to the Organizing Team, delegates and participants present in the Conference CNRE-2021.

(S.K. Salwan)

### **Message from Vice-Chancellor**



### **Professor Ajay Kumar Sharma**

Vice-Chancellor, IKGPTU Kapurthala
Ph.D., LMISTE, LMOSA, LACSI, LMSPIE, FIETE
Former Director NIT Delhi, NIT Hamirpur & Mentor Director IIIT Una

It's a matter of proud priviledge that I. K. Gujral Punjab Technical University, Kapurthala is organizing an International Conference on the theme of "Computing, Networks & Renewable Energy" (CNRE-2021) during August 05-07, 2021. This conference will provide platform to researchers, faculty members, and industry persons to present and publish their original research work in the conference proceedings. The eminent speakers will share their state-of-the-art research knowledge with participants that will further motivate and enlighten the research directions of other researchers.

I, Professor Ajay Kumar Sharma, Vice Chancellor of I. K. Gujral Punjab Technical University, Kapurthala, Punjab extend my best wishes to the organizers and participants for the grand success of CNRE-2021.

Ajay Kumar Sharma

### **Message from Director**



### **Professor Vikas Chawla**

Dean Academics, IKGPTU Kapurthala

Director, Main Campus Kapurthala

Ph.D., M.E., B.E., LMISTE, LMEMS, IAENG, LMPAS

I. K. Gujral Punjab Technical University, Kapurthala is organizing an International Conference on the theme of "Computing, Networks & Renewable Energy" (CNRE-2021) during August 05-07, 2021. The researchers, academicians and people from Industry will present their original research work and will share their experience in the said area of research using this platform.

I, Prof. (Dr.) Vikas Chawla, Dean (Academics) and Director (Main Campus) of I K Gujral Punjab Technical University, Kapurthala, Punjab extend my best wishes to the organizers and participants for the grand success of the CNRE-2021.

Vikas Chawla Director-cum-Dean Academics IKGPTU Kapurthala

### **Message from Conference Chair**



**Dr Satvir Singh**Ph.D., M.Tech., B.Tech.
LMISTE, FIE, FIETE, IAENG

On behalf of the organizing committee of CNRE-2021, I am honored and delighted to welcome you to the 1st International Conference on Computing, Networks and Renewable Energy being organized by IKGPTU Kapurthala during August 5-7, 2021. Due to global pandemic COVID-19, we have to conduct this event in online-mode.

Originally, we had decided to publish only 50 full research papers in the conference proceeding with ISBN. After rigorous reviews by our Technical Committee recommended to publish 60 full papers in the conference proceeding out of total 126 papers received. I hereby apologize for not considering most of paper for publishing in conference proceeding; although many of them were good, but we must restrict ourselves somewhere. Every paper had been reviewed by at least two experts of the domain and in some case, there were four reviews also to ensure quality of the papers. All 60 paper have been divided into five sessions that will be chaired by eminent researchers. Most of the papers in the conference are submitted by PG and Doctoral research scholars, therefore, to encourage and guide them each technical session involves a brief talk and interactive session by a relevant domain expert.

As a conference chair of CNRE-2021, I know that the success of the conference depends ultimately on many people who have worked with us in organizing the event. We thank the Technical Committee for support and timely review of papers. Most importantly we are thankful to the GOD who energized all of us to work together in a team.

Satvir Singh Conference Chair, CNRE-2021

### Message from Organizing Chair



**Dr Naveen Kumar Sharma**Ph.D., M.Tech., B.Tech.
SMIEEE, IAENG, IACSIT

It is my immense pleasure to welcome all to the International Conference on Computing, Networks & Renewable Energy (CNRE-2021) during August 05-07, 2021. Due to global pandemic COVID-19, we have to replan organization of CNRE-2021 in online virtual mode for the safety of all delegates.

Eminent speakers from India and abroad will talk about ongoing research in computational innovations and sustainable energy sources from different perspectives during various sessions of the conference. I am thankful to the university, my worthy parents, my respective teachers, my seniors, and my friends whose unconditional support helped us in making this event a grand success.

My association with CNRE-2021 as Organizing Chair is a matter of great pleasure for me and I extend my best wishes to speakers and participants for their contributions.

