



1st International Conference on Artificial Intelligence & Machine Vision (AIMV) 2021 Report

AIMV'21 was the 1st International Conference on Artificial Intelligence and Machine Vision organized by CSE Department of Pandit Deendayal Energy University, Gandhinagar. It provided researchers to interact and collaborate under one umbrella for recent developments, applications and research outcomes on Computer Vision, Machine Intelligence, Human Computer Interaction and Data Science.

CONFERENCE DETAILS

Theme: Artificial Intelligence and Machine Vision

Date: 24th – 26th September, 2021

Venue: Pandit Deendayal Energy University, Gandhinagar, Gujarat, India.

Publication: All accepted and presented papers will be published on *IEEE Digital library* and will be *Scopus Indexed*.

Associations & Sponsors:



*Important details and deadlines about paper submissions and student registrations were all highlighted in the website aimv.in. Total 267 Papers were received from different parts of the world, including 7 papers from USA and UK. Total 121 papers were accepted for presentations and 90 authors did registration for their paper presentations. Around 143 Reviewers reviewed the papers for the papers received. Around 14 tracks were executed for paper presentation and all 90 papers were presented during this 3-day conference.

Schedule:

1st IEEE International Conference on Artificial Intelligence and Machine Vision (AIMV) Program Schedule 24th-26th September, 2021					
Department of Computer Science and Engineering School of Technology Pandit Deendayal Energy University					
Day 1 (Friday, 24th September, 2021)	Time	Day 1 Friday (24, September 2021)	Day 2 (Saturday, 25th September, 2021)	Time	Day 2 Saturday (25, September 2021)
	8:00 AM - 9:00 AM	Registration		8:00 AM - 9:00 AM	Registration
	9:00 AM - 10:30 AM	Inauguration		9:00 AM - 10:30 AM	Keynote 2 (Dr. Avnish Kshatriya)
	10:30 AM - 11:00 AM	High Tea		10:30 AM - 11:00 AM	High Tea
	11:00 AM - 12:30 PM	Keynote 1 (Dr. Korhan Cengiz)		11:00 AM - 12:00 PM	Plenary Session Talk (Track 3) (Dr. J.C. Bansal)
	12:30 PM - 1:30 PM	Lunch Break		12:30 PM - 1:30 PM	Plenary Session Talk (Track 4) (Dr. Bhushan Garware)
	1:30 PM - 2:30 PM	Plenary Session Talk (Track 1) (Dr. Snehanshu Saha)		1:30 PM - 2:30 PM	Presentation Session 5 (ID: 54,62,63,182,68,69)
	2:30 PM - 4:00 PM	Plenary Session Talk (Track 2) (Dr. Jennifer Corbett)		2:30 PM - 4:30 PM	Presentation Session 6 (ID: 70,71,72,74,80,82)
	4:00 PM - 4:30 PM	Presentation Session 1 (ID: 4,5,7,9,12,13)		4:30 PM - 4:45 PM	Lunch Break
	4:30 PM - 6:00 PM	Presentation Session 2 (ID: 16,17,21,25,30,31)		4:45 PM - 6:15 PM	Presentation Session 7 (ID: 84,86,89,91,93,94,99,101)
Day 3 (Sunday, 26th September, 2021)	Time	Day 3 Sunday (26, September 2021)	Day 2 (Saturday, 25th September, 2021)	Time	Day 2 Saturday (25, September 2021)
	8:00 AM - 9:00 AM	Registration		8:00 AM - 9:00 AM	Registration
	9:00 AM - 10:00 AM	Plenary Session Talk (Track 5) (Dr. Ketan Kotecha)		9:00 AM - 10:30 AM	High Tea
	10:00 AM - 10:30 AM	High Tea		10:30 AM - 12:30 PM	Presentation Session 11 (ID: 143,144,145,146,147,150,151,152)
	10:30 AM - 12:30 PM	Presentation Session 12 (ID: 154,158,179,181,183,188,189,192)		12:30 PM - 1:30 PM	Lunch Break
	12:30 PM - 1:30 PM	Lunch Break		1:30 PM - 2:30 PM	Presentation Session 13 (ID: 193,195,201,203)
	1:30 PM - 2:30 PM	Presentation Session 14 (ID: 204,205,206,208, 190)		2:30 PM - 4:00 PM	Valedictory Function
	2:30 PM - 4:00 PM	Valedictory Function		4:00 PM - 4:15 PM	Tea Break
	4:00 PM - 4:15 PM	Tea Break			

