

**IEEE YESIST 12 2021**

**REPORT**

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## **1 Executive Summary**

**IEEE YESIST'12 2021** (YOUTH ENDEAVOURS FOR SOCIAL INNOVATION USING SUSTAINABLE TECHNOLOGY) (SS12) is an international flagship event that showcases the inner potential of budding minds through various tracks. The ultimate aim is to bring about the development and advancement of the community. The event holds its fame in recognizing talented students and exhibiting their works in front of global leaders of multiple disciplines.

The last implementation of the event happened in the year 2021 in a virtual mode using the Webex platform, due to the global pandemic. The grand finale took place from the **18th to the 20th** of September 2021. The final pitching round led to the selection of **6 winners, 8 runners runner ups and 6 honourable mentions** from 5 tracks. Tracks were formed according to the functionalities including Innovation Challenge, Maker Fair, WePOWER, Junior Einstein and Special track, involving around 183 participants from 16 countries. Members and students from India, Bangladesh, EGYPT, Srilanka, Oman, Iraq, Pakistan, Indonesia, Greece, Burkina Fas, Mexico, Peru, El Salvador. Nigeria, Japan, Kenya have presented their innovation on the international platform.

An exclusive steering committee was set up with **Dr Ramalatha Marimuthu** as General Chair, and **Ms Ketha Nikitha** as the secretary for the 2021 edition of YESIST'12. The team formulated new strategies and activities for the successful completion of the event along with guidance and support from a panel of advisors from various regions. Two co-chairs and an advisor per track were assigned to assist the members in performing their respective activities. The event involved active and dedicated 100+ Student volunteers and IEEE members from various sections. The winners and runners of the competition had a golden opportunity to present their projects at IEEE Region 10 Humanitarian Technology Conference ( **IEEE R10 HTC** ) 2021, the flagship conference, IEEE Bangalore Section. Finalist and selective Volunteers were provided with an opportunity to learn the **Japanese Pluz N5 Level Achiever ( 250\$ )** course and **Microsoft Cloud Training** (100\$ ) therefore assisting them in reaching their career goals.

The Inauguration and Valedictory ceremony of IEEE YESIST 12 2021 witnessed a variety of eminent speakers from various parts of the globe thus adding to the success of the event. Eminent dignitaries such as

- **Mylswamy Annadurai** (Padmashree, Former Director, ISRO Satellite Centre (ISAC), Bangalore)
- **Susan Kathy Land** (2021 IEEE President & CEO, an IEEE Fellow)
- **Mary Ellen Randall** (Founder and CEO of Ascot Technologies, Inc.)
- **Deepak Mathur** (IEEE Region 10 (Asia-Pacific) Director 2021-2022)
- **Forrest Shull** (2021 IEEE Computer Society President)
- **Deepa Shenoy** (Professor and Dean of Engineering, UVCE College, Chair-Elect IEEE Bangalore section)
- **Bikarna Kumar Ghosh** (Managing Director, Bangladesh Hi-Tech Park Authority)
- **Darwin Jose Raju** (Associate Professor and the Head of the Department, Electrical and Electronics Engineering in St. Xavier's Catholic College of Engineering)

- **Praneeth Balasubramanian** (Manager - Operations, Japanese Pluz, SST GLOBAL)

Shared their valuable insights and experience with the younger generation thus inspiring them towards service-oriented engineering practices.

The partners and sponsors who played an indispensable role greatly supported the prosperity of the international event. The partners from the IEEE community were IEEE Computer Society, IEEE Entrepreneurship, IEEE Madras Section, IEEE YP Madras Section, IEEE WIE Madras Section, IEEE Madras Educational Society, IEEE SSIT Madras Section, IEEE TRY Engineering, IEEE YP Kenya Section, IEEE WIE Kenya Section and IEEE Region 10 professional activities committee. International partners played a major role in the establishment of the competition in the global arena which includes, Rotary Organization, ATAL Innovation Mission, Wepower and NITI Sating. The industrial, educational and governmental organizations include Tinkerly, Yuva bharathi public school, Kamlavati Senior Secondary school and Bangladesh hi-tech park authority.

Thus the 9-month journey of the IEEE YESIST 12 for the year 2021 ended with grand success and with the expectation towards the next edition of 2021

## **2 Detailed Report**

### **2.1 Inaugural Ceremony**

The Inauguration ceremony of IEEE YESIST 12 2021 witnessed a variety of eminent speakers from various parts of the globe on 18 September 2021 from 6.15 PM (IST) onwards. The ceremony marked the beginning of the grand finale of the international talent show. The session began with an Inaugural Keynote address from

**Dr Mylswamy Annadurai** (Padma Shree, Former Director, ISRO Satellite Centre (ISAC), Bangalore) addressing the gathering about the “Space systems for Sustainable Development Goals” further explaining more about 17 sustainable goals, satellites from the past and its growth of humanity in science and technology.

