



International Conference APPLIED DATA SCIENCE AND SMART SYSTEMS

4th - 5th November, 2022 | Mode: Hybrid

TRACKS

- Machine Learning Principles, Smart Solutions and Business Strategies
- Al and Deep Learning
- Data Science Techniques for Handling Epidemic, Pandemic
- Deep Intelligence for Interdisciplinary Research
- Software Engineering and Automation
- Data Communication and Computer Networks
- · Computing in Business and Learning
- Engineering Mathematics and Physics

IMPORTANT DATES

20/8/2022 Paper Submission Deadline 20/9/2022 Notification of Acceptance 5/10/2022 Submission of Camera-ready Papers 20/10/2022 Registration Deadline 4-5/11/2022 Conference Date

OVERVIEW

Department of Computer Applications, Chitkara University, Punjab, India organized an International Conference titled "Applied Data Science and Smart Systems (ADSSS-2022)" in the month of November, 2022. It was a two-day event and conducted in a Hybrid Mode. The technical sessions were conducted on both days i.e. 4th November and 5th November. The agenda of the conference was to bring the researchers on a common platform to showcase their research on applied data science and smart systems.

INTRODUCTION

ADSSS-2022 is a first edition of International Conference organized by department of computer applications. This conference got approval from AIP (American Institute of Physics) and all accepted papers will get published in SCOPUS indexed AIP conference proceedings. This conference got overwhelming response from across the nation



and after following the rigorous review process approximately 55% of high quality research papers were shortlisted for inclusion in the proceedings. A total of 110 research papers were finally presented on both days. Majority of the presenters, approximately 96, opted for the online presentations and the remaining researchers opted to present in the offline mode. This conference utilized the easyChair web-portal for the paper submissions and acknowledgements. A large number of national and International researchers were associated with this

conference as a member of Technical Programme Committee. The national and International keynote speakers shared the latest tools, technologies and information with the audience which was highly appreciated by everyone. The keynote talks by Dr. Danilo Pelusi (University of Teramo, Italy), Dr. Farman Ali (Sejong University, South Korea) and Dr. Dinesh Vishwakarma (DIT, New Delhi, India) was really an eye opener.

THEME OF THE CONFERENCE

First International Conference on Applied Data Science and Smart Systems solicits original, unpublished, research contributions from researchers in the areas of Computer Science, Information Systems, Computational Engineering, Electronics and Telecommunication, Computer Application and all the relevant disciplines to a common forum.

In the recent past, an unprecedented growth has been witnessed in the number of applications using machine learning and deep learning. However, development of such software requires a high level of precision and application of advanced software engineering paradigms and modern database tools. Furthermore, there are many applications that require computer graphics and multimedia. Efficient and secure communication of data between the different entities over the internet is yet another challenge that is being addressed by the researchers in industry and academia. Applied Data Science and Smart Systems was an international multidisciplinary conference on innovation/ innovative practices in science, technology and management. The conference accepted both interdisciplinary and multidisciplinary research papers. The conference goal was to bring together scholars and practitioners working on computing, communications, and applied informatics from around the world. The conference intended to bring together international researchers to deliver papers and spark debates about recent computing trends and breakthroughs. The conference included a variety of presentations on current research projects, as well as engaging discussions and keynote addresses.

This conference covered the following major areas.

- Machine Learning Principles, Smart Solutions & Business Strategies

- Machine learning for smart cities
- Knowledge based systems
- Business strategies, product design
- Cognitive advertising
- Marketing trends and customer behavior

- AI and Deep Learning

- Heuristic and nature inspired search
- Fuzzy and rough set
- Reinforcement learning
- ANN, RNN, CNN, RBM and deep neural network
- NLP (natural language processing)

- Data Science Techniques for Handling Epidemic, Pandemic

- Forecasting models for tracking outspread, contamination and causalities
- Disease detection
- Analyzing social media
- Drug discovery and genome sequencing
- Investigation of economic impact of epidemic and pandemic

- Sentiment analysis
- Deep Intelligence for Interdisciplinary Research
 - Healthcare, cyber security and agricultural solutions
 - Deep intelligence into IoT (Internet of Things) and robotics
 - Smart advertising and marketing
- Software Engineering and Automation
 - Applied Software Engineering
 - Component Based System Development
 - Software Design Tools
 - Software Visualization
 - Reliability Engineering

- Data Communication and Computer Networks

- Mobile Social and Ambient Networks
- Wireless Access Networks
- Wireless Routing Protocols
- Fault-Tolerant and Delay Tolerant Networks
- WSN, WANET and MANET
- Network Management for Cloud Computing

- Computing in Business and Learning

- Asynchronous Learning
- Collaborative Learning Applications
- Learning Management Systems (LMS)
- Learning through Gamification
- Computing Architectures and Online Businesses
- AI-Based Training Tools for Business

- Engineering Mathematics and Physics

- Applied and Statistical Mathematics
- Discrete Mathematics
- Fuzzy Logic
- Operational Research
- Applied Mechanics

CONFERENCE COMMITTEES

The various committees were formed for the smooth conduct of this conference. The committee names and their members are listed below.

STEERING COMMITTEE

The overall conference execution was managed by this committee.

Sr. No.	Position	Names
1	Chief Patron	Dr. Ashok Chitkara, Chancellor, Chitkara University, Punjab
2	Patron	Dr. Madhu Chitkara, Pro-Chancellor, Chitkara University, Punjab
3	Conference Chair	Dr. Archana Mantri, Vice-Chancellor, Chitkara University, Punjab
4	Organizing Chair	Dr. Jaiteg Singh, Professor & Dean, Department of Computer Applications

5	Conference	Dr. Rajesh Kumar Kaushal, Professor, Department of Computer Applications
	Convener	
6	Advisory Chair	Dr. Krishna Vedula, Dean Emeritus, University of Massachusetts Lowell, USA
7	Organizing Secretary	Dr. Ruchi Mittal, Professor, Department of Computer Applications
8	Joint Organizing Secretary	Ms. Vandana Bajaj, Associate Professor, Department of Computer Applications
9	Publication Chair	Dr. Jaiteg Singh, Professor & Dean, Department of Computer Applications
		Dr. Rajesh Kumar Kaushal, Professor, Department of Computer Applications
10	TPC-Chair	Dr. Preetinder Singh Brar, Associate Professor, Department of Computer Applications
11	TPC-Co-Chair	Dr. Deepika Chaudhary, Professor, Department of Computer Applications
12	Publicity Chair	Dr. Naveen Kumar and Dr. Varun Malik, Associate Professor, Department of Computer Applications
13	Web Chair	Mr. Amanpreet Singh and Mr. Jaswinder Singh, Department of Computer Applications
14	Technical Chair	Mr. Jaspreet Singh Bajaj, Assistant Professor, Department of Computer Applications

The conference also formed an International Advisory Committee for the smooth conduct of this conference. The members of this committee are listed below:

INTERNATIONAL ADVISORY COMMITTEE

Sr. No.	Name	Affiliation
1	Dr. Pamela Thompson	University of North Carolina at Charlott, USA
2	Dr. Vijayakumar Varadarajan	University of New South Wales, Sydney, Australia
3	Dr. Ke-Lin Du	Concordia Univesity, Montreal, Canada
4	Dr. Xavier Fernando	Ryerson University, Ontario, Canada
5	Dr. Danilo Pelusi	University of Teramo, Italy
6	Dr. Joy Iong-Zong Chen,	Da-Yeh University, Taiwan
7	Dr. Nittaya Muangnak	Kasetsart University, Thailand

The conference also formed a National Advisory Committee to get a timely guidance to make this conference a grand success. The members of this committee are listed below:

NATIONAL ADVISORY COMMITTEE

Sr. No.	Name	Affiliation
1	Dr. Virender Ranga	Department of Information Technology, DTU, Delhi, India
2	Dr. Kawaljeet Singh	Punjabi University, Patiala, India
3	Dr. Amit Mittal	Professor & Dean, Doctoral Research Centre, CBS, Chitkara University Punjab, India
4	Dr. Suresh Limkar	AISSMS Institute of Information Technology, Pune, India
5	Dr. Veningston K	Department of Computer Science and Engineering, National Institute of Technology, Srinagar, India
6	Dr. B. Balamurugan	Associate Dean-Student Engagement Shiv Nadar University, Delhi-National Capital Region (NCR), India
7	Dr. Jagpreet Sidhu	Jaypee University, Solan, India
8	Dr. Harmeet Kaur Kang	Principal and Professor, Department of Nursing, Chitkara School of Health Sciences, Chitkara University, Punjab, India

Maintaining the quality of the conference is vital and thus requires a rigorous review process. This process requires TPC members who are domain experts. We formed a TPC committee of more than 100 national and International experts. Their details are mentioned in the table below.

