

Department: EEE | Date: 27th to 29th November, 2020

A Three day International E-Conference
on
"Energy, Control, Computing and Electrtronic Systems (ICECCES-2020)"

Report

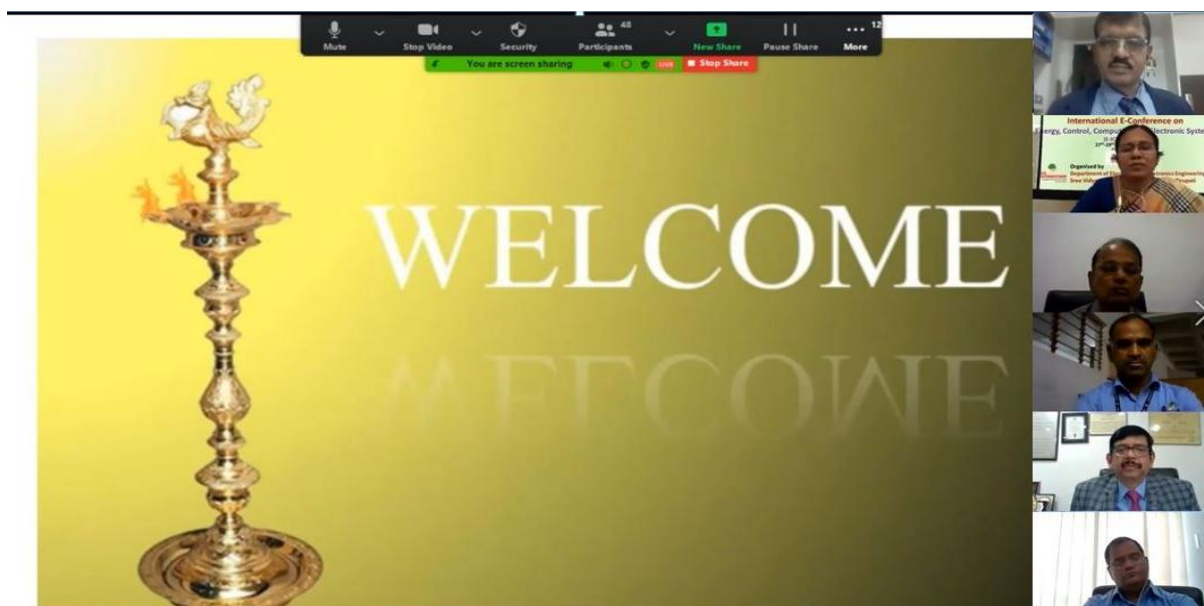
The conference was held from 27th to 29th November 2020. It brought together a wide range of researchers, academicians, and research scholars working on the subject title.

It served as the multi-disciplinary platform for exchanging innovative ideas and thoughts on the Energy, Control, Computing and Electrtronic Systems and their applications to the society. Based on the conference theme, 50 papers were shortlisted from the total count of 150 papers from different countries like India, Bangladesh, Morrisia, China etc,. This scientific meeting had 2 technical talks and 7 technical sessions where 50 research papers were presented.

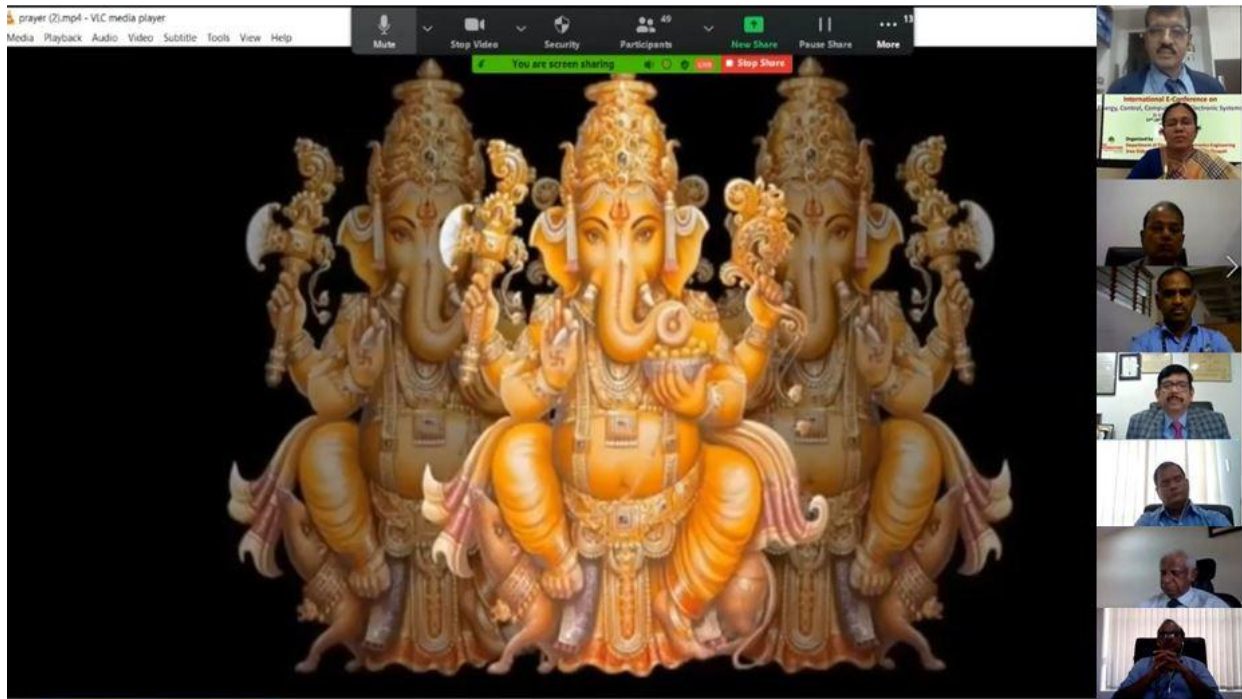
Day 1: 27th November, 2020

Session 1: Inauguration and Keynote address by Dr. Sydulu Maheswarapu, Professor (HAG), NIT-Warangal.