The traditional lamp lighting ceremony of the IEEE YESIST 12 2021 went on virtually marking the beginning of the grand innovation platform by Ms Susan Kathy Land, President of IEEE (2021 IEEE President & CEO, an IEEE Fellow). The session began with the Welcome address from Ms Nithyavathy Nagarajan extending the warm invite to the dignitaries and delegates of the evening.

The history and the vision of the talent show along with its mission were outlined by Dr Ramalatha Marimuthu, General Chair IEEE YESIST 12 2021. She detailed the entire session and

the events to be happening in the following days. She thanked the dignitaries and insisted the participants utilize the opportunities and bring their innovations for the enhancement of society.

**Ms Susan Kathy Land** (2021 IEEE President & CEO, an IEEE Fellow) who in her address applauded the efforts of the entire team and further went on to elaborate about “Innovation as a life of way”. She emphasized the role of Engineers and IEEE in technological innovation towards the world's challenging problems.

**Mary Ellen Randall** (Founder and CEO of Ascot Technologies, Inc.) who took the spot addressed the motto and progress of the IEEE MOVE Program in a nutshell

**Dr Mylswamy Annadurai** in his felicitation speech appreciated the efforts and steps of the team in establishing this platform.

Further, **Ms Bozena Pasik Duncan** expressed her thoughts on Project Based Learning and the importance of the learning methodologies in the educational system.

**ANM Safiqul Islam Director** (Finance and Admin) and Joint Secretary, Bangladesh Hi-Tech Park Authority expressed the remarkable contribution of the government in establishing Start-up ecosystems and their progress towards achieving sustainable goals.

The beginning of IEEE YESIST 2021 was declared open by **Mr Deepak Mathur** (IEEE Region 10 (Asia-Pacific) Director 2021-2022) and he highlighted the social ethology of the technology and its role in humanitarian projects. He further outlined the initiatives and congratulated the team success in his address.

A vote of thanks for the event was proposed by Ms Bharathi Ramesh thanking the esteemed dignitaries, participants, sponsors, partners, steering committee and all the volunteers for having their presence on the occasion. The inauguration ceremony came to an end with a group photo and the E-memento presented to the dignitaries as a token of gratitude.

Inaugural ceremony, Dr Mylswamy Annadurai, Ms Susan Kathy Land and several speakers gave detailed information about sustainable development and emphasized the technological innovation and the opportunities in IEEE. Finally, the speakers admired the efforts and contribution of the YESIST'12 team.

## 2.2 Track 1: WePower

The WePOWER Track began its journey remarkably in the second week of February 2021 with the official meetup and followed by bi-weekly meetups since then wherein the responsibilities, progress, and plans were discussed. WePOWER Track of YESIST12 2021 came up with a paramount theme for 2021, **Sustainable Energy: Meeting the Rising Energy Demands** with a key objective to bring projects meeting the requisites of the current Energy demands. Adding more anticipation, this year WePOWER Track organized this grand event in coordination with **World Bank, IEEE WIE, IEEE Kenya Section WIE, IEEE Madras Section.**

In addition to the new particulars, there were numerous neoteric initiatives taken by WePOWER Track for 2021, such as **Voice of WePOWER** – A Voice Directory of Super - Women in STEM, which brought to light two renowned leaders' thoughts, **Prof. Bozena Pasik Duncan**, University of Kansas and Advisor of IEEE YESIST12 WePOWER Track and **Lucy Craig**, Director of Growth, Innovation & Digital at DVN. Joining the initiative was an engaging **Workshop on Entrepreneurship in the Renewable Sector** by **Dr Rashi Gupta**, fondly known as Batterywali of India on July 24, 2021, from 4:00 to 5:30 PM IST. The workshop gave inputs about opportunities in the Renewable Industry. Following this preparation towards the finals commenced.

The current year **WePower Track** had a total of 37 abstracts from 5 countries namely India, Bangladesh, Oman, Turkey and Singapore. Out of that, we had 16 finalists for the finals from 3 countries namely India, Bangladesh, Oman. **WePower Track Finals** took place on 18th and 19th September 2021 which kickstarted with a Keynote session on **Introduction to WindTRAIN + Deep Storage Technology** by **Dishant Mishra**, CEO & Project Head, Baud Resources endowing us with deep cognizance on WindTrain and Deep Storage Technology. For the final presentation, WePOWER Track two renowned juries, **Prof. Sri Niwas Singh** from Department of Electrical Engineering, IIT Kanpur. and **Dr Panagiotis Papadopoulos**, Director of Business Development - Smart Energy Systems Elin Verd S.A, Greece.