Inauguration Session would be PDEU Auditorium, All Plenary Sessions in ICT LAB2 and CPLAB1 Eblock 2nd Floor
Presentation Session 1,3,5,7,9,11,13 would be in ICTLAB2, E Block, 2nd Floor, PDEU
Presentation Session 2,4,6,8,10,12,14 would be in CP LAB1, E Block, 2nd Floor, PDEU

LUNCH arrangement: Cafeteria PDEU
HIGH TEA: Outside Auditorium
TEA : Near Near ICT LAB2 and CP LAB1, E, Block, 2nd Floor

Tracks: There were total 5 tracks with numerous subdivisions on which papers were being accepted and presented.

1. Machine Intelligence
2. Computer Vision
3. Human Computer Interaction
4. Data Science
5. Cognitive Science

DAY 1:

The conference began with the registration and inaugural function, wherein the executive committee and guests lighted a lamp and offered their prayers to Maa Saraswati, the Goddess of Knowledge, for an auspicious start to AIMV'21. All the dignitaries talked about the technological advances and how it was impacting today's world.

Keynote Speech 1:

Dr. Korhan Cengiz, PhD, SMIEEE, was invited to deliver his keynote speech. With the help of all the knowledge that he has gathered over the years, and the immense experience he has gained in the field of IoT and WSN, he was able to put forward the basic theme and technical ideas of the conference with utmost ease.

Plenary Session Talks: Two plenary session talks were arranged for the first day before the start of the presentation sessions.

Dr. Snehanshu Saha

Dr. Snehanshu, who holds a Master's Degree in Mathematical and Computational Sciences, and a PhD in the department of Applied Mathematics, talked in detail about Super Optimizer, and Optimization in Deep Neural Networks. His insights were enlightening for the audience.

Dr. Jennifer Corbett

Dr. Jennifer, a lecturer in Psychology at Brunel University, had completed her PhD in Cognitive Science from the University of British Columbia. She gave the audience a brief about her interests and work in visual perception and cognition.

Presentation Sessions:

4 presentation sessions were conducted on day 1. A total of 25 papers were presented.

Session chairs for the day were as follows:

Session 1: Dr. Mohendra Roy (PDEU) & Dr. Pallabi Saikia (PDEU)

Session 2: Dr. Hardik Patel (PDEU) & Dr. Kaushal Shah (PDEU)

Session 3: Dr. Nayantara Kotoky (PDEU) & Dr. Purvi Koringa (PDEU)

Session 4: Dr. Vipin Shukla (PDEU) & Dr. Rutvij Jhaveri (PDEU)

DAY 2:

The second day began with registration for the paper presenters and attendees. This was followed by the second keynote speech.

Keynote Speech 2:

Dr. Avnish Kshatriya, currently the Global Head & Principal Consultant of Transformation & Advisory Office (TAO) within the CIO/CDO Function of Wipro Limited, was the second keynote speaker for the AIMV'21. He talked about the what, how, why and where of Machine Vision. All the attendees also got to know the latest and upcoming trends in the field of AI and MV.

Plenary Session Talks: Two plenary session talks were arranged for the second day before the start of the presentation sessions.

Dr. J. C. Bansal

Dr. Bansal is an associate professor at South Asian University, New Delhi and a visiting faculty at Math and Computer Science in Liverpool Hope university, UK. He has worked with the IAF and Liverpool Hope University on various research projects and is the series editor of the book series Algorithms for Intelligent Systems.