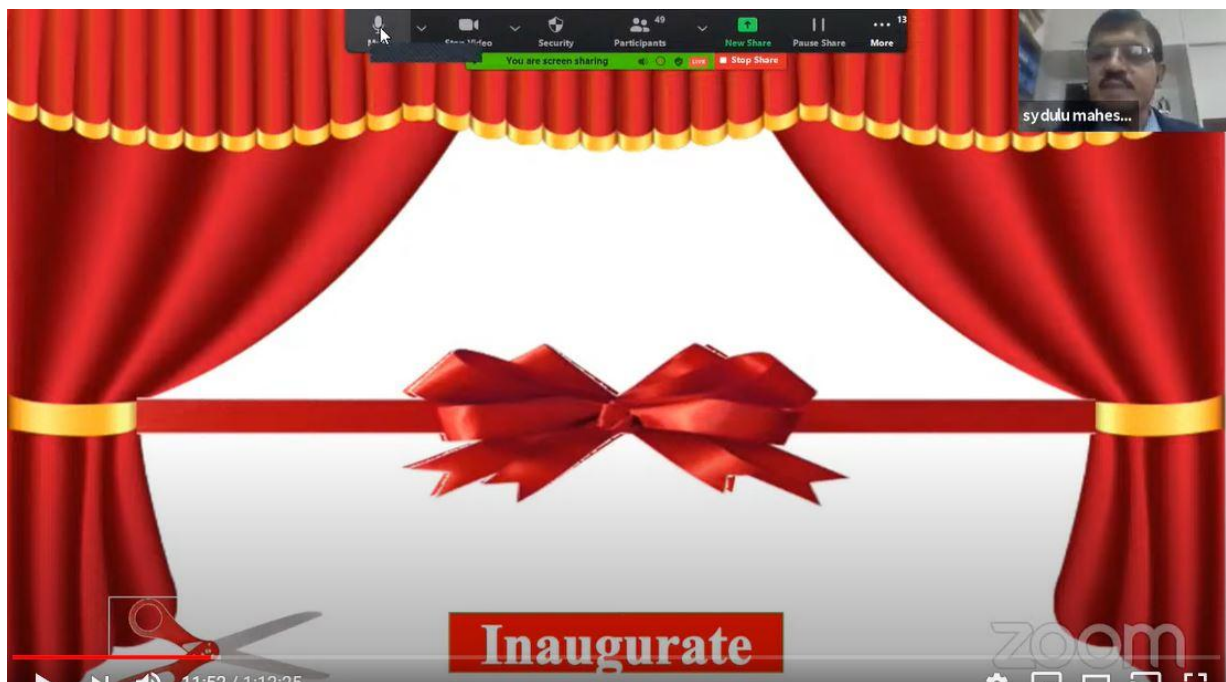
Chief Guest of International Conference, Dr. Sydulu Maheswarapu, Professor (HAG), National Institute of Technology, Warangal; Guests of Honor, Prof. L. Venugopal Reddy, Advisor cum Director, SVET & Dr. Lazar Mathew, Pro Vice chancellor, Karunya University, Coimbatore; Principal, SVEC, Dr. P.C. Krishnamachary; Director Q & D, SVET, Dr. I. Sudarshan Kumar; Conference chair Dr. T. Nageswara Prasad, Vice Principal, BoS Chairman Dept. of EEE & Prof. M. S. Sujatha, HoD, Dept. of EEE; Conveners, Dr. G. Harikrishnan & Dr. V. Arun, Associate Professors Dept. of EEE graced the e-inauguration of the conference.



E-Lighting of the lamp



Prayer Song



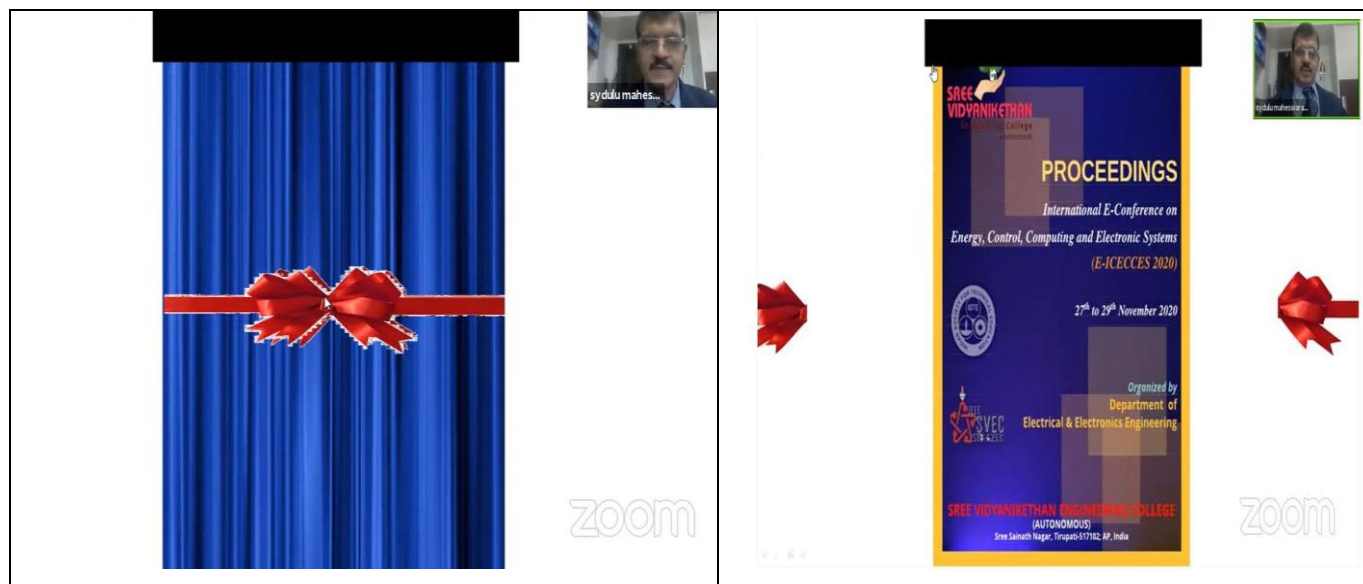
Digital Inauguration of the conference by the Chief Guest