All the finalists gave spell bounding presentations giving tough competitions to other finalists. Emerging out as **Winners** were "Maryam Nasser Al-Hinai, Aisha Mohammed AL-Maqbali, Abeer Majed AL-Maqbali, Safa Abdullah AL-Sukaiti" from University of Technology & Applied Sciences (IBRI Technology), Oman with the Project title - **Highway Energy Harvesting with Vertical Axis Wind Turbine in IBRI Wilayat, Oman**. They presented well with proper demonstration regarding how wind energy can be harvested from the wind-generated due to moving vehicles.

The **Runners of the WePower event** were "Anupma Thakur and Ashish Sharma" from CSIR-CSIO, India with the Project title - **Nanobot with Paper-based Flexible Photoelectrodes as an Artificial Light-Harvesting Leaf for Green Hydrogen Production**. They gave an important aspect of generating Green Hydrogen Energy which is going to help the future rising energy demand.

The **Special Mention** of WePower event is the Project entitled - **Avoid Electricity wastage of lavatory by using Microwave Controller** presented by "Yogesh S. Kale, Anagha Surtikar, Utkarsh Dafe" from India. They demonstrated how electricity and water can be saved in lavatories by using technology with special mention to campus accommodations.

On the whole, WePOWER Track sketched out a detailed plan and yielded beautiful execution achieving the vision of the track with combined efforts of Co-chairs, Advisor, vibrant volunteers and enthusiastic participants.

WePower track emerged with the theme "Sustainable Energy: Meeting the energy rising demands". Various sessions and workshops were established under the Renewable domain. On the whole, WePOWER Track sketched out a related plan and resulted in a wonderful implementation achieving the vision of the track.

### **2.3 Track 2: Maker Fair**

Maker Fair is a celebration of innovators, makers, doers getting together to showcase their outcomes to the local society. The theme of MAKER FAIR is followed by Unsustainable development goals from ideation to commercialization with a key objective to deliver projects matching the requirements of the current Energy needs. With the support of co-chairs....and advisory committee call for Abstracts commenced on 2 May and concluded on August 15 with over 37 teams from across 5 different countries to bring about and showcase their innovations. The event carried on with presentations from various young makers which was carried out with webinars on different areas to keep the participants excited and to empower the creators within.

Under the banner of the Maker fair various events were organized to benefit the attendees, On Aug 16, **Global Summit Program** was organized which is a platform to share innovation with key Academicians and businesspeople joining us across renowned groups. The objective of this program is to spread awareness of Social Innovation through the YESIST12 Platform and get awareness about integrating YESIST12 with Career Enhancement

To encourage women in society, the Women-in wind energy program was administered on July 31st. The session highlighted some of the control systems issues for wind turbines at these scales and outline an advanced control method that is developing to address the issues and finally closed by discussing continuing challenges and ongoing and future research avenues that can further facilitate the growth of wind energy.

Webinar on "**Inspire and Engage the Engineers of Tomorrow with Assistive Technology Engineering**" which was handled by **Dr S.K.Ramesh** Professor, California State University and Director and Lead Principal Investigator of AIMS2 Program at California State University in collaboration with IEEE Brand Ambassadors Community and IEEE SSIT Madras section on 27th July.

On 29th June, **Mr Sampathkumar Veeraraghavan** Chair at IEEE SIGHT Global Steering Committee, and Founder & President, The Brahman gave a detailed view on "**Decoding the life**

**cycle of technology-driven sustainable development programs".** The session addressed important opinions on sustainable programs and created awareness about integrating technology with your career enhancement.

The winners of the Maker fair track were RISER from the Bangladesh section. Their project idea was to build "**A Smart Robotic Crutch for Paralyzed Patients**". The 1st-Runner up were team WARRIORS from the Pakistan section. Their design is to create a "**Dental Cavity Detection**". Finally, team ALLIANCE won 3rd place from India, were their project entitled "Starlight".

On the whole, MakerFair Track carried out a comprehensive strategy and generated excellent execution by achieving the vision of the track with combined efforts of Co-chairs, Advisor, active volunteers, and passionate participation.

The track fulfilled the theme of Unsustainable Development Goals from Ideation to Commercialization. Various academicians and businesspeople narrated insights about the openings in the sustainable development sector. With the assistance of co-chairs, advisors and volunteers the track provided a detailed strategy and induced excellent results.