Dr. Bhushan Garware

Dr. Bhushan works as a senior Data Scientist at Persistent Systems with special interest in Digital Healthcare. His current work is based on applications of Deep Learning for CT, MRI, X-Ray and Microscopic images. His recent area of research interests are Explainable AI and Assistive Intelligence.

Presentation Sessions:

6 presentations sessions were conducted on day 2. A total of 40 papers were presented.

Session chairs for the day were as follows:

Session 5: Dr. Premanand Gadaker (VIT, Pune) & Dr. Rajiv Gupta (PDEU)

Session 6: Dr. Pramit Majumdar (IIIT, Vadodara) & Dr. Shakti Mishra (PDEU)

Session 7: Dr. Aadarsh Parikh (Industry) & Dr. Paawan Sharma (PDEU)

Session 8: Dr. Priyanka Sharma (Industry) & Dr. Debabrata Swain (PDEU)

Session 9: Dr. Vibha Patel (VGEC) & Dr. Ashok Karania (Industry)

Session 10: Dr. Sunil Gautam (IAR) & Dr. Pallabi Saikia (PDEU)

DAY 3:

The last day began with registration for the paper presenters and attendees. This was followed by a plenary session.

Plenary Session Talk: One plenary session talk was arranged for the last day before the start of the presentation sessions.

Dr. Ketan Kotecha

Dr. Kotecha is a recipient of the two SPARC projects worth INR 166 lacs from MHRD govt. of India in AI in collaboration with Arizona State University, USA and University of Queensland Australia. Dr. Kotecha has expertise and experience of cutting edge research and projects in AI and Deep Learning for last 25 + years.

Presentation Sessions:

4 presentations sessions were conducted on the last day. A total of 25 papers were presented.

Session chairs for the day were as follows:

Session 11: Dr. Raju G. (Christ, Bangalore) & Dr. Debabrata Swain (PDEU)

Session 12: Dr. Mehul Barot (LDRP) & Dr. Chintan Patel (RRU)

Session 13: Dr. Kanhaiya Sharma (Anurag University, Hyderabad) & Dr. Kaushal Shah (PDEU)

Session 14: Dr. Nishant Doshi (PDEU) & Dr. Aarti Jain (JP Noida)

Valedictory Function

The valedictory session began with a brief introduction from Dr. Kaushal Shah. This was followed by the feedback and suggestions from the convener, **Dr. Samir Patel** and the co-convener, **Dr. Santosh Kumar Bharti**. After this, the student volunteers and offline presenters were called on the dais to give their feedback and suggestions, also sharing with everyone their experience and views about their role in the conference.