Digital Inauguration of the conference by the Chief Guest



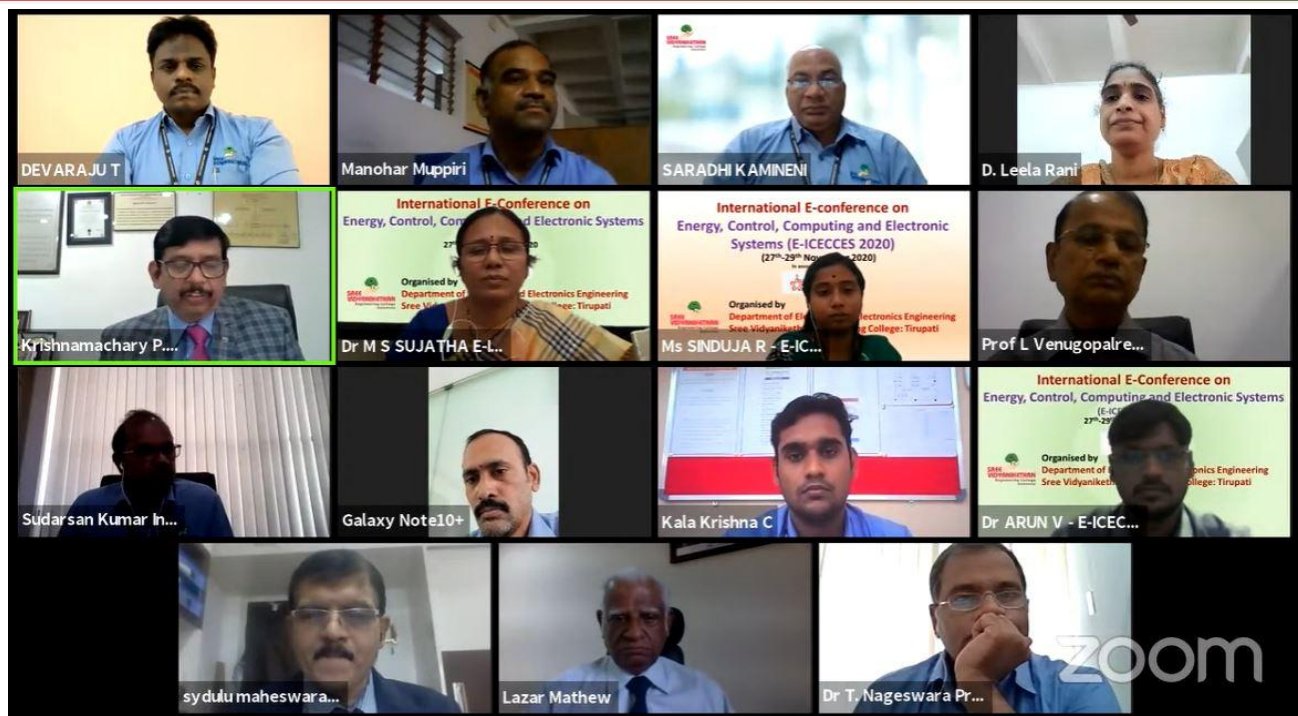
Dr. M. S. Sujatha, Conference Chair delivering welcome address



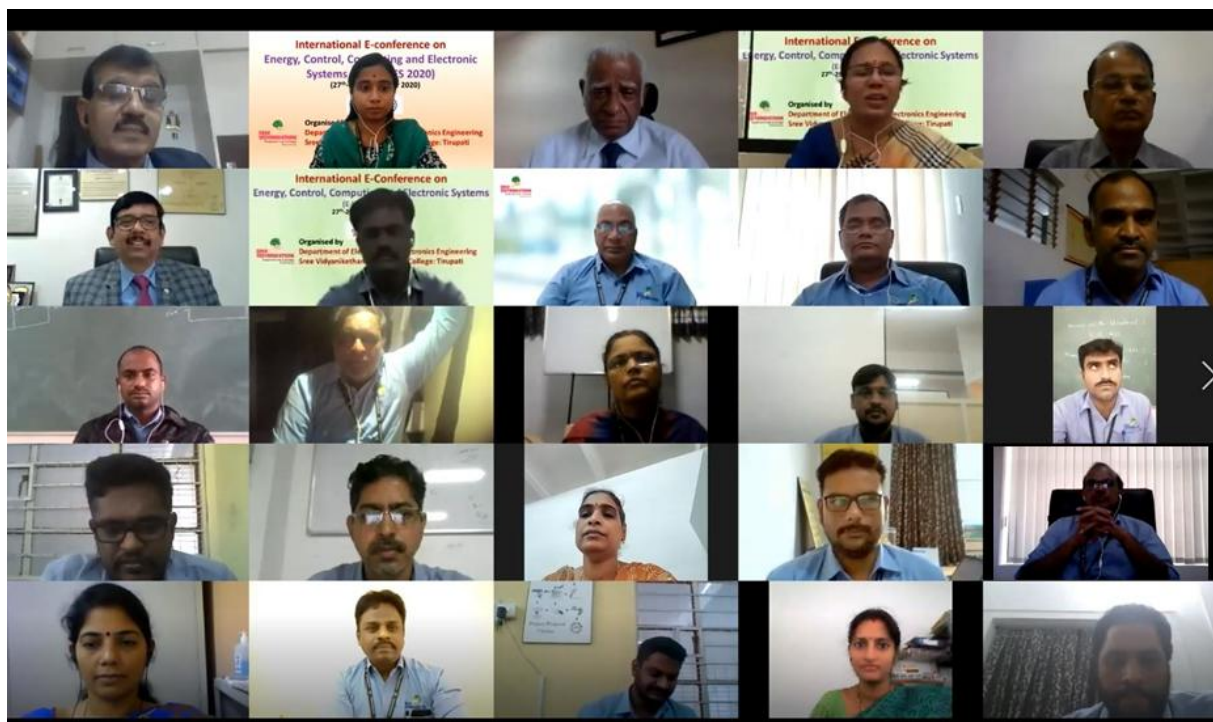
Release of the conference souvenir by Chief Guest