## **2.4 Track 3: Special track**

IEEE YESIST'12 Special Track was held for nearly six months starting from the 20th of March 2021. Many interesting webinars were held under various categories. The webinar series was started with the webinar on 20th March 2021 from 6.30 pm to 7.30 pm IST which was handled by **Isha Dash** under the title of "Clean water and Sanitation - Challenges faced & measures to overcome ". The next webinar was held on 2nd of April 2021 from 6.00 pm to 7.00 pm IST and was led by **Jairo H. Garcia** on the topic of "Sustainable Cities and Communities". Followed up by the next session on the title of "Clean water and Sanitation - Challenges faced & measures to overcome " which was handled by **Md. Koushik Ahamed** on 14th of April 2021 from 6.30 pm to 7.30 pm IST. The last webinar of the series was carried out on the 23rd of April 2021 by Uti Anselm on the title of "The challenges of Health and Safety in the Medical and Health sector - An Innovative approach in a local community".

Special Track had nearly 35 teams participating from 7 countries across the world. The Team Robovation with the project "**Landslide prediction and zone-based alert system**" bagged the first prize. The members of the winning team are S.M. Muhammed Azhar, Nitha Shahul, ALfiya K. S and Gokul Prakash, from Government Engineering College Idukki, India.

The Runners are the Team Eco Ninjas with the Project "**Eco360**". The runner up team members are Prokriti Monolina, Anika Chowdry, Nawshani Nawar and Umme Israt Afroz from Khulna University of Engineering & Technology, Bangladesh.

The Honored Jury panellist of the final is **Dr M. Monika Jenefer**, Associate Professor & Head of Meenakshi Sundararajan Engineering College of India, **Uti Anselm**, Founder & CEO of SafeWorld International Company from Nigeria, **Mr M. Arun**, Assistant Professor of ECE,



Panimalar Institute of Technology, India and **Md. Koushik Ahamed**, Sanitation engineer of Dhaka, Water & Life from Bangladesh was the jury member of the final competition.

The 2 best projects other than the runner and winner are **Team The Covid Terminatorx and Team TOTS**. Two speeches were conducted on the final day. **Dr Yasuhiro Soshino** from Japan Conducted the speech on the title of “Humanitarian Projects” while **John D. McDonald** from the United States conducted his speech on “Experience Sharing: My IEEE Humanitarian Project with Africa - A Walk Through”.

Under Special track, numerous innovative sessions were governed which comprises "The challenges of Health and Safety in the Medical and Health sector - An Innovative approach in a local community", Landslide prediction and zone-based alert system. Finalist projects were designated under the theme of Clean Water and Sanitation, Improvised medical and health care, Sustainable cities and communities, Preventive measures from hazards and disasters, Environmental Engineering.

The theme of the finale was clean water and Sanitation, Improvised medical and health care, Sustainable cities and communities, Preventive measures from hazards and disasters, Environmental Engineering.

## **2.5 Track 4: Innovation Challenge Track**

Innovation Challenge track of IEEE YESIST'12 is a talent show for the passionate innovator among the students and young professionals in STEM to portray innovative ideas that solve humanitarian and social issues prevailing among the community around them. The projects were focused on Mobile Apps, Computer Based or IoT based with the lead element as creativity, Application, Relevance to them, Application of Standards, Deliverability. Around **11 countries** including **India, Mexico, Peru, Nigeria, El Salvador, Burkina Faso, Bangladesh, Japan, Indonesia, Pakistan, Kenya** with a wide range of domains.

The initial Call for pilots was announced to bring more potential pilots who will host the preliminary round of the “INNOVATION TRACK” of the international platform. The close call for pilots was brought on May 31 2021. There were about **44 pilots registered**. The pilots were selected and given training related to the track. 30 pilots were actively engaging in the event.

The pilots through various of their tasks performed well and brought various brainstorming projects for the grand finale of IEEE YESIST 12 2021. Based on their contribution and works the best pilot was awarded to **Lima Norte, Los Olivos, Peru**. The rising pilot is awarded to **“Telcom University, Indonesia”**. 15 Dedicated volunteers were involved in the success of this event

The winners and runners-up were announced at the closing ceremony. The 1st place was given to the project titled **“We’re Able”** presented by the team IC21123 Wasted\_Potential And the runner up was IC21123 Medtronics for the project **“Water Power Saver for Lavatory using IOT Module”** and IC21115 Bangladesh Marine Academy for their project on **“Innovations in**

*preventing Covid-19*". The honourable mention was awarded to the team IC21101 ELIXIR for the project "*Elixir*" and the team "IC21103 Team Paquito's for the project "*Smart Dispenser*".