Naucen

Naveen Kumar Sharma Organizing Chair, CNRE-2021

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### **About IKGPTU**

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4	Application of Internet of Things	12	Power Quality & Harmonics Analysis
5	Energy Storage & Electric vehicle	13	Cloud and Mobile Computing
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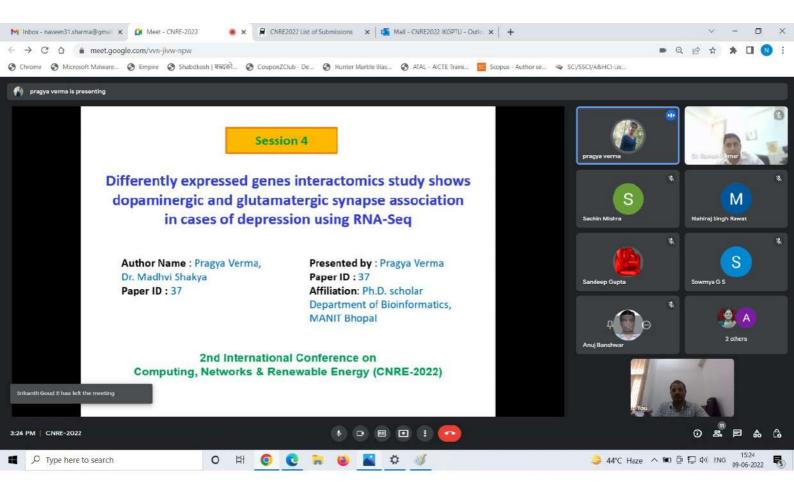
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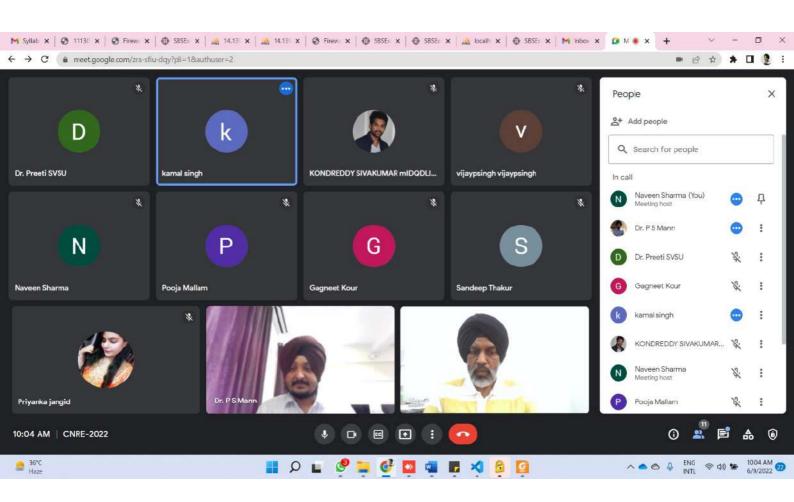
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### ਪੀ.ਟੀ.ਯੂ. 'ਚ ਕਰਵਾਈ ਗਈ ਦੂਜੀ ਇਟਰਨੈਸ਼ਨਲ ਕਾਨਫ਼ਰੰਸ, 160 ਤੋਂ ਵੱਧ ਵਿਦਵਾਨਾਂ ਦੇ ਪੇਪਰ ਆਨਲਾਈ ਪ੍ਰਾਪਤ ਹੋਏ