Chief Guest, Dr. Sydulu Maheswarapu delivering Keynote address

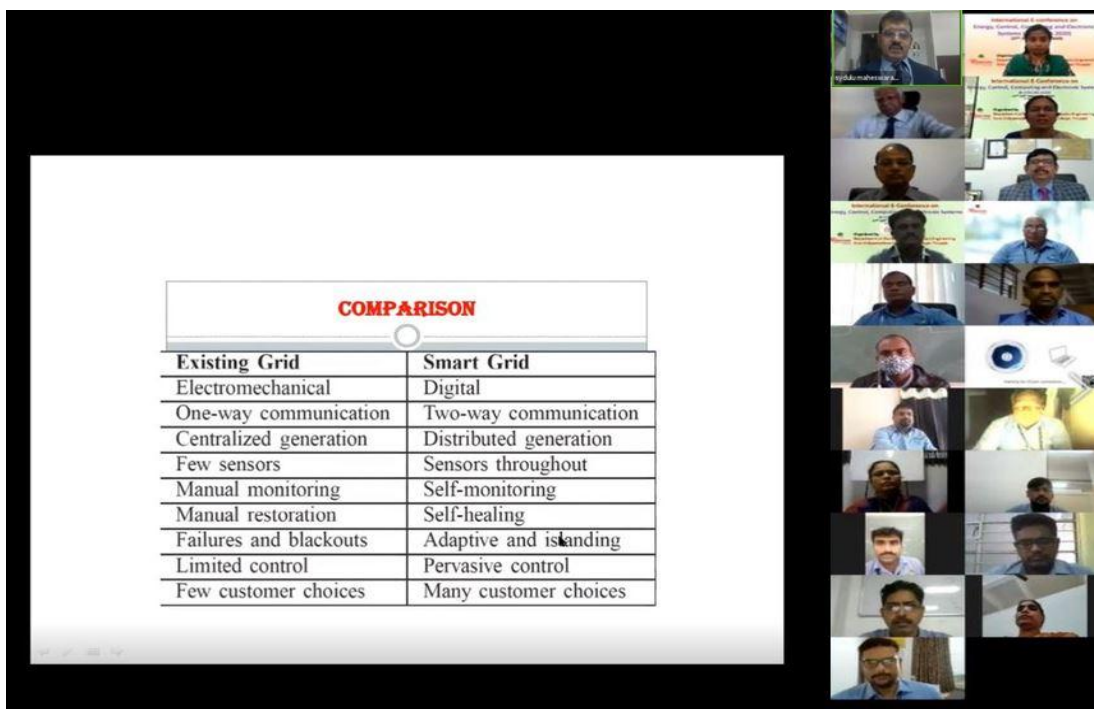


Principal, Dr. P.C. Krishnamachary addressing the gathering



Participants during inaugural session

Session 1: Invited Talk - 1: "Modern Society with Smart Grid & Challenges" - Dr. Sydulu Maheswarapu, Professor, NIT, Warangal.



COMPARISON	
Existing Grid	Smart Grid
Electromechanical	Digital
One-way communication	Two-way communication
Centralized generation	Distributed generation
Few sensors	Sensors throughout
Manual monitoring	Self-monitoring
Manual restoration	Self-healing
Failures and blackouts	Adaptive and islanding
Limited control	Pervasive control
Few customer choices	Many customer choices

Dr. Sydulu Maheswarapu delivering a talk on "Modern Society with Smart Grid & Challenges"

Dr. Sydulu Maheswarapu presented his extensive research on "Modern Society with Smart Grid & Challenges" and discussed on the latest ICT components, tools, technologies, architecture, and various optimization techniques, as well as its current development in Smart grid-based applications. As modern society is unimaginable without use of electricity, communication, internet and computers, he gave more insights about the smart technologies used in smart grid like WAMS, PMU, RTU etc.

Session 2: Invited Talk - 2: "IOT based Renewable Energy Systems" - Dr. Ashok G. Matani, Professor, Dept. of Mechanical Engineering, Government College of Engineering, Amaravathi, Maharashtra.

Dr. Ashok G. Matani gave a Power Point presentation, entitled: "IOT based Renewable Energy Systems". In his address, Dr. Matani emphasized the role of Artificial Intelligence and Internet of Things (IOT) which has almost marginally changed every element of energy industry. He gave insights about drones which has even its advantage in Covid-19 prevention protocol by identifying the persons who were without their face mask. He gave more real time applications of IOT and AI based renewable energy systems. He gave more insights on AI and IOT which are the drivers of modern energy industries.

Significance of IoT-based renewable energy systems

- The blades on turbines are industrial assets that wear out over time and therefore need to be inspected annually.
- This accounts for almost one million blades that need to be checked each year.
- In the past this was done through a complicated procedure with personnel rappelling from the blades and inspecting everything from up close.

Participants (12)

Initials	Name	Role
SR	Sindhuja R	(Co-host, me)
DH	Dr.G Harikrishnan	(Host)
DM	Dr Matani	(Co-host, guest)
AB	Ankush Bhishnurkar	(Guest)
AI	Aravindh ICECCES-223	(Guest)
AM	Ashish Mali	(Guest)
DA	Dr ARUN V	
DA	Dr. A K Damodaram	
FS	Farook Shaik	
HB	Hemalata Bhujle	(Guest)
MN	madhuri n s	
NK	NMG Kumar	

Dr. Ashok G. Matani delivering a talk on "IOT based Renewable Energy Systems"

Technical Sessions: Paper Presentations

In the technical sessions, authors presented their research contributions in two parallel sessions.

Technical Session-I: Chaired by Dr. Ashok G. Matani, Professor, Dept. of Mechanical Engineering, Government College of Engineering, Amaravathi, Maharastra and co-chaired by Dr. NMG Kumar, Professor, Dept. of EEE, SVEC and Dr. S. Farook, Associate Professor, Dept. of EEE, SVEC.

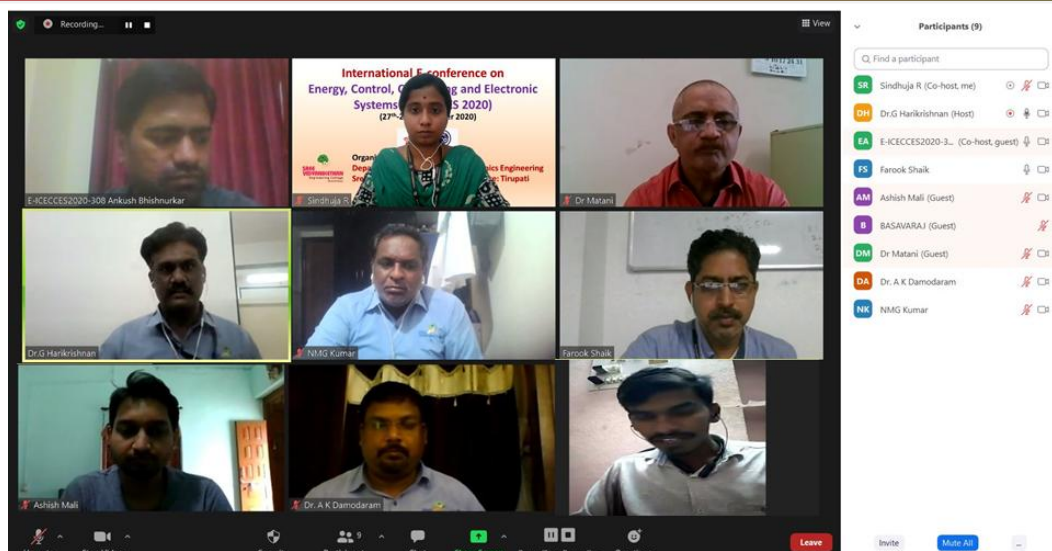
Conclusions

- ❑ Deformation and stresses are drastically reduced when presently available blades of 7 mm thickness are modified for 9 mm thickness.
- ❑ The risk of soil and water pollution is minimised by using organic fertilizers.
- ❑ Overall maximum production achieved by plots prepared by using rotavator and minimum water supply.
- ❑ The maximum production of Pigeon Pea of 814kg was obtained from plot whose seedbed is prepared by using rotavator and organic fertilizer followed by 802kg from the plot whose seedbed is prepared by using rotavator and chemical fertilizer was used.
- ❑ The minimum Pigeon Pea production of 690kg was obtained from the plot whose seedbed was prepared manually and chemical fertilizer was used.