TECHNICAL PROGRAMME COMMITTEE

Name	Affiliation
Dr. Simachew Gashaye	Debre Markos University, Ethiopia
Dr. Danilo Pelusi	Department of Communication Sciences University of Teramo, Italy
Dr. Alex Khang	Universities of Technology and Science, Ho Chi Minh City Vietnam
Dr. Chia Hung	Department of Electrical Engineering National Taiwan Normal University
Dr. S.N.Panda	Chitkara University, Punjab
Dr. Sanjay Misra	Ostfold University Halden, Norway
	Department of Electrical and Computer Engineering Concordia Univesity
Dr. Ke-Lin Du	Montreal, Canada
Dr. Przemyslaw Falkowski-	
Gilski	Gdansk University of Technology, Gdansk, Poland
Dr. Rameshwar Dubey	John Moores University. Liverpool
Dr. Chia-Hung Yeh	National Taiwan Normal University Taiwan
Dr. George A. Tsihrintzis	University of Piraeus Athens Greece
Dr. Kirti Seth	Inha University Taskkent

Dr. Nittova Muananak	Kasetsart University Chalermphrakiat Sakonnakhon Province Campus Department of Computer Science and Information Technology Thailand
Dr. Nittaya Muangnak Dr. Reima Al-Jarf	King Saud University Riyadh
Dr. Xiao-Hua Yu	California Polytechnic State University SLO (San Luis Obispo) USA
Dr. Joy Iong-Zong Chen	Department of Electrical Engineering Da-Yeh University Taiwan
Dr. Joy long-Zong Chen	Ryerson Communications Lab Associate Editor IEEE IOT Journal
	Associate Editor IEEE Consumer Technology Magazine IEEE Canada
Dr. Xavier Fernando	Region 7 Vitality Coordinator Canada
Dr. Grigorios N. Beligiannis	University of Patras - Agrinio Campus Greece
	College of Software Engineering Sichuan University Chengdu Sichuan
Dr. Yi-Fei PU	China
Dr. Dimitrios Koukopoulos	University of Patras Greece
Dr. Nikola Ivkovic	University of Zagreb Croatia
Dr. M.L. Dennis Wong	Heriot Watt University Malaysia
Dr. Kalpna Guleria	Chitkara University Punjab
Dr. Martin Anda	Murdoch University Australia
Dr. Ahmed Nabih Zaki Rashed	Menoufia University Egypt
Dr. Costin Badica	University of Craiova Romania
Dr. Prabjakara Rao Kapula	B.V.Raju Institute of Technology Telangana
Dr. Kawalinderjit Kaur	California State University USA
Dr. Harjit Singh	Chitkara University Punjab
Dr. Ashu Gupta	Prince Sattam Bin Abdulaziz University Saudi Arabia
Dr. Jagpreet Sidhu	Jaypee University Solan India
Dr. Karamjeet Singh	Thapar University Patiala India
Dr. Kawaljeet Singh	Punjabi University Patiala India
Dr. Pao-Ann Hsiung	Professor National Chung Cheng University Taiwan
Dr. Shashvat	Alliance College of Engineering and Design Alliance University Bangalore
Dr. Shweta Jain	IIT Ropar
Dr. Shalli Rani	Chitkara University Punjab
Dr. Arpan K. Kar	IIT New Delhi
Dr. Aarti Vaish	School of Engineering and Technology Sushant University Gurugram
Dr. Virender Ranga	Delhi Technological University Delhi Information Technology Department
Dr. Sheifali Gupta	Chitkara University Punjab
Dr. Sitender	Maharaja Surajmal Institute of Technology Delhi
Dr. C Senthilkumar	Thiagarajar College of Engineering Madurai Tamil Nadu India
Dr. Arpan Deyasi	RCC Institute of Information Technology Kolkata West Bengal India
Dr. Saravanan K	Vellore Institute of Technology Chennia India
	Professor & Head Department. of Information Technology JNEC and
Dr. Sharvari C. Tamane	University
Dr. Manish Sharma	Chitkara University Punjab
Dr. S. Balakrishnan	Sri Krishna College of Engineering and Technology Coimbatore Tamil Nadu
Dr. S. Palanivelrajan	Department of Electronics and Communication Engineering M.Kumarasamy College of Engineering Tamil Nadu India

	Department of Artificial Intelligence and Data Science
Dr. S. Kanaga Suba Raja	SRM Easwari Engineering College Ramapuram Chennai
	Department of Computer Science and Engineering
Dr. Veningston K	National Institute of Technology Srinagar
	MIEEE LMCSIMACM Reviewer of WMC journal Senior Member IEEE
Dr. Nitika Vats Doohan	Indore India
D 4: W W	PhD SMIEEE Adani Institute of Infrastructure Engineering (AIIE)
Dr. Ajay Kumar Vyas	Ahmedabad Gujarat India
Dr. Urmila Shrawankar	Government Engineering College Ajmer Rajasthan
Dr. Ripal D Ranpara	Department of Computer Science Atmiya University Rajkot Gujarat
	Department of Computational Intelligence SRM Institute of Science and
Dr. T. Subha	Technology Tamil Nadu
Dr. Purnima Gandhi	Institute of Technology Nirma University Ahmedabad Gujarat
Dr. Rishu Chaujar	DTU New Delhi India
Dr. Ashwani Kush	Kurukshetra University Haryana India
Dr. Ram Kumar	Chitkara University Punjab
Dr. B. Sandhya	MVSR Engineering College Hyderabad Telangana India
Dr. Deepak Garg	Bennett University Greater Noida Uttar Pradesh India
Dr. Jerwinprabu A	Bharati Robotic Systems India Pvt. Ltd Pune Maharashtra India
Dr. K.P.Lakshmi	B.M.S. College of Engineering BengaluruKarnataka India
Dr. S.K.Mittal	Chitkara University Punjab
Dr. Prakash Hegade	KLE Technological University Karnataka India
Dr. Rajesh Khanna	Thapar University Punjab India
Mr. Jyotir Moy Chatterjee	Asia Pacific University of Technology & Innovation Malaysia
Dr. Sikhinam Nagamani	Department of IT LBRCE Andhra Pradesh
Dr. Arpan Deyasi	RCC Institute of Information Technology Kolkata West Bengal
Dr. Arpan Deyasi	RCC Institute of Information Technology Kolkata West Bengal

CONFERENCE SCHEDULE (INAUGURAL, TECHNICAL SESSIONS & VELIDICTORY)

The conference was scheduled on two different days. The detailed conference schedule is mentioned below along with data and timings.