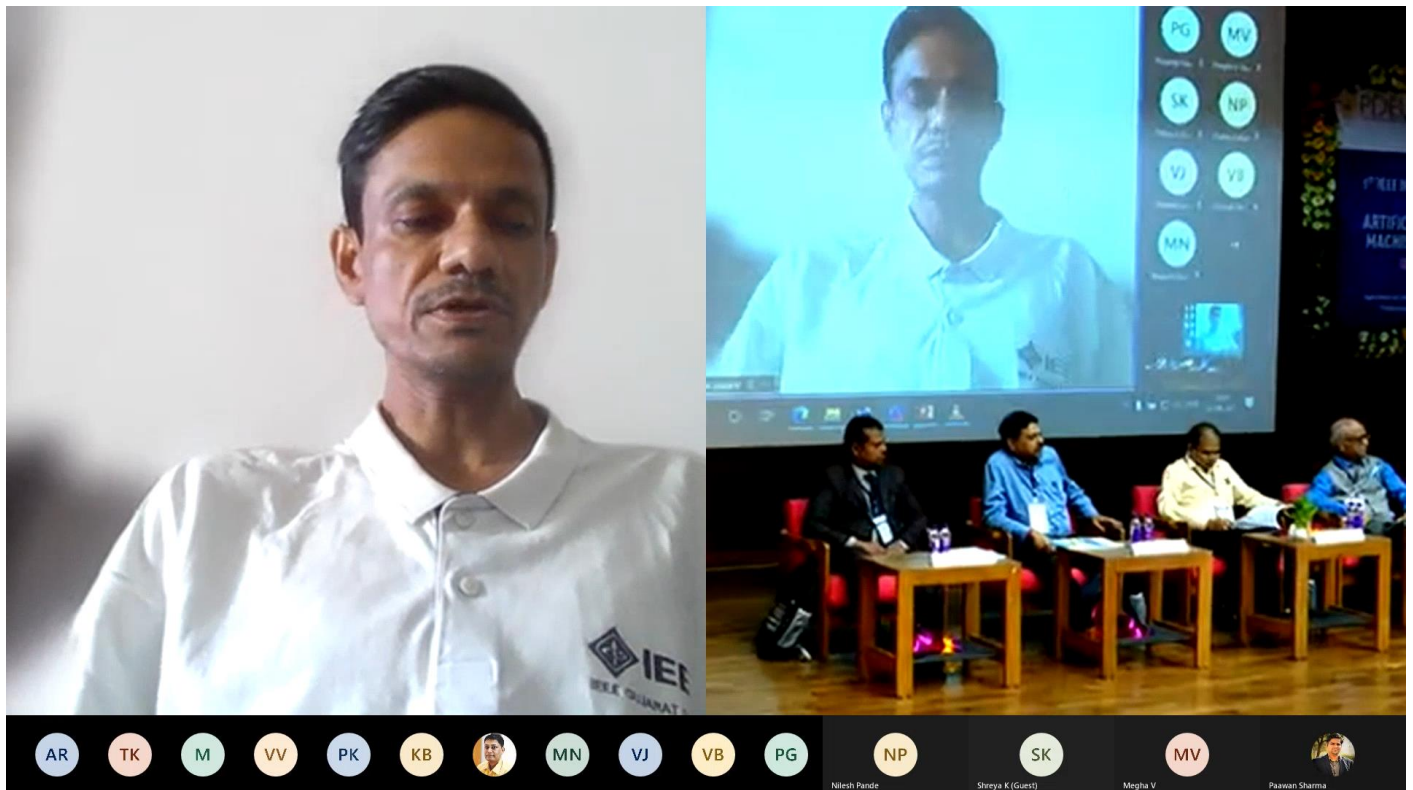
This 3-day conference came to an end with the valedictory function in which Dr. Samir Patel and Dr. Santosh Kumar Bharti thanked all the members who were involved in making this conference a success.

The 1st IEEE Conference AIMV'21 was concluded with the National Anthem.

Gallery:

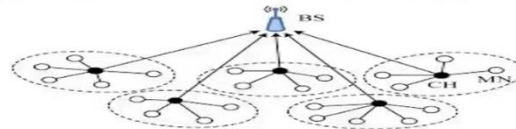


Inauguration Function



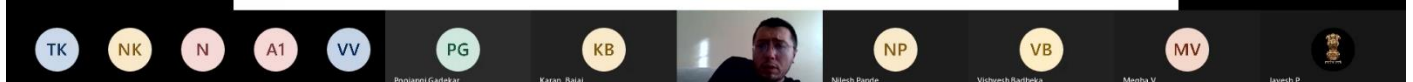
Motivation

- A WSN contains distributed sensor nodes that can sense, record and distribute physical and environmental parameters. WSNs have become an active research area since they have integrated in our daily lives with a vast number of applications, such as **disaster relief, target tracking, environmental control, smart cities, medicine and health care.**