The resource person for the keynote session The IEEE R10 PA Committee in collaboration with IEEE YESIST12 IC Track organized the various session with eminent speakers such **Dr Divyanshu Verma**, Ex-Vice Chairman, OFC, India Chapter, Founder, Investor, Entrepreneur **Mr Shiblee Hasan**, a Senior User Experience Engineer at Google expertise. Dr **Shakeel Khoja**, Past Chair – IEEE Computer Society IEEE Karachi Section.

of the track was **Dr John D. McDonald**, P.E. is Smart Grid Business Development Leader for GE's Grid Solutions business. The Speaker shared his knowledge and valuable insights on "**Big Data, IoT, Enterprise Data Management and the New Data Requirements of Drones and Robotic Inspection Devices**". Around 27 teams participated as the finalist in the grand finale. **John D. McDonald**, P.E.Prof.Senior Fellow Grid Solutions GE Renewable Energy, **Dr Ciro Rodriguez**, Professor Department of Software Engineering, Universidad Nacional Mayor de San Marcos UNMSM and **Parkash Lohana**, Chair IEEE R10 PA Committee (2021-22) witnessed and judged the finalist as jury.

The Co-Chairs and pillars of the IC Track are **Ms Tasnim Binte Shawkat**, Assistant Professor, RUET, Bangladesh, **Dr Bindu A. Thomas**, Professor & Head, Dept. of ECE, VVIET, India. Thus the 9-month journey of the IEEE YESIST12 Innovation Challenge track for the year 2021 ended with grand success witnessing great innovations and ideas from the participants and hopes to be bigger and better in the upcoming editions.

Innovation Challenge track of IEEE YESIST'12 is a talent show for the intense innovator among the students and young professionals in STEM to characterize creative ideas that understand humanitarian and social problems persisting among the community around them. The track ended with grand prosperity noticing great innovations and intentions of the participants and hopes to be greater and better in the upcoming versions.

## **2.6 Track 5: Junior Einstein**

IEEE YESIST'12 Junior Einstein Track turns out to be one of the most eminent tracks that hold its fame in recognizing budding talents who are pursuing their schooling. The participants lie between the age of 12 and 17. The solutions provided has great potency in solving the issues in the community.

With the efforts and vibrancy of volunteers under the guidance and support of respected co-chairs and advisors, the track stepped into the execution process with the "Call for Ambassadors" in the month of February 2021, followed by a call for pilots and abstracts.

As an act of establishing the event, the event involved themselves in organizing a promotional session on the topic “Tips and Tricks: How to implement the industry 4.0 Revolution in your Project” handled by Mr Basil O. Alfakeer who was serving as an Automation Projects Engineer at SAM Engineering & Trade Co. It was held on 02 July 2021 at 04:00 PM IST.

In order to provoke the young minds, a 5-day workshop named “Innovation Fest” was planned in collaboration with SATNUT, Funoppia and Marvelnut. The first day of the event was “Creativity, Design & Imagination”, which took place on 10 September 2021 at 06:00 PM IST. The finalists of the track were exclusively invited for the session. The recorded response of the session was 50+ making it a great success.

The preliminary round of IEEE YESIST’12 Junior Einstein Track was executed by assigning pilots from various regions. Since it is an international event, the prelims were conducted through organizations/pilots from the local areas, which made it easier for the participants to interact. On the whole, a total of 11 pilots worked from around 7 countries including Japan, Egypt, Bangladesh, India etc. From each Pilot, the Top 3 teams have been included in the finals of the IEEE YESIST12 Junior Einstein Track 2021. The total numbers of participants included in the Prelims are 166. We had projects from the different sectors like Electronics, Agriculture, Internet of things, Information technology and many more. Participants have shown their novelty in the project presentation.

Being the most expected finale, the Junior Einstein Track had around 61 teams from 6 countries, where 28 were from direct entry, 33 were taken from the pilot’s preliminary round. IEEE YESIST12 Junior Einstein Track in the year 2021 came up with the theme of Preparing for the future – Sustainable transformative technologies. This year there are entries from different countries like India, Bangladesh, Sri Lanka, Egypt, and Japan.

The final round was implemented in the presence of respected juries, Mr Kiran Kumar H S who is serving as Innovation & Product Strategy Consultant & Mentor Associated with Atal Innovation Misson and Dr Hussain Mahdi who is the Project Assessment Chair of PEC-HAC HTPDC 2021 and Membership Development Chair, IEEE R10 HAC.