ਕਪੂਰਥਲਾ, 18 ਜੂਨ (ਵਿਸ਼ੇਸ਼ ਪਤੀਨਿਧ) - ਤਕਨੀਕ ਦੇ ਯੋਗ 'ਚ ਵਿਦਿਆਰਥੀਆਂ ਤੇ ਅਧਿਆਪਕਾਂ ਦਾ ਹਰ ਦਿਨ ਨਵੀਂ ਜਾਣਕਾਰੀ ਨਾਲ ਭਰਪਰ ਹੋਣਾ ਲਾਜ਼ਮੀ ਹੈ। ਲੋੜ ਹੁਣ ਨਾ ਕੇਵਲ ਆਪਣੇ ਨਾਲ ਸਬੰਧਿਤ ਖ਼ੋਜ ਕਾਰਜਾਂ ਤੋਂ ਜਾਣੂ ਹੋਣ ਦੀ ਹੈ ਸਗੋਂ ਵਰਤਮਾਨ ਵਿਚ ਅਤਿ ਜ਼ਰੂਰੀ ਹੋ ਗਿਆ ਹੈ ਕਿ ਅੰਤਰਰਾਸ਼ਟਰੀ ਪੱਧਰ 'ਤੇ ਵਿਸ਼ੇ ਨਾਲ ਸੰਬੰਧਿਤ ਨਵਾਂ ਕੀ ਹੋ ਰਿਹਾ ਹੈ। ਇਨ੍ਹਾਂ ਵਿਚਾਰਾਂ ਦਾ ਪ੍ਰਗਟਾਵਾ ਰਾਹੁਲ ਭੰਡਾਰੀ ਆਈ.ਏ.ਐਸ. ਉਪ ਕਲਪਤੀ ਆਈ.ਕੇ. ਪੰਜਾਬ ਤਕਨੀਕੀ ਯੂਨੀਵਰਸਿਟੀ ਨੇ ਯੂਨੀਵਰਸਿਟੀ ਵਲੋਂ ਕਰਵਾਈ ਦੂਜੀ ਇੰਟਰਨੈਸ਼ਨਲ ਕਾਨਫ਼ਰੰਸ (ਸੀ. ਐਨ. ਆਰ. ਈ.- 2022) ਦੀ ਸਮਾਪਤੀ 'ਤੇ ਕਾਨਫ਼ਰੰਸ ਵਿਚ ਭਾਗ ਲੈਣ ਵਾਲੇ ਵਿਦਵਾਨਾਂ ਨੂੰ ਸੰਬੋਧਨ ਕਰਦਿਆਂ ਕੀਤਾ। ਉਨ੍ਹਾਂ ਕਿਹਾ ਕਿ ਹੁਣ ਉਹ ਸਮਾਂ ਦਰ ਨਹੀਂ ਜਦੋਂ ਅਜਿਹੀਆਂ ਇੰਟਰਨੈਸ਼ਨਲ ਕਾਨਫ਼ਰੰਸਾਂ ਰਾਹੀਂ ਪੰਜਾਬ ਵਿਚ ਰਹਿ ਕੇ ਅੰਤਰਰਾਸ਼ਟਰੀ ਪੜ੍ਹਾਈ ਵਿਚ ਖੋਜਾਂ ਕਰਨ ਦੇ ਮੌਕੇ ਮਿਲਣਗੇ। ਆਨਲਾਈਨ ਮੌਡ ਹੋਈ ਕਾਨਫ਼ਰੰਸ ਜਰੀਏ 'ਕੈਪਿਊਟਿੰਗ ਨੈੱਟਵਰਕ ਤੇ ਨਵੀਨੀਕਰਨ ਉਰਜਾਂ ਵਿਸ਼ੇ 'ਤੇ ਆਈ. ਆਈ. ਟੀ., ਆਈ. ਟੀ., ਯਨੀਵਰਸਿਟੀਆਂ ਤੇ ਕਾਲਜਾਂ ਦੇ ਫੈਕਲਟੀ ਮੈਂਬਰਾਂ ਤੇ ਹੋਰ ਵਿੱਦਿਅਕ ਅਦਾਰਿਆਂ ਦੇ ਵਿਦਵਾਨਾਂ ਦੇ 160 ਤੋਂ ਵੱਧ ਪੇਪਰ ਆਨਲਾਈਨ ਪਾਪਤ ਹੋਏ ਜਿਨ੍ਹਾਂ ਵਿਚੋਂ