Participants (9)

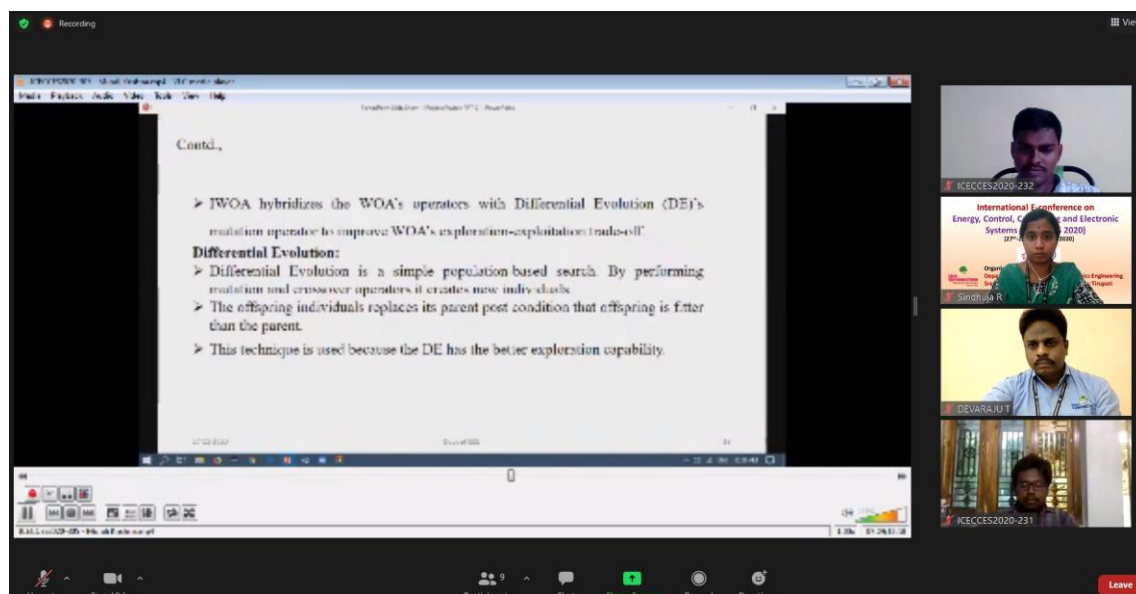
Initials	Name	Role
SR	Sindhuja R	(Co-host, me)
DH	Dr.G Harikrishnan	(Host)
EA	E-ICECCES20...	(Co-host, guest)
AM	Ashish Mali	(Guest)
B	BASAVARAJ	(Guest)
DM	Dr Matani	(Guest)
DA	Dr. A K Damodaram	
FS	Farook Shaik	
NK	NMG Kumar	

Participants presenting their research contributions

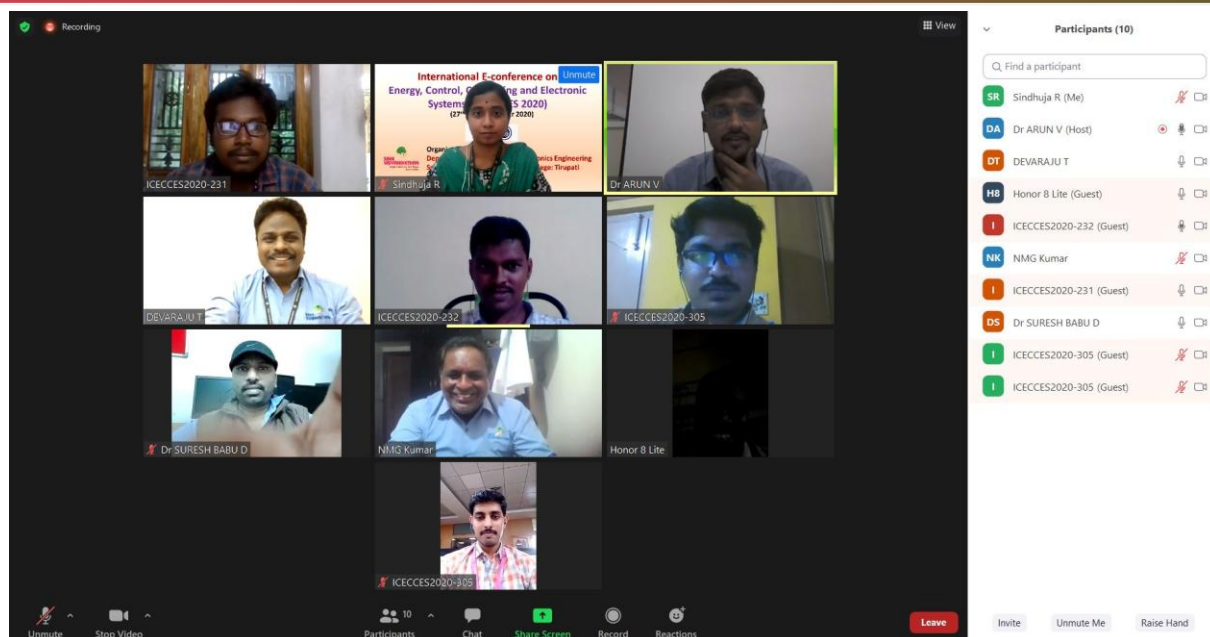


Participants during their research contributions

Technical Session-II: Chaired by Dr. Gowri Manohar, Professor, Dept. of EEE, S.V University College of Engineering, Tirupati and co-chaired by Dr. T. Devaraju, Professor, Dept. of EEE, SVEC and Dr. D. Suresh Babu, Associate Professor, Dept. of EEE, SVEC.