Inaugural Schedule of ADSSS-2022 Date: 4 th November, 2022			
Time	Activity		
10:00 AM	About Chitkara University		
10:10 AM	Brief introduction of conference by Dr. Jaiteg Singh, Organizing Chair		
10:15 AM	Lamp Lighting by Dignitaries		
10:20 AM	Address by Conference Patron, Dr. Madhu Chitkara, Pro Chancellor, Chitkara University, Punjab		
10:25 AM	Address by Conference Chair, Dr. Archana Mantri, Vice Chancellor, Chitkara University, Punjab		
10:35 AM (IST)	Address by keynote speaker: Dr. Danilo Pelusi, Department of Communication		
6:05 AM (CET, Italy)	Sciences, University of Teramo, Italy.		
11:00 AM (IST)	Address by keynote speaker: Dr. Farman Ali, Department of Software, Sejong		
2:30 PM (KST, South Korea)	University, South Korea		
11:15 AM	Address by keynote speaker: Dr. Dinesh Kumar Vishwakarma, Professor,		
	Department of Information Technology, Delhi Technological University, New		
	Delhi, India		
11:30 AM	Address by keynote Speaker: Dr. Srinivas Padmanabhuni, Co-Founder CityMandi.com		
11:45 AM	Address by keynote Speaker: Mr. Vinod Raj, Group Manager, Allianz		
	Technology, India		
12:00 PM	Address by keynote Speaker: Mr. Jayakrishnan Krishnankutty, Senior Manager,		
	Allianz Technology, India		
12:15 PM	Inaugural closing		
1:45 PM	Start of Technical Sessions (Online/Offline)		

Valedictory Schedule of ADSSS-2022 Date: 5 th November, 2022		
Time	Activity	
01:30 PM	Welcome Address	
01:35 PM	Felicitation of Guests	
01:45 PM	Feedback from participants	
02:00 PM	Prize distribution to best paper winners	
02:10 PM	Felicitation of Conference Committee Heads	
02:25 PM	Felicitation of session coordinators	
02:40 PM	Vote of thanks by Conference Convener (Dr. Rajesh Kaushal)	

TECHNICAL SESSION DETAILS

The conference was scheduled on two different days. The detailed conference schedule of technical sessions is mentioned below along with paper Ids, paper title, authors and timings. A total of 16 different sessions were formed according to the common theme.

DATE & VENUE: 4th November 2022, ONLINE

Session Chair: Dr. Gaurav Gupta(9501236400), Dr. Gurjit Singh Bhathal and Dr. Brahmaleen K Sidhu gaurav.shakti@gmail.com, gurjit.bhathal@gmail.com, brahmaleen.sidhu@gmail.com Session Coordinator: Ms. Jasmeen Chahal, Session Assistant: Mr. Mir Amir Hamid

Timings: 1:45 pm to 3:45 pm

Zoom Link: https://zoom.us/meeting/register/tJMpf-muqj8oHdWuki6ETm5OXrfzLDWUiHW9

Paper ID	Title	Authors	Theme	
1665	Past, Present and Future of Computational Intelligence: A Bibliometric Analysis	Jasneet Kaur and Jyoti Verma	Artificial Intelligence	
4079	Comparative Analysis of Performance Parameters of a New Hybrid Algorithm used for Segmentation of Retinal Images	Rajwinder Kaur, Dr. Richa Brar and Dr. Gagandeep Jagdev	Artificial Intelligence	
8524	Plants Recognition using Leaf Image Pattern Analysis with focus on Advanced Smart Computing Technologies	Pankaj Bhambri, Sukhmeet Singh, Inderjit Singh Dhanoa and Sidharth Jain	Artificial Intelligence	
2565	Classification Of Various Land Use and Land Cover classifiers Using Hyperspectral Imaging	Neelam Dahiya, Sheifali Gupta and Sartajvir Singh	Artificial Intelligence	SESSION 1
3012	Data Valuation Using Shapley Value in Machine Learning	Pushti Sharma and Navneet Kaur	Machine Learning	SE
4796	Classification and Detection of Diabetic Eye Diseases using Deep Learning: A Review and Comparative Analysis	Seema Gulati, Kalpna Guleria and Nitin Goyal	Artificial Intelligence	
1811	Human Activity Recognition with Machine Learning	Payal Kaushal and Vidhyotma Gandhi	Machine Learning CP	

Session Chair: Dr. Rachna Soni(9872574480) and Dr. Amandeep Bhullar(6283401012)

rsoni63@gmail.com, amandeep.bhullar@chitkara.edu.in

Session Coordinator: Ms. Puninder Kaur, Session Assistant: Ms. Shikha Sharma

Timings: 1:45 pm to 3:45 pm

Zoom Link: https://zoom.us/meeting/register/tJUvceiqqz4vHdIBrPOfM5AZI7_w9Dwv4qq4

Title	Authors	Theme	
Online Transaction Fraud Detection Using Machine Learning	Ayushi Pasrija, Pooja Dahiya, Nonita Sharma and Monika Mangla	Machine Learning	
Aspects of Multi-Task Learning: In Joint Estimation of Age, Gender and Race	Mazida Akhtara Ahmed, Ridip Dev Choudhury, Parvez Aziz Boruah and Khurshid Alam Borbora	Artificial Intelligence	
Comparative Analysis of Handwriting based Writer Identification using Machine and Deep Learning Techniques	Sukhdeep Kaur and Ganesh Kumar Sethi	Machine Learning	5
Opinion Extraction from Big Social DataUsing Machine Learning Techniques: A Survey	Devendra Kumar and Faiyaz Ahmad	Machine Learning	SESSION
Optimization of Neural Networks Through Classical Metaheuristic Algorithms: A Review of Past Decade	Navjot Kaur, Deepika Chaudhary and Jaiteg Singh	Neural Network CP	
Trust Aspects in Usage of Cloud Computing For Website Development	Amanpreet Singh, Amandeep Kaur and Deepali Gupta	Cloud Computing CP	
	Online Transaction Fraud Detection Using Machine Learning Aspects of Multi-Task Learning: In Joint Estimation of Age, Gender and Race Comparative Analysis of Handwriting based Writer Identification using Machine and Deep Learning Techniques Opinion Extraction from Big Social DataUsing Machine Learning Techniques: A Survey Optimization of Neural Networks Through Classical Metaheuristic Algorithms: A Review of Past Decade Trust Aspects in Usage of Cloud Computing For	Online Transaction Fraud Detection Using Machine Learning Ayushi Pasrija, Pooja Dahiya, Nonita Sharma and Monika Mangla Aspects of Multi-Task Learning: In Joint Estimation of Age, Gender and Race Parvez Aziz Boruah and Khurshid Alam Borbora Comparative Analysis of Handwriting based Writer Identification using Machine and Deep Learning Techniques Opinion Extraction from Big Social DataUsing Machine Learning Techniques: A Survey Optimization of Neural Networks Through Classical Metaheuristic Algorithms: A Review of Past Decade Trust Aspects in Usage of Cloud Computing For Amanpreet Singh, Amandeep Kaur and Deepali	Online Transaction Fraud Detection Using Machine Learning Aspects of Multi-Task Learning: In Joint Estimation of Age, Gender and Race Comparative Analysis of Handwriting based Writer Identification using Machine and Deep Learning Techniques Opinion Extraction from Big Social DataUsing Machine Learning Techniques: A Survey Devendra Kumar and Faiyaz Ahmad Optimization of Neural Networks Through Classical Metaheuristic Algorithms: A Review of Past Decade Machine Learning For Amanpreet Singh, Amandeep Kaur and Deepali Cloud Computing

DATE & VENUE: 4th November 2022, ONLINE

Session Chair: Dr. Sanjay Singla(9729376850), Dr. Ruchi Mittal and Dr. Varun Malik dr.ssinglacs@gmail.com, ruchi.mittal@chitkara.edu.in, varun.malik@chitkara.edu.in Session Coordinator: Ms. Taruna Sharma, Session Assistant: Ms. Nandini Modi