ਅਮਰੀਕਨ ਇਸਟੀਚਿਊਟਸ ਆਫ਼ ਫਿਜ਼ਿਕਸ ਨਾਲ ਸਕੰਪ ਇੰਡੇਕਸੇਡ ਕਾਨਫ਼ਰੰਸ ਪ੍ਰੋਸੀਡਿੰਗ ਵਿਚ ਪ੍ਰਕਾਸ਼ਨ ਲਈ ਕੇਵਲ 33 ਉੱਚ ਗੁਣਵੱਤਾ ਵਾਲੇ ਸ਼ੋਜ ਪੱਤਰ ਸਵੀਕਾਰ ਕੀਤੇ ਗਏ। ਇਸ ਮੌਕੇ ਡਾ: ਸਤਬੀਰ ਸਿੰਘ ਤੇ ਡਾ: ਨਵੀਨ ਕੁਮਾਰ ਸ਼ਰਮਾ ਨੇ ਕਿਹਾ ਕਿ ਕਾਨਫ਼ਰੰਸ ਵਿਚ ਪ੍ਰਾਪਤ ਹੋਏ ਸ਼ੋਜ ਪੱਤਰਾਂ ਦੀ ਵੱਖ-ਵੱਖ ਤਿੰਨ ਪੜਾਵਾਂ ਵਿਚ ਜਾਂਚ ਤੇ ਸਮੀਖਿਆ ਕੀਤੀ ਗਈ। ਕਾਨਫ਼ਰੰਸ ਨੂੰ ਯੂ. ਪੀ. ਟੀ. ਯੂ. ਲਖਨਊ ਤੋਂ ਭਾਰਤ ਭੂਸ਼ਣ ਸ਼ਰਮਾ, ਅਨੁਜ ਵੰਸ਼ਵਾਰ, ਡਾ: ਸੁਰਜੀਤ ਕੁਮਾਰ ਜੈਨ ਡੀਮੰਡ ਟੂ.ਬੀ. ਯੂਨੀਵਰਸਿਟੀ ਜੀ. ਟੀ. ਯੂ. ਅਹਿਮਦਾਬਾਦ ਤੇ ਜੀ. ਜੇ. ਯੂ. ਹਿਸਾਰ ਤੋਂ ਡਾ: ਪਲਵਿੰਦਰ ਸਿੰਘ ਮਾਨ, ਡਾ: ਵਿਜੇ ਪਾਲ ਸਿੰਘ, ਪੀ.ਟੀ.ਯੂ. ਤੋਂ ਰਜੀਵ ਚੌਹਾਨ ਨੇ ਆਪਣੇ ਵਿਚਾਰਾਂ ਦਾ ਵਿਸਥਾਰਪੂਰਵਕ ਖ਼ੁਲਾਸਾ ਕੀਤਾ। ਯੂਨੀਵਰਸਿਟੀ ਦੇ ਡੀਨ ਅਕਾਦਮਿਕ ਪ੍ਰੋਫੈਸਰ ਵਿਕਾਸ ਚਾਵਲਾ ਨੇ ਦੱਸਿਆ ਕਿ ਖ਼ੇਜਕਰਤਾਵਾਂ ਦੁਆਰਾ 58 ਪੇਪਰ ਆਨਲਾਈਨ ਜਮਾਂ ਕੀਤੇ ਗਏ ਹਨ। ਇਸੇ ਦੌਰਾਨ ਡਾ: ਸਤਬੀਰ ਸਿੰਘ ਨੇ ਦੱਸਿਆ ਕਿ ਯੂਨੀਵਰਸਿਟੀ ਵਿਚ 22 ਤੋਂ 24 ਜੂਨ ਤੱਕ ਸੀ. ਐਨ. ਆਰ. ਈ. 2023 ਵਿਸ਼ੇ 'ਤੇ ਤੀਜੀ ਅੰਤਰਰਾਸ਼ਟਰੀ ਕਾਨਫ਼ਰੰਸ ਕੀਤੀ ਜਾਵੇਗੀ ਜਿਸ ਲਈ ਤਿਆਰੀਆਂ ਕੀਤੀਆਂ ਜਾ ਰਹੀਆਂ ਹਨ।