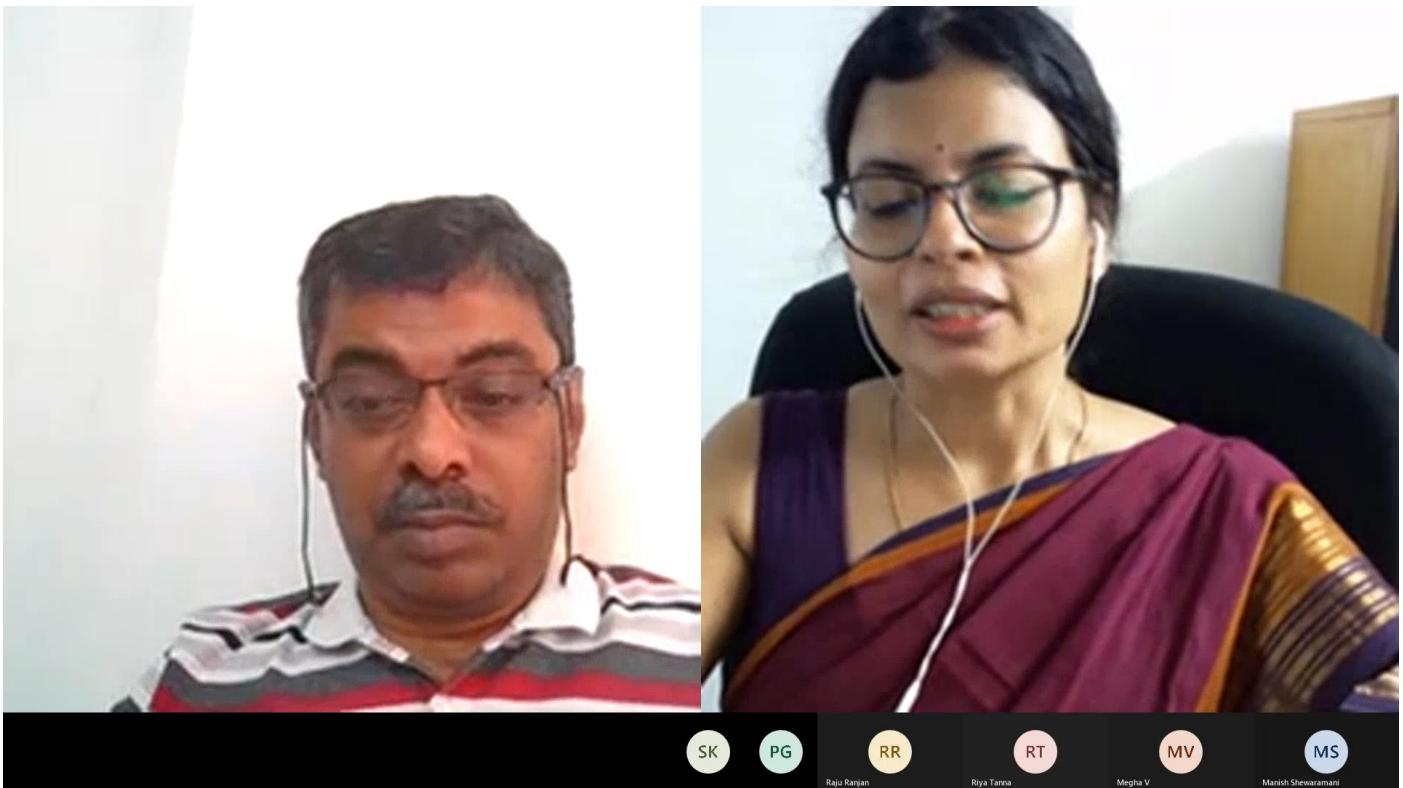


- To distribute the sensed data, different approaches are used.
 - **direct transmission**
 - Direct communication between sensor nodes and receivers
 - **multi-hop routing**
 - Relays between sensor nodes and receivers
 - **clustering**
 - Clusters of sensor nodes collect and transmit data for each cluster
 - Efficiently maintain the energy consumption of sensor

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Keynote Sessions



Plenary Sessions



Presentation Sessions



Valedictory Session