Timings: 1:45 pm to 3:45 pm

Zoom Link: https://zoom.us/meeting/register/tJwpc-2oqjsoE9OKnM0q2st4T46BDPPzViTi

Paper ID	Title	Authors	Theme	

6711	Mobile Phone App For Identification Of Nutrients And Microbial Contamination In Fruits And Vegetables	Sujatha Kesavan	Artificial Intelligence	
4365	Recognition and Classification of leaf pattern techiques using SVM	Neha malhotra and Geeta Arora	Artificial Intelligence	
1454	Two Stage Open Shop Scheduling Model with a String of Disjoint Job Blocks using a Heuristic Approach	Jatinder Pal Kaur, Deepak Gupta, Adesh Kumar Tripathi and Renuka Jain	Fuzzy Logic	en -7
1759	Current Trends and Literature Review of Machine Learning Models for predicting software fault based on Textual and Numeric Data	Shallu Juneja, Dr. Gurjit Singh Bhathal and Dr. Brahmaleen Kaur Sidhu	Machine Learning	SESSION
3380	Investigating Impact Of Decision Table And Random Forest Classifier During K-Mean Clustering	Hemlata Nanda	Machine Learning	
1222	Using Social Media to Predict Social Unrest: A Survey	Ravneet Kaur Chahal	Machine Learning	

Session Chair: Dr. S.N.Panda and Dr. Naveen Kumar(7009600929)

naveen.kumar@chitkara.edu.in, snpanda@chitkara.edu.in Session Coordinator: Ms. Neelam Dahiya, Session Assistant: Ms. Kamalpreet Singh

Timings: 1:45 pm to 3:45 pm

Zoom Link: https://zoom.us/meeting/register/tJMqfuqtqjMrEtY06NlKHtokyd-9QyKsWcr2

Paper ID	Title	Authors	Theme	
6977	Comparative Analysis of Existing Security Techniques in Intelligent Transportation System	Sumit Kumar and Rajender Chhillar	IoT/Machine Learning	4
4975	COVID-Safe Attendance Monitoring System using QR Codes, Geolocation and IOT	Gourav Aravinda, Srivatsan Narendiran, Rishab Kshatri, Dev Darshan and Jeny Jijo	IoT/COVID	SESSION
6514	Smart Traffic Management Using the Big Data and IoT	Kavita Kavita	IoT/Big Data	S

2071	Arduino Based Wireless Hand Gesture Controlled Robot	Sachin Kumar Gupta	IOT	
8273	Experiment on Safety Measures in the Textile Industry by Using IoT Sensors	Ramesh Kumar A, Dinesh T, Balaji C, Akhilesh S, Bhuvanasanju M and Gokul Kumar V	IOT	
4360	Indoor Positioning and Tracking in Home Automation Systems to Protect the Elderly: A Review	Sheenam Naaz and Suraiya Parveen	IOT	
4610	Cryptocurrency In Modern Finances	Jasmeen Kaur Chahal, Nanki Bhatia and Gurpreet Singh	Crptocurrencies in Finance/CP	

Session Chair: Dr. Shelja Sharma (9310879557), Dr. Vasudha Arora(9999885200) and Dr. Indu Kashyap (9899798033)

sheljaofficial@gmail.com, vasudhaarora6@gmail.com, indu.kashyap82@gmail.com Session Coordinator: Ms. Rajwinder Kaur, Session Assistant: Gagandeep Singh Timings: 1:45 pm to 3:45 pm

Zoom Link: https://zoom.us/meeting/register/tJwsduitqz4tHt2D4r4-lPq9HsCrJfqd1rFf

Paper ID	Title	Authors	Theme	
687	Hierarchical Blockchain-based Data Provenance in IoT	Mekhla Sharma	Blockchain	
9961	XE The New Variant of COVID: Analysis and Discussion	Rohan Khanna and Pankaj Singh	COVID-19	
236	Covid 19 Pandemic Triggered Disruptions in World Supply Chains: Challenges and Roadmap Ahead of Pharmaceutical Industry	Richa Arora, Richa Nangia, Rashmi Singel, Anshika Prakash, Nidhi Gupta and Amit Mittal	COVID-19	SESSION 5
3529	Factors affecting adoption of Information and Communication Technology Tools in pedagogy by STEM Teachers in Higher Education during COVID-19 pandemic	O.R.S. Rao and Puneet Kumar Gupta	COVID-19	SES
6983	Use of machine learning techniques in tea crop yield prediction: An Analytical Review	Pallavi Nagpal, Deepika Chaudhary and Jaiteg Singh	Machine Learning	

542	Cosine Elastic Cluster Scheduling Algorithm for VM Migration in Cloud Computing	Amandeep Kaur and Saurabh Kumar	Cloud Computing CP	
544	INFLUENCE OF COVID-19 ON MENTAL HEALTH ISSUES	Puneet Kaur, Deepika Chaudhary and Jaiteg Singh	COVID-19	

Session Chair: Dr. Nikhil Marriwala, Dr. Kalpna Guleria(8826648937) and Dr. Manish Sharma(7838566174) nmarriwala@kuk.ac.in, kalpna@chitkara.edu.in, manish.sharma@chitkara.edu.in Session Coordinator: Mr. Amanpreet Singh, Session Assistant: Mr. Manjit Singh

Timings: 1:45 pm to 3:45 pm

Zoom Link: https://zoom.us/meeting/register/tJIpduugrzgvHNLaaysZM8hLj6SN8Gw7N2vs

Paper ID	Title	Authors	Theme	
3735	An Analysis on Enhancing the Performance of OBS Networks	Rajinder Kumar and Karan Aggarwal	Computer Networks	
4683	Performance Analysis of Priority Queue Network Consisting Biserial and Parallel Channel	Aarti Saini, Dr. Deepak Gupta and Dr. Adesh Tripathi	Computer Networks	
5948	Performance Analysis Of Different Topologies In FiWi Networks	Nitin Kali Raman and Himanshi Saini	Computer Networks	
8040	A Simulation Based Crosstalk Performance and Delay Analysis of different CNT based Single and Bundled SW-CNT, DW-CNT and MW-CNT Interconnects	Arun Kundu, Manoj Kumar and Neha Gupta	Core Electronics	SESSION 6
9010	Design and Simulation Study of Effect of Channel Length, Source/Drain Material, Source/Drain Concentration on Graphene Based Field Effect Transistor (GFET)	Neha Gupta, Manoj Kumar and Arun Kundu	Core Electronics	SES
9282	Trust Computation for Vehicular Ad-hoc Networks	Sarbjit Kaur and Ramesh Kait	Computer Networks	
8384	A Comprehensive Survey On The Artificial Neural Network Open Source Software For Implementing Computational Intelligence	Amardeep Singh and Dr Sandeep Kumar	Artificial Intelligence	

2262	The Effects of Class Rebalancing Techniques on	Mehedi Mahmud Kaushik, S. M. Hasan Mahmud, Md	machine Learning	
	Ensemble Classifiers on Credit Card Fraud	Alamgir Kabir and Dip Nandi		
	Detection: An Empirical Study			

Session Chair: Dr. Pankaj Bhambri (9814828414), Dr. Sita Rani and Dr. Nishu Bali Session Coordinator: Dr. Rupinder Singh, Session Assistant: Ms. Noopur Tyagi

Timings: 1:45 pm to 3:45 pm

Zoom Link: https://zoom.us/meeting/register/tJYodO-qrT8qGtWXq2URDOKYsnbt3FqrFSz8

Paper ID	Title	Authors	Theme	
4203	potential pre-processing techniques of data mining on mutual funds	Shikha Singla, Gaurav Gupta and Gurjit Singh Bhathal	Data Mining	
1657	Data Preprocessing for Development of Customer Churn Prediction Models in E- Commerce	Seema and Gaurav Gupta	Data Mining	
7452	Spec-Crawl: Domain Specific Crawler and Specifications Management for Search Engines	Prakash Hegade, Manjunath Netekal and Sunil Menasinakayi	Search Engine Crawlers	7
3811	Genetic Algorithm Based Approach for Code Clone Detection	Nidhi Sehrawat, Kamna Solanki, Sandeep Dalal and Amita Dhankar	Software Engineering	SESSION
4233	M-TOPSIS Approach for Solving Bilevel Multiobjective Quadratic Fractional Programming	Rozy Rani, Vandana Goyal and Deepak Gupta	Software Engineering	SE
7705	Automated Test Generation with Genetic Algorithm: A Review	Sonali Vyas, Geetika Vyas and Sunil Gupta	Software Engineering	
9898	Cocoa Beans Quality testing based on Deep Learning Models	Richard Essah, Darpan Anand and Surender Singh	Deep Learning	