### ਜੀ.ਡੀ. ਗੋਇਨਕਾ ਇੰਟਰਨੈਸ਼ਨਲ ਸ ਤੱਕ ਅਪਗਰੇਡ ਕੀਤੇ ਜਾਣ 'ਤੇ ਸਕੂਲ

ਕਪੂਰਥਲਾ, 18 ਜੂਨ (ਵਿਸ਼ੇਸ਼ ਪ੍ਰਤੀਨਿਧ) – ਕਪੂਰਥਲਾ ਦੇ ਪ੍ਸਿੱਧ ਜੀ.ਡੀ. ਗੋਇਨਕਾ ਇਟਰਨੈਸ਼ਨਲ ਸਕੂਲ ਨੂੰ ਸੀ.ਬੀ.ਐਸ.ਈ. ਵਲੋਂ 12ਵੀਂ ਜਮਾਤ ਤੱਕ ਅਪਗ੍ਰੇਡ ਕੀਤੇ ਜਾਣ 'ਤੇ ਮਾਪਿਆਂ ਨੇ ਖ਼ੁਸ਼ੀ ਦਾ ਇਜ਼ਹਾਰ ਕੀਤਾ ਹੈ ਤੇ ਸਕੂਲ ਵਿਚ -2 ਜਮਾਤ 'ਚ ਦਾਖ਼ਲੇ ਲਈ ਵਿਦਿਆਰਥੀਆਂ ਵਿਚ ਉਤਸ਼ਾਹ ਪਾਇਆ ਜਾ ਰਿਹਾ ਹੈ। ਸਕੂਲ ਦੀ ਪ੍ਬੰਧਕ ਕਮੇਟੀ ਦੇ ਚੇਅਰਮੈਨ ਸੁਖਦੇਵ ਸਿੰਘ ਨਾਨਕਪੁਰ ਨੇ ਦੱਸਿਆ ਕਿ ਜੀ.ਡੀ. ਗੋਇਨਕਾ ਗਰੁੱਪ ਦਿੱਲੀ ਨਾਲ ਸਬੰਧਿਤ ਇਹ ਸਕੂਲ ਪੂਰੀ ਤਰ੍ਹਾਂ ਏਅਰਕੰਡੀਸ਼ਨ ਹੈ ਤੇ 24 ਘੰਟੇ ਸੀ.ਸੀ.ਟੀ.ਵੀ. ਦੀ ਨਿਗਰਾਨੀ ਹੇਠ, ਆਧੁਨਿਕ ਕੰਪਿਊਟਰ ਲੈਬ, ਲੈਂਗੂਏਜ ਲੈਬ, ਸਪੋਰਟਸ ਤੇ ਡਾਂਸ ਰਾਮ, ਆਡੀਟੋਰੀਅਮ, ਆਧੁਨਿਕ ਰਾਈਫ਼ਲ ਨਾਲ ਲੈਸ ਸ਼ੂਟਿੰਗ ਰੇਂਜ ਤੋਂ ਇਲਾਵਾ ਹਰ ਤਰ੍ਹਾਂ ਦੀ ਖੇਡ ਲਈ ਮੈਦਾਨ ਤੇ ਬਿਹਤ ਬੱਚਿਆਂ ਨੂੰ ਆਈਲ ਇੰਗਲਿਸ਼ ਦੀਆਂ ਵਿਸ਼ੇ ਪ੍ਰਬੰਧਕ ਕਮੇਟੀ ਦੇ ਚੇਅ ਨੂੰ ਸਖ਼ਤ ਅਨੁਸ਼ਾਸਨ ਇਲਾਵਾ ਉਨ੍ਹਾਂ ਨੂੰ ਕੌਮੇ ਸਮਰੱਥ ਬਣਾਉਣ ਦੇ ਬੋਧਿਕ ਵਿਕਾਸ ਤੇ ਮਨ੍ਹ ਉਨ੍ਹਾਂ ਕਿਹਾ ਕਿ ਸਕੂ ਅੰਤਰਰਾਸ਼ਟਰੀ ਪੱਧਰ ਚ ਹੈ ਤਾਂ ਜੋ ਬੱਚੇ ਆਪਣੇ

### तकनीकी युग में छात्रों, शिक्षकों को रोजाना नई 🖫 जानकारी से भरपूर रहना होगा : राहुल भंडारी

आईकेजी-पीटीयू में दूसरा अंतरराष्ट्रीय सम्मेलन 'सीएनआरई-2022' आयोजित, ऑनलाइन माध्यम से आयोजित सम्मेलन में 58 शोधपत्र प्रस्तुत