Participants presenting their research contributions



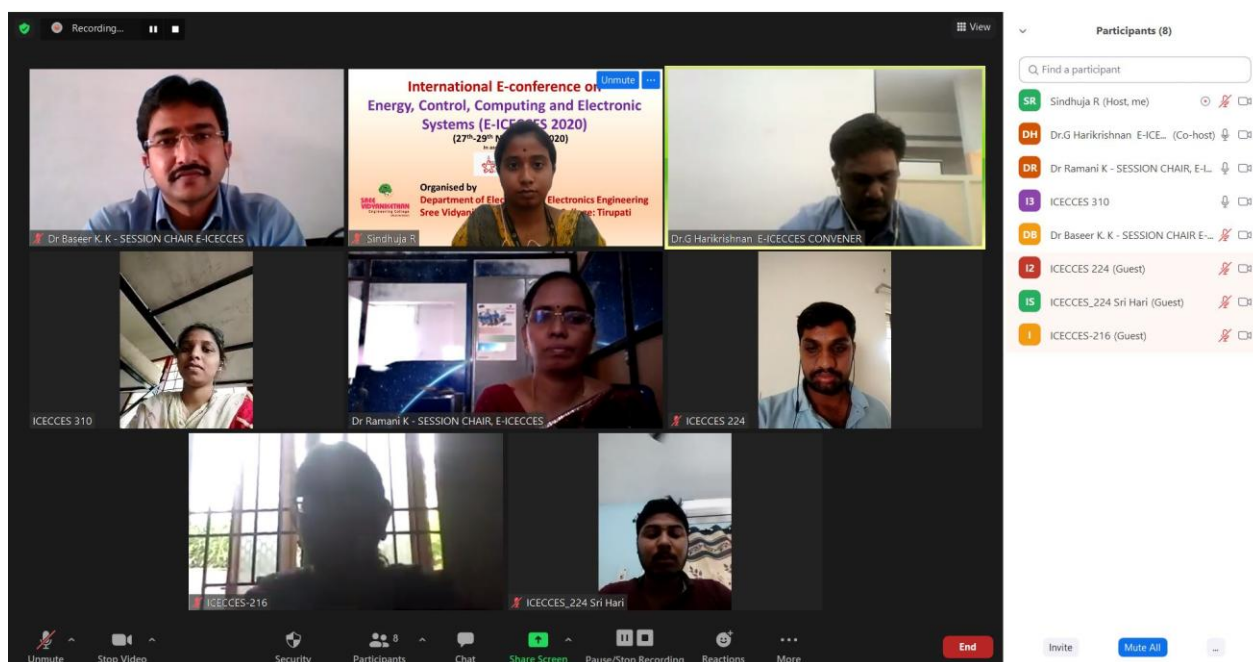
Participants during their research contributions

Day 2: 28th November, 2020

Technical Sessions: Paper Presentations

In the technical sessions, authors presented their research contributions in three sessions.

Technical Session-III: Chaired by Dr. I. Kullayamma, Assistant Professor, Dept. of ECE, S.V University College of Engineering, Tirupati and co-chaired by Dr. K Ramani, Professor & Head, Dept. of IT, SVEC and Dr. K. Baseer Associate Professor, Dept. of IT, SVEC.



Participants during their research contributions

Technical Session-IV: Chaired by Dr. Usha, Professor, Dept of EEE, S.V University College of Engineering, Tirupati and co-chaired by Dr. N. Gireesh, Professor & Head, Dept. of ECE, SVEC and Dr. E. Parimalasundar, Associate Professor, Dept. of EEE, SVEC.

COMPARISON OF INVERTER TOPOLOGIES

Topology	Full Bridge	H5	H6	HERIC
No. of Power devices	4	5	6	6
No. of switches On each period	2	3	4	2
Efficiency	High	High	High	Highest
Leakage current	Low	High	Very low	Very low
Common mode voltage	Constant	Float	Constant	Float
Switching frequency	T1-4 high	T1-4 line	T1-4 line	T1-4 high

SIMULATION PARAMETERS

PARAMETER
DC VOLTAGE
MODULATION INDEX
GRID FREQUENCY
CARRIER FREQUENCY

Participants presenting their research contributions

MATHEMATICAL MODEL OF CASCADED MULTILEVEL INVERTER

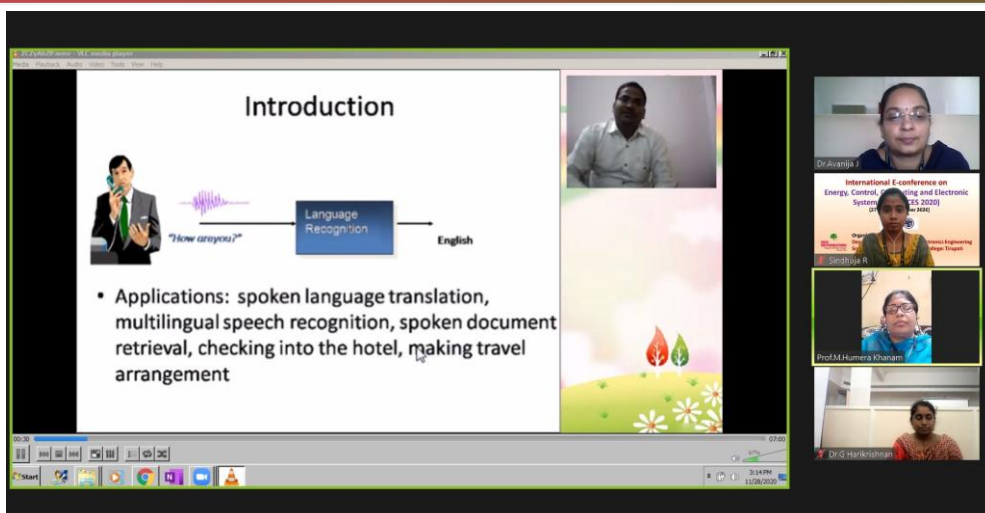
- Number of H-bridges = $[N-1]/2$.
- Number of carrier signal = $N-1$ where N is the level of inverter.
- $THD = \sqrt{(V_3^2 + V_5^2 + \dots + V_n^2)} / V_1$.

For five level:

- 2 H-bridges are using.
- 4 carrier waves are using.
- $THD = \sqrt{(V_3^2 + V_5^2)} / V_1$.

Participants presenting their research contributions

Technical Session-V: Chaired by Dr. M. Humera Khanam, Professor, Dept. of CSE, S.V University, Tirupati and co-chaired by Dr. J. Avanija, Associate Professor & Chair BOS, Dept. of CSE, SVEC and Dr. M. Sakthivel, Associate Professor, Dept. of CSE, SVEC.