DATE & VENUE: 4th November 2022, ONLINE

Session Chair: Dr. Urvashi Tandon(9805050060), Dr. Arun Aggarwal(9888432764) and Dr. Balraj Verma(8219177133) Session Cooordinator: Ms. Payal Kaushal Session Assistant: Ms. Deepika Sharma

Timings: 1:45 pm to 3:45 pm

Zoom Link: https://zoom.us/meeting/register/tJYuf--oqD4iH9wNZn71xOg_v5BfSaWybISv

7474	Modeling the impact of perceived cognitive biases and belief perseverance and information processing biases on risk tolerance and investment undertaking: A study with mediation of financial literacy.	Vinay Kumar Sharma and Deepak Sood	Management	
2962	Exploring Vendor's Critical Attributes to Success in Engineering, Procurement and Construction companies in India	Anantharaman Subramaniyan, Balraj Verma, Amit Mittal and Arun Aggarwal	Management	
693	Mediating role of technology on innovation performance of international SMEs in India	Kiran Mehta, Renuka Sharma, Vishal Vyas and Archana Goel	Management	
7458	A fuzzy AHP approach to rank factors used in evaluation of B2C E-commerce websites	Renuka Sharma, Vishal Vyas, Kiran Mehta and Muskaan Arora	Management	SESSION 8
2747	Does Venture Capital Qualify As An Asset Class: A USA Based Study	Manu Sharma and Raj Kumar	Management	SES
1876	A Systematic Literature Review on Sustainable Development: Emergence of Sustainable Mobility for Global Ecology	Kirtikumar Tolani, Sridhar Manohar, Deepika Jhamb and Amit Mittal	Management	
1913	Factors facilitatting and restraining the adoption of fintech neobanking platforms in India: A literature review approach	Gurpreet Singh and Deepak Sood	Management	
3310	Using analytic hierachy process to determine forex risk hedging strategies of SMEs	Renuka Sharma, Kiran Mehta and Aman Chugh	Management	

DATE & VENUE: 4th November 2022, OFFLINE (Plato Hall)

Session Chair: Dr. Vinayak Bairagi (9421016118) and Dr. Suresh Limkar(9823328686)

bairagil@gmail.com, sureshlimkar@gmail.com

Session Cooordinator: Dr. Jaswinder Singh, Session Assistant: Mr Arvind Singh

Timings: 10:45 am to 12:30 pm

Paper ID	Title	Authors	Theme	
6173	Analysis of Segmentation Techniques in Wheat Leaf Disease Detection using Deep Learning Approach	Taruna Sharma and Ganesh Kumar Sethi	Artificial Intelligence	SESSION 9

2073	Al based detection of COVID-19 Pneumonia in Chest X-ray images using ResNet50	Srishti Bhardwaj, Neerja M. Garg, Tarandeep Singh and Anita Gupta	COVID-19	
9403	Supervised Machine Learning Approach for Employee Attrition Analysis	Vikas Rattan, Ruchi Mittal, Varun Malik, Jaiteg Singh	Data Mining	
6607	Multi-Lingual Text Classification Models to Detect Hate and Offensive Text	Pranav Garg, Pranav Kumar, Mansi Chitkara and Gulshan Dhillon	Natural Language Processing	
4944	Analyzing The Impact of Fog on Wireless Propagation using Different Attenuation Models	Sakhshra Monga, Ashu Taneja, Nitin Saluja, Roopali Garg and Navdeep Singh	Electronics	
8594	An Internet of Things Based Framework for Implementation of Efficient Healthcare Facilities	Preetinder Singh Brar and Jaiteg Singh	ІоТ	
7430	CACAI: Comparative Analysis of Crypto App in India	Rahul Johari and Suhas Harbola	Blockchain	

Session Chair: Preetinder Singh Brar preetinder.brar@chitkara.edu.in

Session Coordinator: Ms. Jasmeen Chahal, Session Assistant: Mr. Mir Amir Hamid

Timings: 10:00 am to 12:00 pm

Zoom Link: https://zoom.us/meeting/register/tJAkce2vrT4vGdURCePCWW7hcB-k1j3KA8OG

Paper ID	Title	Authors	Theme	
383	Hindi Title Generation using Rule-based Approach	Nandini Sethi, Amita Dev and Poonam Bansal	Natural Language Processing	
3662	Flow Modification Cooling Technique to Reduce Aerodynamic Wave Drag by Mechanical Cut Shape Aero-spike for the Blunted Body at Mach 8.0	Shyam Singh Kanwar, Gajendra Kumar Agrawal, Avinash Ranjan Patnaik, Satish Kumar Gavel and Sachin Kumar Gupta	Mechanical/Electronics	SESSION 10
8735	Assessment of Various Security Schemes of Wireless Sensor Network	Swedika Sharma and Dr. Vishal Bharti	Wireless Sensor Networks	

6827	Underwater Wireless Sensor Network Risk Analysis, Security, and Mitigation Policies	Jocil D and Vadivel Ramasamy	Wireless Sensor Networks	
2414	In-Network Storage Management in Large Scale Wireless Sensor Networks -A Survey	Rakhi Puri and Teek Parval Sharma	Wireless Sensor Networks	
1903	Effect of Physio-chemical Parameters in Defining the Quality of Wastewater from ETP & STP	Shubam Sudan, Ajay Khajuria and Dr. Jyotsna Kaushal	Water Science CP	
1352	Brief Overview of Biochar as Carbon Sequestration, its synthetic techniques, kinetic and equilibrium studies	Ajay Khajuria, Shubham Sudan and Dr. Jyotsana Kaushal	Water Science CP	

Session Chair: Dr. Rupinder Singh(9888856605) and Dr. Geeta Rani (9888820780) rupinder.1153@chitkara.edu.in, geeta@chitkara.edu.in

Session Coordinator: Ms. Puninder Kaur, Session Assistant: Ms. Shikha Sharma

Timings: 10:00 am to 12:00 pm

Zoom Link:https://zoom.us/meeting/register/tJ0rfuCppzgjHNZNdR9zvZzznvrK8yIZL2Qe

Paper ID	Title	Authors	Theme	
6213	VM consolidation using Optimization techniques: A Review	Ajay Prashar and Jawahar Thakur	Cloud Computing	
3354	A Review on Cloud Computing: Evolution, Applications and Its Future	Ishu Dagar and Pankaj Kumar Singh	Cloud Computing	
6623	Identification of an eminent approach for IDPS in the cloud environment	Vaneeta Dhawan, Sangeeta Rani and Lalit Kumar Joshi	Cloud Computing	1
7287	A Comparitive Study of Task Scheduling Algorithms and a Proposed Tri-Stage Model for a Federated Cloud Environment	Jeny Varghese, Samarth Ramesh, Sai Sudhir Sunku and Jagannatha Sreenivasaiah	Cloud Computing	SESSION 1.
9900	Exploring Cyber Security Threats in Smart City Infrastructure with Prospective Solution	Rushabh Shah, Shram Kadia, Rajvi Shah, Kaushal Shah and Mukti Padhya	Cyber Security	
2381	Comprehensive Study of Digital Forensics in Contemporary Domain	Mitali Chugh, Sonali Vyas and Shaurya Gupta	Digital Forensics	
2231	Virtual World – Metaverse Governance	Atul Grover and Dr. Kumar Shalender	AR/VR	

	Framework			
1905	Soil quality assessment and prediction using	Nishu Bali, Anshu Singla, Deepika Chaudhary and	Artificial Intelligence	
	various AI techniques: A Review	Pallavi Nagpal	СР	

Session Chair: Dr. Renu Thakur(9915934244) and Dr. Ruchi Mittal renu.thakur@chitkara.edu.in, ruchi.mittal@chitkara.edu.in