संवाद न्यज एजेंसी

कपरथला। तकनीक के यग में छात्रों, शिक्षकों को हर दिन नई जानकारी से भरपुर रहना होगा। अब जरूरत सिर्फ तकनीक से जुड़े शोध कार्य के प्रति जागरूक होने की नहीं है, बल्कि अब इस विषय पर अंतरराष्ट्रीय स्तर पर क्या हो रहा है, इस पर भी पैनी नजर रखने की जरूरत है।

ऐसी शैक्षिक साझेदारी के लिए शैक्षणिक संस्थानों के लिए एक वैश्विक सम्मेलन (अंतरराष्ट्रीय कांफ्रेंस) होना आवश्यक व फायदेमंद है। पंजाब सरकार अपने शिक्षण संस्थानों व आईके गुजराल पंजाब तकनीकी विश्वविद्यालय से संबद्ध 250 से अधिक कॉलेजों में प्रयास कर रही है। यह संदेश प्रमुख

250 से अधिक कॉलेजों में अंतरराष्ट्रीय अनुसंधान को बढ़ावा देने के लिए लगातार प्रयास जारी

सचिव, तकनीकी शिक्षा व औद्योगिक प्रशिक्षण विभाग तथा आईके गुजराल पंजाब तकनीकी विश्वविद्यालय (आईकेजी पीटीय) के कुलपति आईएएस राहल भंडारी का है। वे द्वितीय अंतरराष्ट्रीय सम्मेलन 'सीएनआरई-2022' की टीम एवं प्रतिभागियों को संबोधित कर रहे थे। उन्होंने कहा कि वह समय दर नहीं है जब इस तरह के अंतरराष्ट्रीय सम्मेलनों के माध्यम से छात्रों को पंजाब में रहते हए अंतरराष्ट्रीय अध्ययन में शोध करने का अवसर मिलेगा।

आईकेजी-पीटीय जालंधर-इस तरह की पहल के लिए लगातार कपुरथला की तरफ से ऑनलाइन मोड पर यह सम्मेलन आयोजित

किया। इसका विषय 'कंप्यटिंग, सतबीर सिंह एवं आयोजन अध्यक्ष नेटवर्किंग और नवीकरणीय ऊर्जा' था. जिसे 'सीएनआरई-2022' के तौर पर प्रमाणित किया गया। विश्वविद्यालय को इस सम्मेलन के लिए ऑनलाइन मीडिया के माध्यम से कुल 160 से अधिक पत्र प्राप्त हए थे, जिनकी विशेषज्ञों की ओर से समीक्षात्मक समीक्षा की गई और चयनित शोध पत्र ऑनलाइन प्रकाशित किए गए।

विश्वविद्यालय ने 'अमेरिकन इंस्टीट्यट ऑफ फिजिक्स (एआईपी) के साथ स्कोप इंडेक्सेड कॉन्फ्रेंस प्रोसीडिंग्स' में प्रकाशन के लिए केवल 33 उच्च गुणवत्ता वाले पूर्ण-लंबाई वाले शोध पत्रों को स्वीकार किया है। दूसरे सम्मेलन में प्रकाशन के लिए केवल 20 अन्य अच्छी गुणवत्ता वाले पेपर स्वीकार

डॉ. नवीन कमार शर्मा ने कहा कि प्रत्येक पेपर की कम से कम तीन अलग-अलग स्तरों पर जांच और समीक्षा की गई। कछ मामलों में शोध पत्रों की गुणवत्ता सुनिश्चित करने के लिए चार समीक्षाओं पर भी काम किया गया था।

जेएसएस अकादमिक ऑफ टेक्निकल एज्केशन (नोडिया), यूपीटीयू लखनऊ से डॉ. भारत भूषण शर्मा, अनुज वंशवार, डॉ. सुजीत कमार जैन (डीम्ड-ट-बी यनिवर्सिटी) जीटीय अहमदाबाद से जीजेयु हिसार के डॉ. पलविंदर सिंह मान, डॉ. विजय पाल सिंह, मेजबान आईकेजी पीटीय कप्रथला से राजीव चौहान ने सम्मेलन के विशेष सत्रों को संबंधित डोमेन पर समन्वित करने का कार्य किया। किए जाते हैं। सम्मेलन अध्यक्ष डॉ. मुख्य अतिथि राहल भंडारी