After rounds of analysis, the winners were selected based upon various criteria. Owing to their presentation, explanation and other considerations, the JE track selected 2 winners. The teams were from India named Amra Shunbo and Scientist. Team scientist made their presentation on “Advance level Sanitizer using UVc”. The runners up of the track were teams UVLR and Team Rakin who made projects on UV Technologies and Robotics and Smart Stick for Blinds respectively, where both the teams made their presence from Bangladesh. Due to the values of projects displayed, the teams- Quantum, The Heroes, RC Innovators and Mindiya Karunasinghe were included in honourable mention. IEEE YESIST’12 Junior Einstein Track turns out to be one of the most prominent tracks that keep its fame in comprehending budding talents who are

pursuing their schooling. As an act of inaugurating the event, the track pertained to organizing several promotional sessions and workshops.

On the whole, IEEE YESIST'12 Junior Einstein Track resulted in astounding success along with the extreme support by co-chairs, the guidance of advisors, profound involvement of volunteers and striking upholding from the participants.

## **2.7 Closing Ceremony**

The valedictory function began with the Keynote session from **Dr Forrest Shull** IEEE Computer Society President addressing the gathering on the topic “Envisioning the future of Software Engineering”. He briefed about the motivation behind, methodology and roadmap of the study by CMU/SEI National Agenda.

Further, the closing ceremony officially began with the invocation songs and welcome note from **Dr Ramalatha Marimuthu** inviting the dignitaries, active volunteers, sponsors and delegates to the evening

The spotlight of the ceremony was the Fireside chat on Project Based Learning from **Dr Forrest Shull** IEEE Computer Society President 2021 who highlighted the impact of volunteering in the enhancement of the society

**Deepa Shenoy** (Professor and Dean of Engineering, UVCE College, Chair-Elect IEEE Bangalore section) **Darwin Jose Raju** (Associate Prof and Head St.Xavier's Catholic College of Engineering) in their partners address encouraged and rendered the wishes to the participants and volunteers.

**Mr Praneeth Balasubramanian** (Manager - Operations, Japanese Pluz, SST GLOBAL) emphasized the importance of the Japanese language in the career development and betterment

The digital transformation of Bangladesh was highlighted by **Dr Bikarna Kumar Ghosh** (Managing Director, Bangladesh Hi-Tech Park Authority) along with the infrastructural revolution that adds to the empowerment of the start-up's ecosystems

The most anticipated session of the evening – the result of the IEEE YESIST12 took the audience in excitement and eagerness. The result was revealed by the chairs of the track with a brief purpose of the track, the prizes for the innovators and thanked the juries.

This followed by a note from Ms Bozena Pasik Duncan, (Prof The University of Kansas) and Mr Jeyakandan from the advisory committee expressed their heartfelt appreciation to the efforts of the steering committee and the active volunteering team for their hard work in bringing out the IEEE YESIS 12 2021 a great success.

Pilots, Mentor and Volunteers shared their experience throughout the event and along with the word of gratitude towards the opportunity.

The IEEE YESIST 12 came to a temporary pause for the year 2021 with the Vote of Thanks from Ms Nikitha expressing her gratitude to the whole team.

Pilots, Mentor and Volunteers shared their experience throughout the event and along with the word of appreciation towards the opportunity. The result and the prizes for the innovators were disclosed by the chairs of the track with a short objective and finally ends by thanking the jury members.

### **3 Conclusion**

As the world has turned upside-down. Recognising opportunities and platforms to the innovators is in more demand IEEE YESIST 12 2021 is an international platform that has set a standard platform for young innovators across the globe. With speakers and projects from diverse streams of domains addressing various social and humanitarian projects, this platform has widened the perspective of the delegates.

The plaudit that we have received from our esteemed IEEE dignitaries, senior leaders, IEEE representatives, professionals, speakers and participants is our true felicity. The impact of the event has ignited ideas across young ingenious innovators, the women community and budding entrepreneurs.

The organisers wish to thank the partners, sponsors and other well-wishers who have rendered their efforts and time towards the success of IEEE YESIST 12 2021. We would like to extend our gratitude to each and everyone who has contributed to this great event making IEEE YESIST 12 for this year 2021 a grand success.