Session Coordinator: Ms. Taruna Sharma, Session Assistant: Ms. Nandini Modi

Timings: 10:00 am to 12:00 pm

Zoom Link: https://zoom.us/meeting/register/tJIqcOCvqzItGdPro6BBjHUzD7_9kNldVoni

4615	Impact of COVID-19 on Contact Lens	Kuldeep Kaur, Ritika Rana, Nitin Deveshwar, Ritika	Healthscience	
	Practitioners' Practice	Thakur, Mohammad Nooruz Zaman and Renu Thakur		
3133	A Cross-Sectional Study of Hearing-Impaired Students on Instructional Practices in Searching Words	Renu Thakur, Jaikishan Jayakumar, Sangeeta Pant and Ruchi Mittal	Healthscience	
1419	The Impact Of Ocular Surface Biomarkers And Ocular Comfort In Contact Lens Users: A Review	Kalla Sailaja and Renu Thakur	Healthscience	
475	A prospective study on parents of the children with strabismus and amblyopia to assess their knowledge, attitude, and practices towards the disease	Shankar Dass, Digvijay Singh and Bunty Sharma	Healthscience	SESSION 12
4649	The impact of various shades on colour perception and contrast sensitivity	Simranjit Singh, Kajol Singh, Gursimran Singh and Astha Mishra	Healthscience	
7899	Building novel approach for context based image retrieval in area of healthcare	Amogh Shukla, Nitin Lodha, Vijayarajan V and Surya Prasath	Healthscience	
8627	Deep Learning Method for Early Alzheimer Disease Diagnosis Based on EEG Signal	Sachin Elgandelwar, Vinayak Bairagi and Sumati Jagdale	Artificial Intelligence	
8411	In Indian Optometry Curriculum, Evidence- Based Practice is crucial. A Review	Steffy Johnson and Renu Thakur	Healthscience	

	_	, , ,	Healthscience	
	Young Adults in Rural North India	Sameer Ahmad		

Session Chair:Dr. Deepika Chaudhary(7347692152) and Dr. Harmaninderjit Singh (9988235974)

harmaninder.jit@chitkara.edu.in

Session Coordinator: Ms. Neelam Dahiya, Session Assistant: Mr. Kamalpreet Singh

Timings: 10:00 am to 12:00 pm

Zoom Link: https://zoom.us/meeting/register/tJMscO2pqT4oHt0f8m7bWzaXr vWP7fz56UV

Paper ID	Title	Authors	Theme	
3117	Career Transition of Baby Boomers Post Retirement: A Phenomenological Study	Dr.Pallavi Chopde, Dr.Kirti Gupta, Dr.Amruta Deshpande and Dr.Amit Mittal	Management	
7407	Inferential Statistics and Visualisation Analysis of Automobile Industry	Aarna Singhal, Kusha Varshney, Nonita Sharma and Monika Mangla	Management	
4665	Impact of Green Marketing Initiatives on Consumer Buying Behaviour: An Empirical Analysis	Dr. Rashmi Singel, Dr. Neha Kamboj, Dr. Swati Shrivastava, Dr. Shivani Kampani, Dr. Anshika Prakash and Dr. Vinita Choudhary	Management	13
1593	DWT-GLCM And PCA Approach Of Image Watermarking	Sakshi Dewan	Image Processing	SESSION
2032	Integrated Approach for Feature Extraction in Face Recognition in Content Based Image Retrival Context	Amogh Shukla, Nitin Lodha, Vijayarajan V and Surya Prasath	Image Processing Context Based Image Retrieval	_
2414	In-Network Storage Management in Large Scale Wireless Sensor Networks -A Survey	Rakhi Puri and Teek Parval Sharma	Wireless Sensor Networks	
7416	Phase Noise Effect on Milimeter Wave MIMO- OFDM and FBMC-OQAM Systems	Tamilselvi B, Udayakumar E and Krishnaveni V	Core Electronics	

Session Chair: Dr. Nitin Goyal (9896530089) and Dr. Raj Gaurang Tiwari (9415561502)

er.nitin29@ieee.org, rajgaurang@chitkara.edu.in

Session Coordinator: Ms. Rajwinder Kaur, Session Assistant: Mr. Gagandeep Singh

Timings: 10:00 am to 12:00 am

Zoom Link: https://zoom.us/meeting/register/tJUvd--rpzkiHNbVjryQM2BqjOKTG z XLgF

Paper ID	Title	Authors	Theme	
3025	An Al-Based Adaptive Assessment System for Effective Campus Placement Process Management	Shivam Vora, Alankrit Arya, Chaitanya Kumbhar and Harshal Dalvi	Artificial Intelligence	
8640	Review of Image Captioning using Deep Learning	Mehzabeen Kaur and Harpreet Kaur	Artificial Intelligence	
9500	Robustness Evaluation of Multi Layer Perceptron based Speech Emotion Recognition Model for Hindi language	Surbhi Khurana, Dr. Amita Dev and Dr. Poonam Bansal	Machine Learning	SESSION 14
4445	Role of AI in Recruitment	Kavita Kavita	Artificial Intelligence	- S
3029	A review on Statistical Analysis for Data Science	Venkat Kumar Perumalla and Himanshu Gupta	Data Science	
1788	Inferential Analysis of Amazon's Top 50 Bestselling Books	Sneha Singh, Rishika Suhag, Nonita Sharma and Monika Mangla	Machine Learning	
4022	A survey on deep learning for medical healthcare: Techniques and Applications	Kumari Archana and Amandeep Kaur	Deep Learning	

DATE & VENUE: 5th November 2022, OFFLINE (Plato Hall)

Session Chair: Mr. Vinod Raj (9961992280) and Mr. Jayakrishanan Krishankutty(9446431535)

Session Cooordinator: Dr. Varun Malik, Session Assistant: Mr. Arvind Singh

Timings: 10:00 am to 12:00 pm

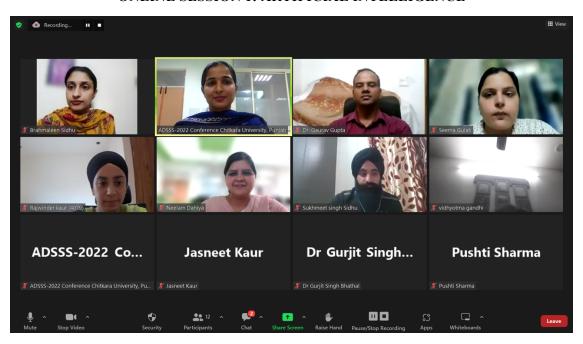
Machine Learning Technique

6620	Prospects of Machine Learning Algorithms in Healthcare Industry: A Review	Shikha Sharma, Ruchi Mittal and Nitin Goyal	Machine Learning	
3765	A survey on Machine Learning based EEG Classification for Detection of Depression	Mir Aamir Hamid and Jaiteg Singh	Machine Learning	
7847	A Study of User Predilection on UPI based Online Payment System with reference to Northern India	Maninderjit Singh Khanna, Harmaninder Jit Singh Sidhu and Akhilendra Khare	UPI Prediction	
2116	Micro Expression Recognition - Contemporary Applications and Algorithms	Parul Malik and Jaiteg Singh	Micro Expression Recognition	
8937	A Machine Learning Approach to Predict Critical Illness in Covid-19 Patients.	Amreen Ghumann, Brahmaleen Sidhu, Gaurav Gupta and Gurjit Bhathal	Machine Learning CP	
8937	=	· · · · · · · · · · · · · · · · · · ·	_	
6382	Demographic Data Analysis of Women Safety Parameters	Priyankal Kohli, Kawaljeet Singh and Brahmaleen K. Sidhu	Management	
6381	Effect of different concentrations of silicon dioxide nanoparticles on electro-optical and morphological properties of homeotropic aligned liquid crystal	Ankit Rai Dogra, Parul Malik, Vandna Sharma and Pankaj Kumar	Chemistry	SESSION 16
3775	Exploring Role of Mindfulness to Reduce Bias in Visual Inspection Technology	Anuradha Sandhu and Neeraj Anand	Machine Learning	
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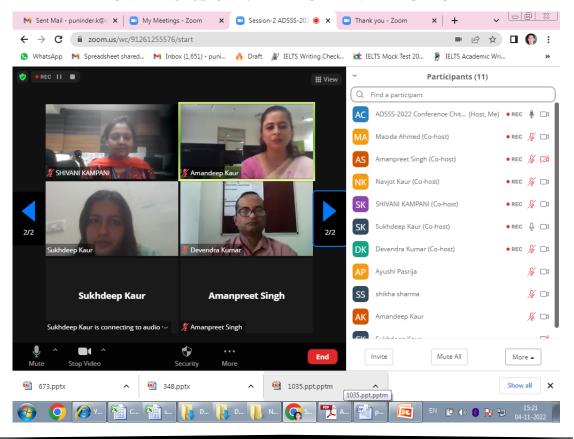
GLIMPSES OF ONLINE TECHNICAL SESSIONS

The glimpses of online technical sessions are show below. All technical sessions were conducted on the ZOOM platform and managed by the session coordinators.