(आईएएस) ने आयोजकों और भागीदारों से भविष्य में भी इस तरह की शैक्षणिक गतिविधियों का आयोजन जारी रखने का आग्रह किया। प्रो. विकास चावला, डीन अकादमिक. आईकेजी-पीटीय कप्रथला ने कहा कि शोधकर्ताओं द्वारा 58 पेपर ऑनलाइन जमा किए गए और एससीआई और स्कोप्स पत्रिकाओं में आगे की सिफारिशों के लिए विशेषज्ञों की ओर से मूल्यांकन भी किया गया।

डॉ. सतवीर सिंह ने बताया कि विश्वविद्यालय 22-24 जन, 2023 को 'सीएनआरई-2023' विषय पर तीसरा अंतरराष्ट्रीय सम्मेलन भी आयोजित करेगा, जिसके लिए तैयारी शुरू हो चुकी है। यह शोधकर्ताओं को अपने शोध कार्य को प्रदर्शित करने के लिए एक बेहतर मंच प्रदान करेगा।

टैक : दिल्लं भारती लडि 4 **कि** हासित

हासि

कान्वे पास साइवि साइवि के लि कर दं पुरा स लाई प पर मे जनिय हिस्स प्रोफेर युनिव

डिपार

### पीटीयू ने आनलाइन इंटरनेशनल कान्फ्रेंस कराई

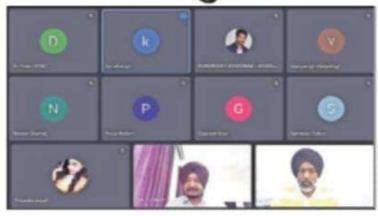
जासं, जालंदार : पीटीयू में दूसरी आनलाइन इंटरनेशनल कान्फ्रेंस आयोजित की गई। इसमें शोधकर्ताओं ने आनलाइन मिले 160 से अधिक पेपरों की समीक्षा की और चुनींदा पेपरों को प्रस्तुत किया। उपकुलपित राहुल भंडारी ने कहा कि तकनीकी युग में हर दिन नई जानकारी के साथ अपडेट होना लाजमी है। जरूरत अब केवल अपने से संबंधित विषयों पर रिसर्च करने की नहीं बल्कि मौजूदा समय में अंतरराष्ट्रीय स्तर पर क्या नया हो रहा उसे करीब से जानने की है।

शिक्षण संस्थानों के लिए ग्लोबल स्तर पर ऐसी कान्फ्रेंस विद्यार्थियों के लिए बेहद फायदेमंद है, क्योंकि विद्यार्थियों को पंजाब में रहते हुए अंतरराष्ट्रीय पढ़ाई में खोज व रिसर्च करने के मौके मिलेंगे। कांफ्रेंस चेयर डा. सतवीर सिंह और आयोजन मंडल चेयर फैकेल्टी डा. नवीन कुमार शर्मा ने कहा कि प्रत्येक पेपर की साहित्यक जांच और कम से कम तीन पक्षों के साथ समीक्षा की गई।

### तकनीक के युग में विद्यार्थियों व अध्यापकों को हर दिन नई जानकारी होना लाजमी : राहुल भंडारी

कपूरथला/जालंधर, 18 जून (महाजन): तकनीक के युग में विद्यार्थियों व अध्यापकों का हर दिन नई जानकारी से भरपूर होना लाजमी है। जरूरत अब न तो केवल अपने साथ जुड़े संशोधित कार्यों से अवगत होने की है, बल्कि वर्तमान में बहुत जरूरी है कि अंतर्राष्ट्रीय स्तर पर विषय के साथ संबंधित नया क्या हो रहा है, पर नजर रखना है और उसको करीब से जानना है।

शैक्षणिक संस्थाओं के लिए ग्लोबल स्तर पर कॉन्फ्रेंस करवाना ऐसी शैक्षणिक सांझ के लिए अवश्य व लाभदायक है। पंजाब सरकार अपने शैक्षणिक संस्थाओं और आई.के. गुजराल पंजाब टैक्निकल यूनिवर्सिटी के साथ जुड़े 250 से अधिक कालेजों में ऐसे प्रयास करवाने के लिए लगातार प्रयत्नशील है। यह कहना है कि तकनीकी शिक्षा और उद्योगिक प्रशिक्षण विभाग के प्रमुख सचिव और आई.के. गुजराल पंजाब