## 4 Advisory Committee

- Bozenna Pasik-Duncan  
University of Kansas | Advisor, WePOWER Track
- Eric Berkowitz  
Director of Membership, IEEE Computer Society
- Divyanshu Verma  
Co-Founder and Chief Operating Officer (COO) Atneva.AI
- Hans Michael Guelich  
Stamford International University, Thailand | Technical Quality Standardization
- Purushothaman S  
Scientist at ISRO

## 5 Organising Committee

### **Steering Committee:**

#### **International Advisory Committee:**

- Bozena Pasik-Duncan , University of Kansas| Advisor, WePOWER Track
- Eric Berkowitz , Director of Membership, IEEE Computer society
- Divyanshu Verma , Co-founder and chief Operating officer(COO) Atneva.AI
- Hans Micheal Guelich , Stamford International University, Thailand |  
Technical Quality Standardization
- Purushothaman S, Scientist at ISRO

#### **Organising Committee:**

- Ramalatha Marimuthu , General Chair
- Nikitha, Secretary

### **YESIST12 Tracks:**

#### **Innovation Challenge track:**

- Tasnim Binte Shawkat , Co-Chair
- Bindu A.Thomas , Co-Chair
- M.Rafay Shaik, Lead Volunteer
- Varsh N J, Volunteer
- Xiomara Andrea Garcia Torrejon, Volunteer
- Luis Plero Velasquez Rojas, volunteer
- Tejasvi Kashyap, Volunteer
- Jesus Hipilito Saavedra, volunteer
- Engr. Muzamil Mahmood, Pilot Coordination member
- Alex Daniel Pizarro Chozo, Publicity Lead
- Mark Steve J, Lead, Graphic Designer
- C. Bharathi Priya, Committee Member



### Junior Einstein track:

- NavaneethaKrishnan Ramanathan, Co-Chair
- Pooja Sharma K, Co-Chair
- Alagumeenaakshi M, Chair, Partnership activities and Advisor
- Anjali Masur, Ambassador Management

### Special track:

- Vydeki Vijayakumar, Co-Chair
- Indhumathi Gunasekaran, Co-Chair
- Mithresh, Publicity Lead
- Premoth Anlruth, Technical Team lead
- Neavil Porus, Volunteer
- Muzaffer Sevil, Campus Ambassador
- Kishore Kumar L, Volunteer
- Sonali Reddy, Volunteer
- Dinithi Sandunika Senarath, Volunteer

### WePOWER track:

- Preethy V Warrler, Co-Chair
- Ramneek Kalra, Co-Chair

### MakerFair Track:

- W.M.Dev Sugandhika Jayalath, Co-Chair
- Mian Junaid Manzoor, Co-Chair
- Heshan Mallawarachchi, volunteer

### Sub committees

#### Outreach Committee :

- Ankayarkanni Rajendran, Co-Chair
- A.Darwin Jose Raju, Co-Chair



### Website Committee:

- Ashvanth B, Co-Chair
- Arangan Rishikesh T, Co-Chair
- Heyram R S, Volunteer

### Content and Communication Committee:

- Janani Ramachandran, Lead
- Bharathi Ramesh , Co-Lead
- Akshaya S, Volunteer
- Manoj Kumar Donthurala, Volunteer
- Priyadharshini S, Volunteer
- Sanlya, Volunteer
- Adithya Marayil, Volunteer
- Nandhitha Kalyanasundaram, Volunteer
- Venkatraman Ravi, Volunteer

### Publicity Committee :

- Alshwarya Bandla , Co-Chair
- Nithyavathy N , Co-Chair
- Ch Athar Mehmood, Volunteer
- Shamlima Deb Trena, Volunteer
- Ganesh, Volunteer
- Aparna G, Volunteer
- Stephen Okwiri, Volunteer
- Parvathi J Nair, Volunteer

### Design Development Committee:

- Tahmil Hossain, Co-Chair

### Technical Committee:

- Darsh Bhatt
- Prit Thakkar
- Savneet Chhatwal
- Parth Patat

## 6 Sponsors

### Our Sponsors

#### IEEE Partners



#### International Organisations



## Industry Sponsors



## Educational Institutions



## Government Partners





## 7 Glimpse of IEEE YESIST 12 2021

Webex | Meeting Info | Show Menu Bar

Connected

DASA SARDANIA  
Me

Yasuhiro SOSHINO (Co-host)

1941861\_Kirihika\_K

Abhimanyu Singh

Aditi Chandra

Aditya Chandra

Anika Ibrat Chowdhury

熊本赤十字病院  
JAPANESE RED CROSS KUMAMOTO HOSPITAL

Playing the Air Guitar...

Doctor-Car NEO

燃料電池自動車

Unmute Start video Share Chat Q & A

Webex | Meeting Info | Special Track | Show Menu Bar

Connected

DASA SARDANIA  
Me

sara rashid alabri

ARUN M

PremothAniruth  
Co-host

Dharini V K

Md. Koushik Ahamed

STATEMENT OF THE PROBLEM

- In this project, Image Processing and AI Techniques are used to solve the above said problem.
- Cameras continuously monitor the birds' movement on and above the solar panel height level.
- Camera images will be sent to the controller for image processing.
- If any bird is found flying towards the power plant, that will be determined by the controller and activates the alarm.

