8th World Engineering Conference on Contemporary Technologies™

WECON™ 2025

October 10 - 11

Theme – NextGen Sustainable Technologies

Organized by – Chitkara University, Punjab, India

Technically Sponsored by – IEEE Delhi Section

Brief Report

Academic Collaborators

Industry Collaborators

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Introduction

WECON 2025, the 8th World Engineering Conference on Contemporary Technologies, technically sponsored by the IEEE Delhi Section was successfully organized by Electronics and Communication Department, Chitkara University, Punjab on Oct 10 and 11, 2025 and it was centred around the theme, **NextGen Sustainable Technologies**. The hybrid mode conference was attended by over 250 delegates from different parts of the world.

Deakin University, Australia and Asia Pacific University of Technology and Innovation, Malaysia were the international academic partners of the conference. While Vardhaman College of Engineering, Hyderabad and Model Institute of Engineering and Technology, Jammu were the national academic partners. TIF-AWaDH (IIT Ropar) and MathWorks were the industry partners for this edition of the conference.

History of WECON

WECON is the flagship engineering conference of Chitkara University and is one the oldest in the region, having begun in 2008. The seventh edition (WECON 2022) of the conference was organized in collaboration with Elsevier, and the accepted papers were published in the Materials Today Proceedings. The two editions prior to the last edition, i.e., WECON 2018 (6th edition) and WECON2016 (5th edition), were conducted with technical sponsorship from IEEE Delhi Section, and the proceedings of both these editions were published in IEEE Xplore. Over the years, WECON has earned a reputation of being one of the best engineering conferences conducted in the North India region.

WECON has been successful in garnering support and endorsement from government institutions like ISRO and DRDO; companies like Texas Instruments, NXP Semiconductors, Applied Materials Inc., IESA, EFY, Elsevier, etc.; and foreign universities like BCIT Canada, Deakin University Australia, George Brown College Canada, Heriot Watt University Malaysia, etc.

For many years, the focus of WECON has only been restricted to the state-of-the-art work in Wireless Networks and Embedded Systems domains. However, today there are many other fascinating technology areas that have been evolving rapidly and are attracting the interest of researchers worldwide. Therefore,

since the seventh edition, it has been decided to broaden the spectrum of WECON to include more contemporary technology areas in its ambit, and thus today the conference is known as the World Engineering Conference on Contemporary Technologies - WECON .

WECON 2025 Stats

- 287 papers were submitted to WECON 2025 across five tracks.
- With authors from 8 countries sharing their research, the conference truly reflected an international spirit. These countries include India, Indonesia, Malaysia, Iran, USA, Bangladesh, UK, and Saudi Arabia.
- A total of 176 seasoned researchers and industry practitioners from different parts of the globe reviewed the submitted papers and provided their expert comments.
- Based on the recommendations of the review committee, 23 papers were given an acceptance decision and 77 papers were given a revision decision in the first round.
- At the end of the second round, a total of 56 papers were accepted for presentation in the conference and publication in the conference proceedings taking the acceptance rate to a mere 20%.
- 48 papers registered for the conference and delivered their presentations. These papers shall now be sent for IEEE consideration for publication in IEEE Xplore.

Summary of the Program

WECON 2025 commenced with a grand Curtain Raiser and a Gala Dinner held at Hotel Holiday Inn-Chandigarh, Zirakpur on the eve of the conference.

The event featured lamp lighting, felicitation of the invited guests, release of conference souvenir, welcome addresses by Dr. Shivani Malhotra (Dean, ECE and TPC Chair), Dr. Rajnish Sharma (VC Chitkara University, H.P. and General Chair) and Dr. Sandhir Sharma (VC Chitkara University, Punjab); and most importantly, the words of wisdom from Dr. Madhu Chitkara (Pro Chancellor, Chitkara University and Chief Patron, WECON 2025).


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NextGen Sustainable Technologies
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WECON 2025 featured two keynote talks and three expert talks -

1. **Memory and Storage Solutions: Powering the Next Technological Revolution** by Dr. Vishal Sipani - Business Director, Micron India Research Center, Micron Technology, Hyderabad, India
2. **Design and Analysis of Sensor Interface Circuits** by Dr. Ankesh Jain – Associate Professor, Electrical Engineering Department, IIT Delhi, New Delhi
3. **Transnational Engineering Education** by Prof. Dennis Wong - Regional Provost and Group CEO (East and Southeast Asia), Newcastle University, Singapore
4. **Quantum Secure Communications in Microgrids** by Dr. Daniel Lai - Associate Professor, Deakin University, School of Information Technology, Australia
5. **Digital Healthcare through Virtual Reality Applications** by Dr. Neelesh Kumar – Chief Scientist and Head, Bio-medical Instrumentation, CSIO-Chandigarh