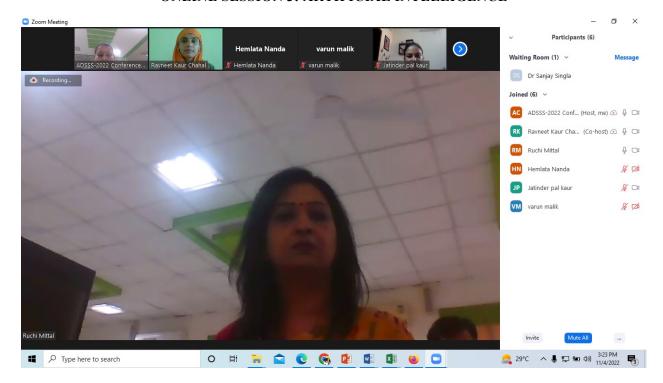
ONLINE SESSION 1: ARTIFICIAL INTELLIGENCE



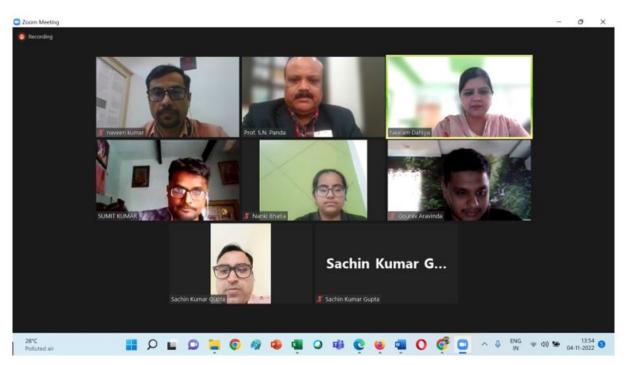
ONLINE SESSION 2: ARTIFICIAL INTELLIGENCE



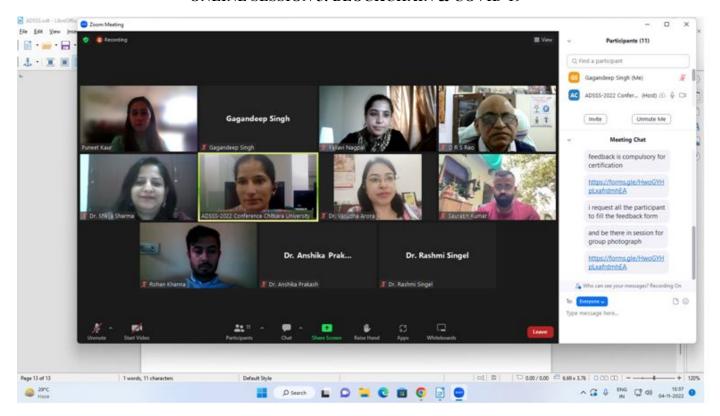
ONLINE SESSION 3: ARTIFICIAL INTELLIGENCE



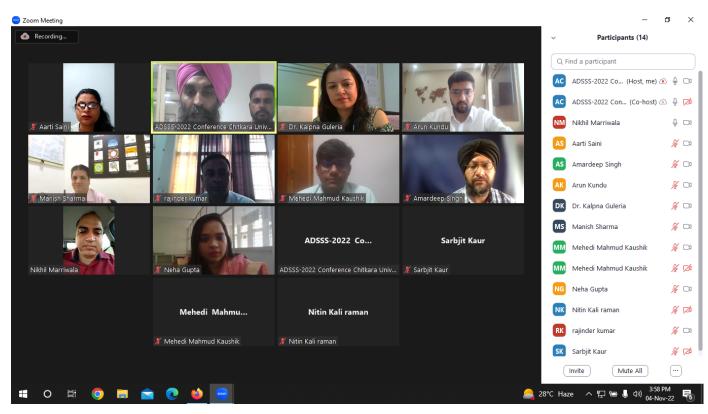
ONLINE SESSION 4: INTERNET OF THINGS



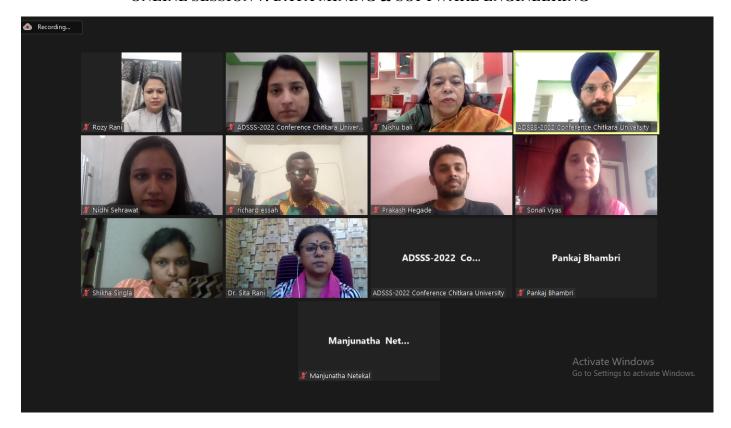
ONLINE SESSION 5: BLOCKCHAIN & COVID-19



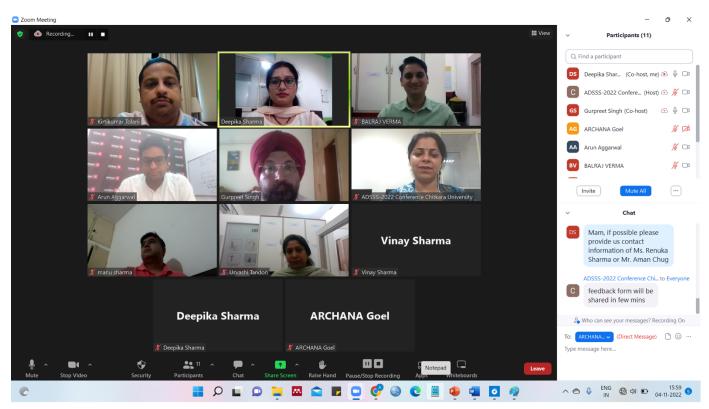
ONLINE SESSION 6: COMPUTER NETWORKS



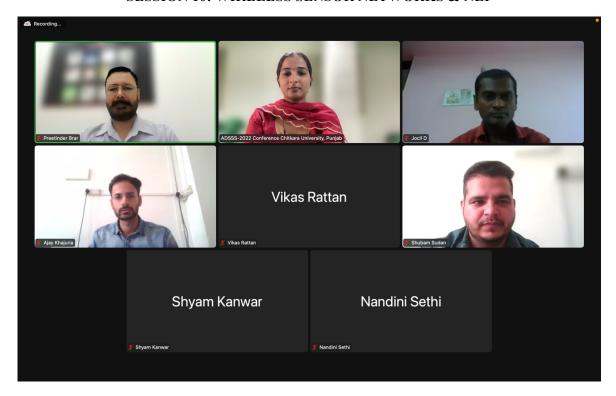
ONLINE SESSION 7: DATA MINING & SOFTWARE ENGINEERING