पी. दी. यू. में ऑनलाइन आयोजित कॉन्फ्रेंस के दृश्य। (चोपड़ा) टैक्निकल यूनिवर्सिटी के उप कुल पति आई. ए. एस. राहुल भंडारी का।

राहुल भंडारी यूनिवर्सिटी द्वारा करवाई दूसरी इंटरनैशनल कॉन्फ्रेंस सी.एन.आर.ई.-2022, की टीम और प्रतिभागियों को संबोधित कर रहे थे। उन्होंने कहा कि वह समय दूर नहीं जब ऐसी इंटरनैशनल कॉन्फ्रेंस के द्वारा विद्यार्थियों को पंजाब में रह कर इंटरनैशनल पढ़ाई में खोज व संशोधन के अवसर मिलेंगे। 6.5.2 Institution has adopted the following for Quality assurance

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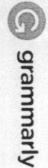
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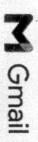
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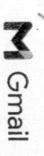
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# EBSCO Webinar on 15th June, 2021 at 11:00AM on Virtual Classroom: Enhance Teaching through Learning Management System (LMS).

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It is being brought to your kind notice a Webinar on "Virtual Classroom: Enhance Teaching through Learning Management System (LMS)" will held as per the below mentioned schedule:-

Date : 15<sup>th</sup> June, 2021 (Tuesday)

: 11:00 AM IST

Time

Speaker Registration Link 3 Dr. Rudra Rameshwar, Assistant Professor, http://bit.ly/2RD1RINVITE

(ii) Sanjay Goswami, Director Sales- South

L.M. Thapar School of management, Patiala

(iii) Dr. G.K. Upadhyaya, Sr. Training Manager EBSCO Information Services India

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Tuesday, 15th June 2021



11:00 AM IST



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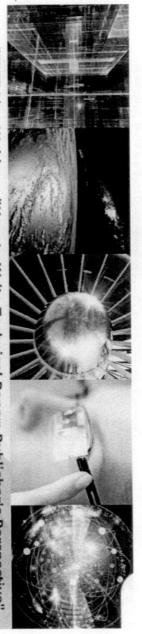
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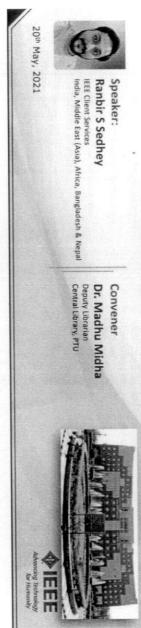
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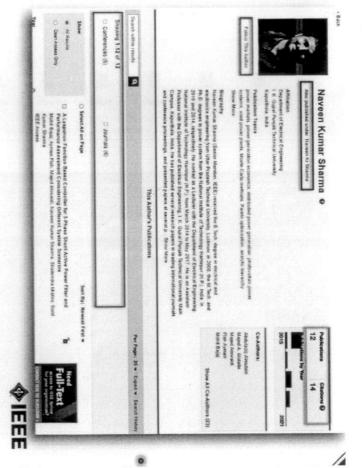
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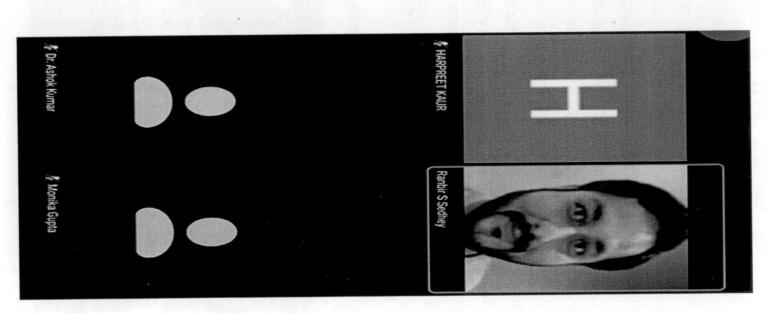




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