Participants presenting their research contributions



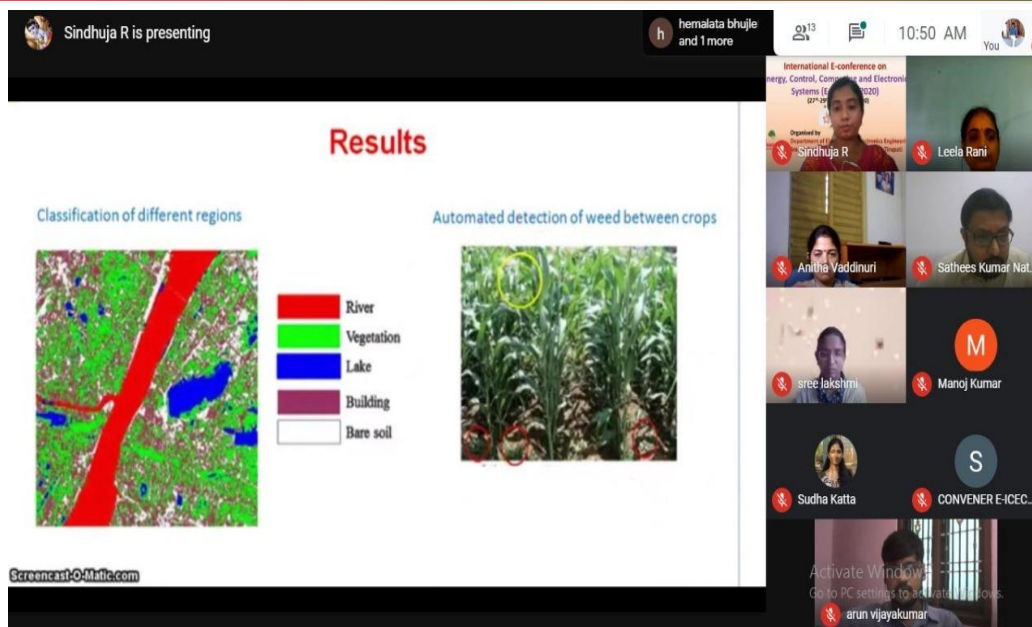
Participants during their research contributions

Day 3: 29th November, 2020

Technical Sessions: Paper Presentations

In the technical sessions, authors presented their research contributions in two parallel sessions.

Technical Session-VI: Chaired by Dr. Sathees Kumar Nataraj, Faculty, AMA International University, Bahrain and co-chaired by Dr. V. R. Anitha, Professor, Dept. of ECE, SVEC and Dr. D. Leela Rani, Professor, Dept. of ECE, SVEC.



Participants presenting their research contributions

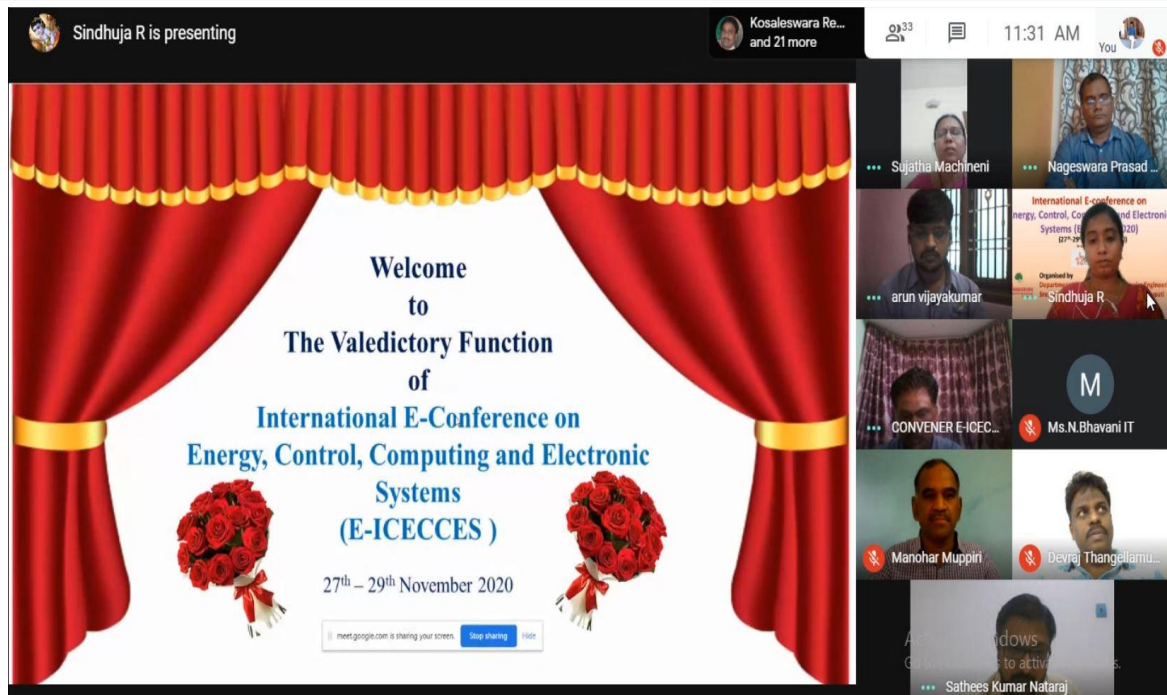
Technical Session-VII: Chaired by Dr. M.S. Sujatha, Professor & Head, Dept. of EEE, SVEC and co-chaired by Dr. V. Arun, Associate Professor, Dept. of EEE, SVEC.