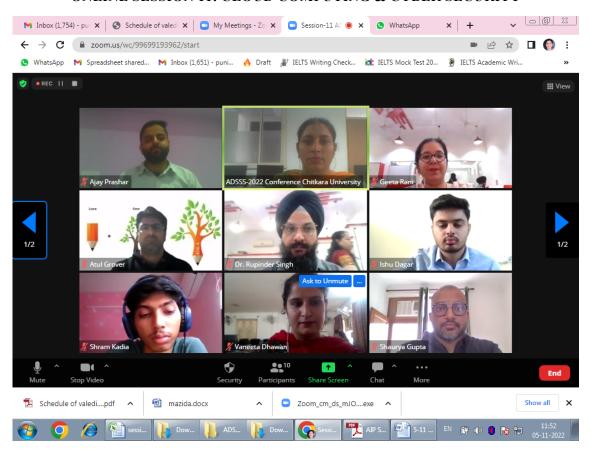
ONLINE SESSION 8: MANAGEMENT



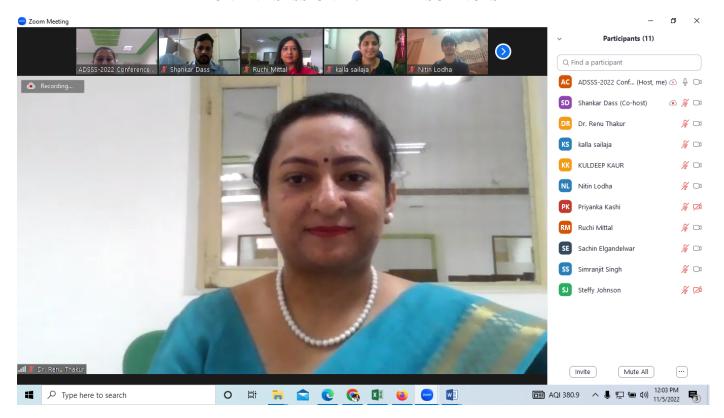
SESSION 10: WIRELESS SENSOR NETWORKS & NLP



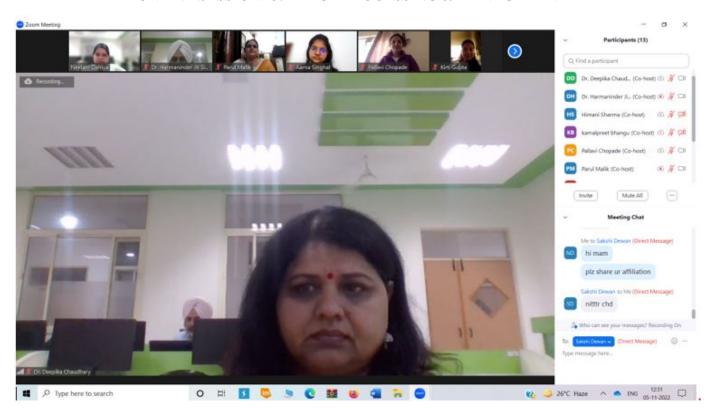
ONLINE SESSION 11: CLOUD COMPUTING & CYBER SECURITY



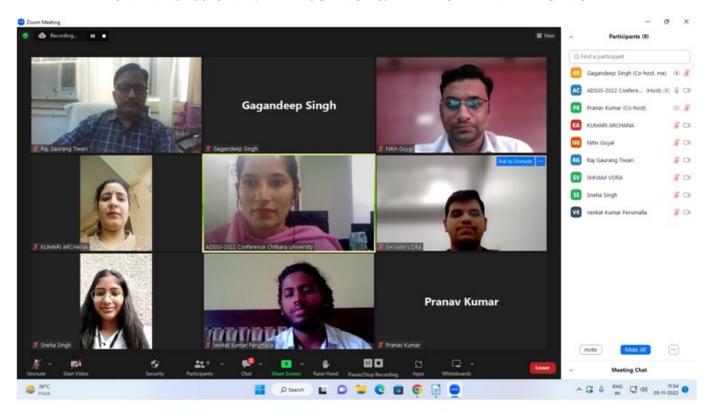
ONLINE SESSION 12: HEALTHSCIENCES



ONLINE SESSION 13: IMAGE PROCESSING & MANAGEMENT

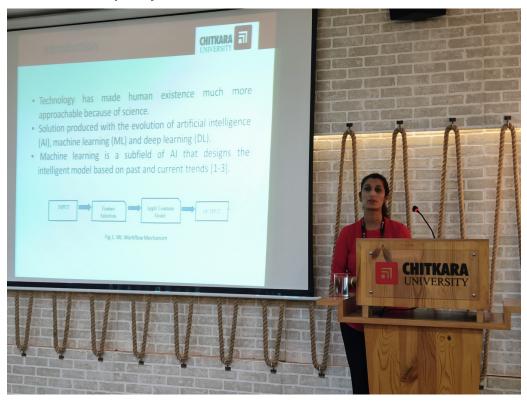


ONLINE SESSION 14: DATA SCIENCE & ARTIFICIAL INTELLIGENCE



GLIMPSES OF OFFLINE TECHNICAL SESSIONS

The glimpses of offline technical sessions are show below. All offline technical sessions were conducted in the PLATO hall, Chitkara University, Punjab



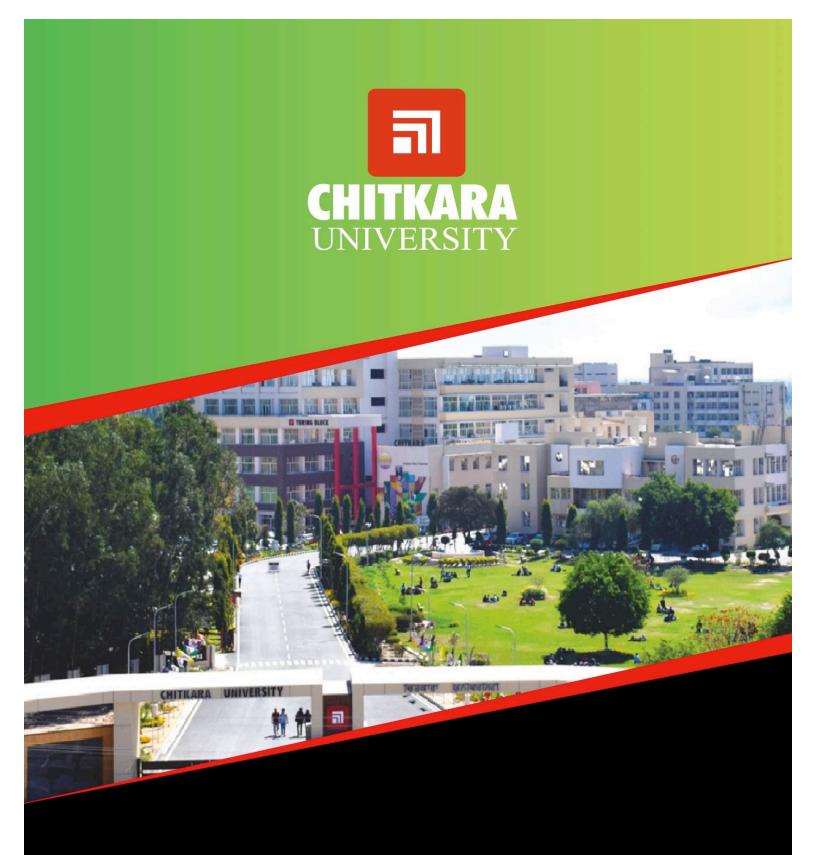






ACKNOWLEDGEMENTS

We thank our university management, national advisory committee, International advisory committee, session chairs, session coordinators and keynote speakers for their support and active participation. It would be impossible to conduct this conference in such a smooth way without their support. Due to their active support we could make this conference a grand success and wish to plan and execute second edition of this conference.



Chitkara University, Punjab

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