A panel discussion session on the topic **Developing a Skilled Workforce for India's Semiconductor Ecosystem** was held that was moderated by Dr. Rajnish Sharma - Vice Chancellor, Chitkara University, Himachal Pradesh and General Chair, WECON 2025. The panellists were –

1. Dr. Sandhir Sharma – Vice Chancellor, Chitkara University, Punjab
2. Dr. Preeti Bajaj – Chair-Elect 2025, IEEE India Council
3. Dr. Prerna Gaur – Professor, Electrical Engineering, Netaji Subhas University of Technology, New Delhi and Chair, IEEE India Council
4. Dr. Angsuman Sarkar - Professor and Head, ECE, Kalyani Government Engineering College, West Bengal

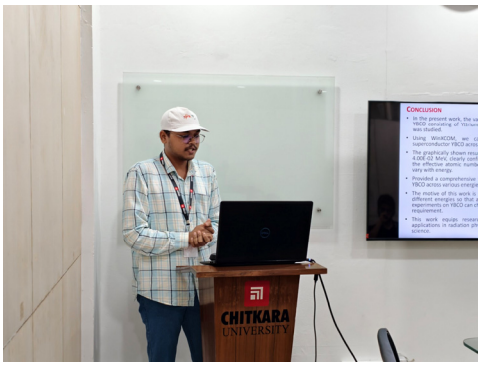
48 papers were presented in the conference and paper presentations were carried out across 9 sessions in 3 tracks, namely

a) AI and Machine Learning in Healthcare

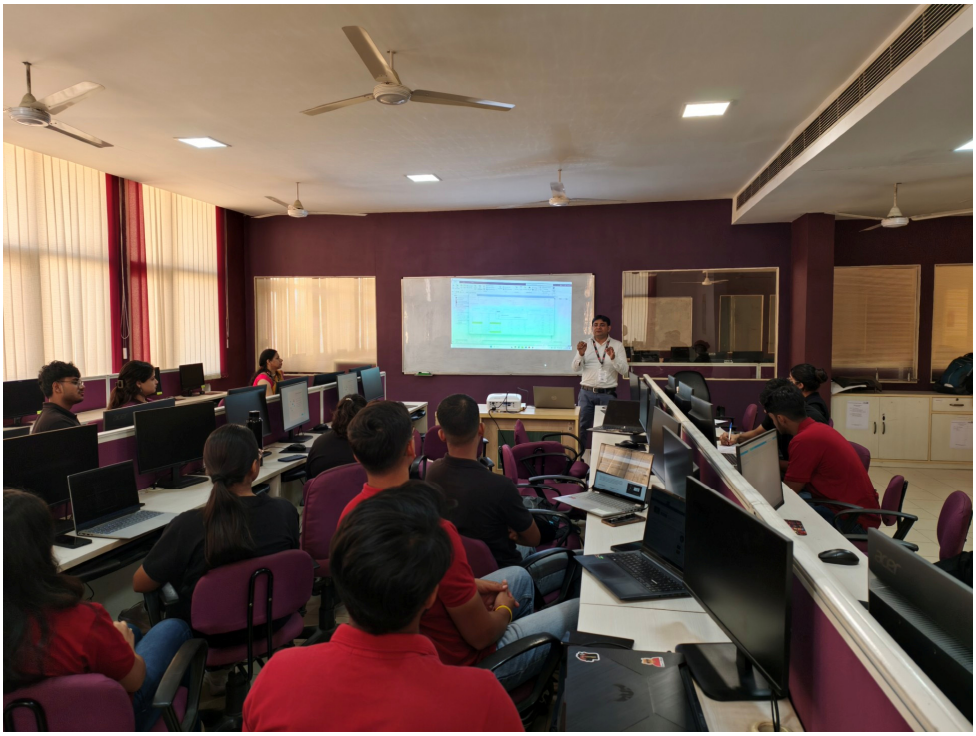
b) Sustainable Data-driven Solutions for Society, Environment and Industry