Closing Ceremony:

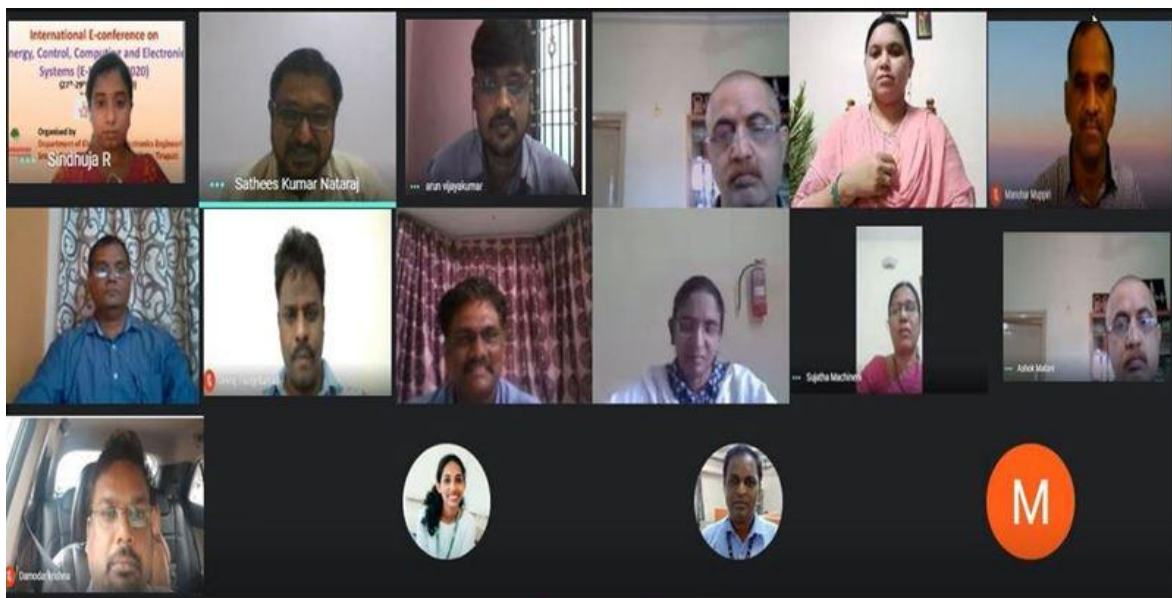
The Chief Guest of the Valedictory function Dr. Sathees Kumar Nataraj, Faculty, AMA International University, Bahrain; Dr. T. Nageswara Prasad, Vice Principal, BoS Chairman Dept. of EEE & Prof. M.S. Sujatha, HoD, Dept. of EEE; Convener, Dr. G. Harikrishnan & Dr. V. Arun, Associate Professors, Dept. of EEE graced the e-valedictory ceremony of the conference and the certificates were issued to the Participants.



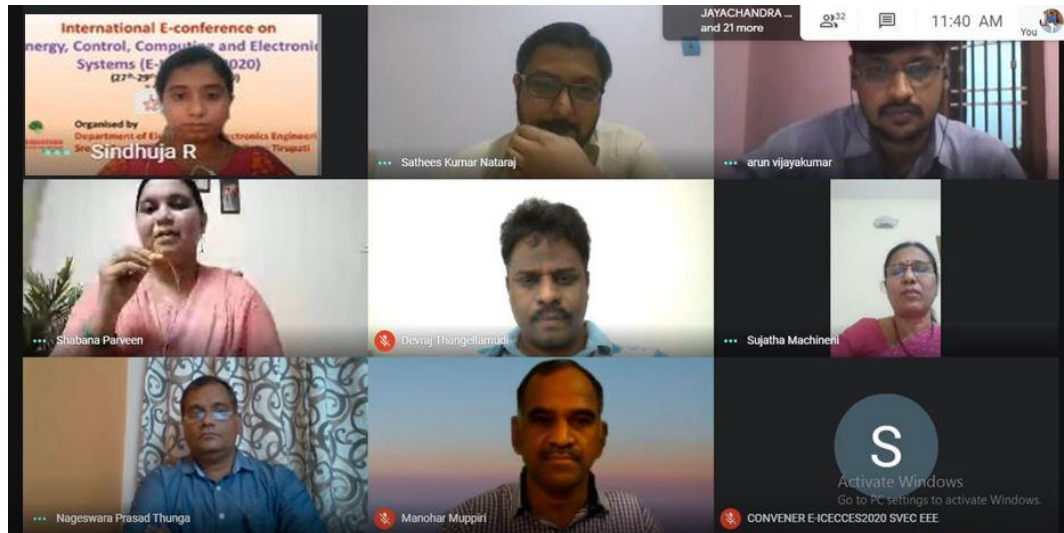
Welcoming all to Valedictory function



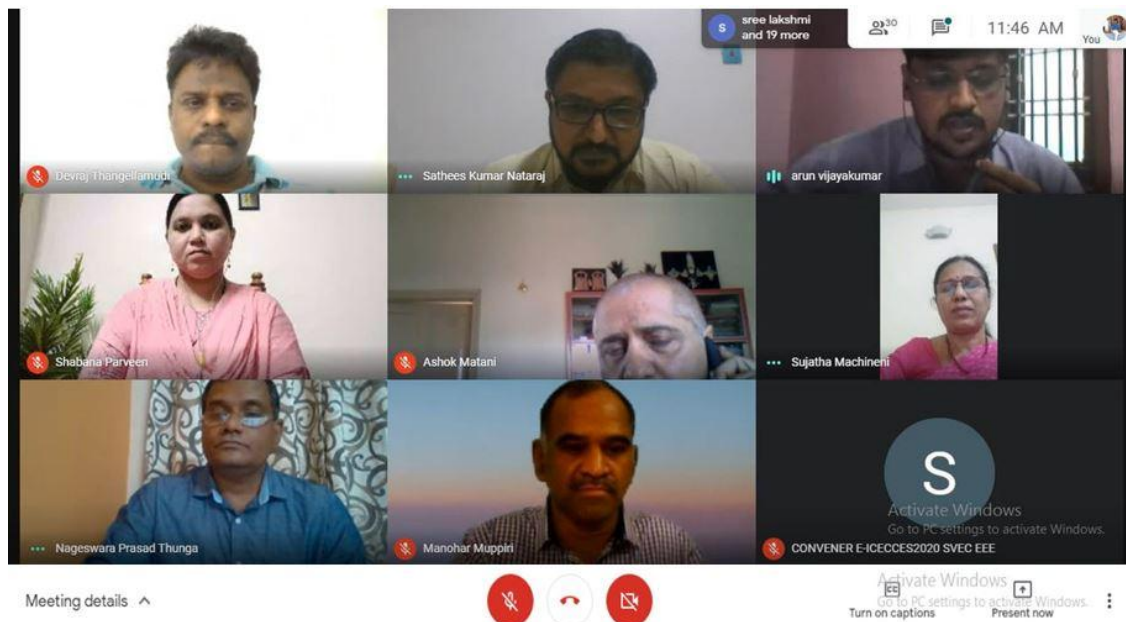
Conference Chair Dr. M.S. Sujatha delivering closing remarks



Participants at valedictory ceremony:



Participants giving feedback



Co-Convener, Dr. V. Arun delivering Vote of Thanks