c) Next-Generation Electronics and Applied Technologies

19 session chairs from different parts of the globe evaluated the paper presentations that have been conducted over two days and have given their expert comments. These session chairs were – Dr. Neelesh Kumar (CSIO Chandigarh), Dr. Angsuman Sarkar (Kalyani Govt. Engg. College, West Bengal), Dr. Amit Pandey (Chitkara University), Dr. Imali Dias (Deakin University), Dr. Umesh Kumar Tiwari (CSIO Chandigarh), Dr. Meenu Garg (Chitkara University), Dr. Ankesh Jain (IIT Delhi), Dr. Suhaib Ahmed (MIET Jammu), Dr. Priyanka Malhotra (Chitkara University), Chua Kian Jon Ernest (National University of Singapore), Dr. Sushma Jaiswal (Guru Ghasidas Central University, Bilaspur), Dr. Priyanka Malhotra (Chitkara University), Dr. Adeline Sneha (APU Malaysia), Dr. Deepti Prit Kaur (Chitkara University), Dr. Reza Maghami (APU Malaysia), Dr. Kulbhushan Sharma (Chitkara University), Rajvir Kaur (NIT Puducherry), Dr. Nikhil Kumar (KU), Sathish Krishna (IBM Corporation), and Dr. Mohammad Maroof Siddiqui (Dhofar University Oman)



WECON 2025 also featured two pre-conference workshops and one hands-on workshop that was held on the day of the conference. The titles of these workshops are as follows: **Beyond Transistors: Quantum Dot Cellular Automata in Logic Systems** (held on July 18, 2025), **Five-day Pre-conference Workshop Immersive Realms: A Workshop on Gaming and AR/VR Development** (July 20-25, 2025), and **Two-day Conference Workshop on Innovating with MATLAB: AI, Simulation & Computational Insights** (October 10-11, 2025).



The conference was concluded in a valedictory ceremony wherein best paper presentations in sessions were announced and recognized and core organizing team of the conference was felicitated by Dr. Amit Mittal (Pro VC, Research Programs, Chitkara University, Punjab and International Collaboration Chair, WECON 2025) and Dr. Shivani Malhotra (Dean, ECE and TPC Chair, WECON 2025).





WECON 2025 was convened by Dr. Harsimran Jit Kaur (Professor, ECE) and Dr. Sagar Juneja (Associate Director, Research) from Chitkara University. Dr. Sagar Juneja also served as the Publication Chair of the conference.

Best Paper Presentation in a Session

The conference featured paper presentations across nine sessions. The best paper presentation from each session has been recognized. Details are listed below.

Session	**PID**	**Paper Title**	**Registered Author(s)**	**Affiliation**
1.1 - AI and Machine Learning in Healthcare	71	Identification of Factors behind High-Risk Pregnancies in Rural Punjab, India using Machine Learning	Gaganpreet Kaur	Thapar Institute of Engineering and Technology, Patiala, Punjab
2.1 - Sustainable Data-driven Solutions for Society, Environment and Industry	10	Cache-Optimized Shared Embedding Space For Seamless Cross-Modal Search	Padmini Gudavalli, G Uday Kiran, and K. Sri Snigdha	B V Raju Institute of Technology, Telangana
3.1 - Next-Generation Electronics and Applied Technologies	251	Enhanced Text Extraction from Low-Quality Legacy Documents Using TrOCR Assisted by Line Detection	A Kirti Meghana and Harsh Gupta	Sharda University, Uttar Pradesh
1.2 - AI and Machine Learning in Healthcare	181	Voice-Based Parkinson's Disease Stage Classification	Gottumukala Gayathri	Vardhaman College of Engineering, Telangana
2.2 - Sustainable Data-driven Solutions for Society, Environment and Industry	48	Efficient Real-Time Object Detection for Indoor Navigation Using Dual YOLO-SSD Networks and MobileNet Backbone	Eshaan Gupta	Manav Rachna University, Haryana
3.2 - Next-Generation Electronics and Applied Technologies	145	Energy-Aware 2D FIR Filter Design using Approximate Multipliers and Circular Coefficient Symmetry	Harish Babu Gade	CVR College of Engineering, Telangana
1.3 - AI and Machine Learning in Healthcare	273	Drug Identification using Graph Neural Network(GNN) for Cancer Treatment	Beetukuru Madhavan	Vardhaman College of Engineering, Telangana
2.3 - Sustainable Data-driven Solutions for Society, Environment and Industry	88	AI-Powered Early Intervention for Sustainable Agriculture: Multi-Crop Disease Detection and Classification Using CNNs	Kavita Jhajharia	Manipal University, Jaipur, Rajasthan
2.4 - Sustainable Data-driven Solutions for Society, Environment and Industry	40	Enhanced Partial Discharge Classification Using Ensemble Learning: A Comparative Analysis of Random Forest and XGBoost Approaches	Rafeetha V C	NIT Goa