IMAGE PROCESSING SOFTWARE

RASPBERRY PI CONTROLLER

BIRD REPELLER

Unmute Start video Share Participants Chat

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DASA SARANYA Mr. GOKULRAAJ P. Jadhesh ARUN M. PremothAniruth Cofost. Aparna G. ABI CHANDAR K.

Layout

Viewing sripriya's application...

## Experimental Model



PremothAniruth: @koushik sir, Hope everything is clear now

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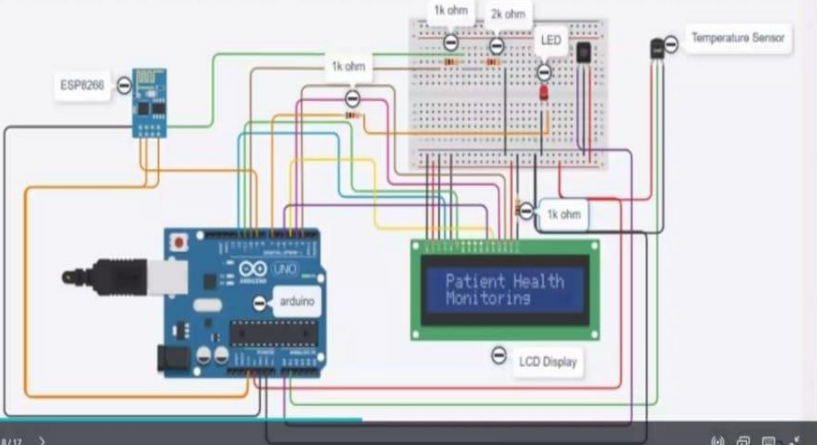
Connected

DASA SARANYA Mr. Indhumathi Gunasekaran Cofost. Payal Chatterjee Shrudhi PremothAniruth Cofost. Gokul Prakash ABI CHANDAR K.

Layout

Viewing sripriya's application...

## CIRCUIT SCHEMATIC



ESP8266

1k ohm 2k ohm

LED

Temperature Sensor

1k ohm

1k ohm

Arduino

Patient Health Monitoring

LCD Display

8/17

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DASA SARANYA  
Host

**Gokul Prakash**

Indhumathi Gunasekaran  
Content

Muhammed Azhar

ALFIYA K S

NITHA SHAHUL

ABI CHANDAR K

Heavy rainfall  
(Yellow/Orange color indication)  
Caution alerts as usual from gov

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Grid of participants:

- Row 1: [Participant 1], [Participant 2], [Participant 3], [Participant 4], [Participant 5], [Participant 6]
- Row 2: [Participant 7], [Participant 8], [Participant 9], [Participant 10], [Participant 11], [Participant 12]
- Row 3: [Participant 13], [Participant 14], [Participant 15], [Participant 16], [Participant 17], [Participant 18]

ANSELM UTI

Bharathi Ramesh

Dr Monica Muthu Maheswaran

GOKULRAAJ P

Muhammed Azhar

Payal Chatterjee

sripriya  
Content

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Participants | Chat

Type here to search

37°C Mostly sunny

1:15 PM  
9/19/2021

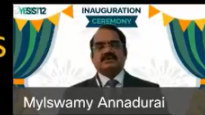
## Space systems for Sustainable Development Goals



IEEE- YESIST 12 Sep , 2021

Dr Mylswamy Annadurai

Chairman, National Design and Development Forum



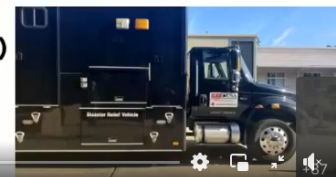
6:25 / 20:26

## MOVE In a Nutshell

- **For** Disaster Survivors
- **Who** have survived the initial catastrophe,
- **MOVE** (Mobile Outreach VEHICLE)
- **Is** an IEEE Project that creates and operates a vehicle for disaster relief
- **That** provides needed communications, light & power support to victims
- **Unlike** some First Responder Efforts (e.g., ARRL, RACES)
- **Our project** is intended to help the disaster survivors by supplying valuable services until normal infrastructure is restored.
- **Additionally** it energizes the IEEE volunteer base, highlights skills, promotes public awareness and more

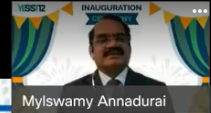


- **4 Natural Disasters (22 program total)**
- **International Expansion underway**
- **2<sup>nd</sup> truck added to our fleet**



11 1:12:49 / 20:26





## Felicitation



### Mylswamy Annadurai

Distinguished Scientist | Vice President, Tamil Nadu State Council for Science and Technology (TNSCST) | Chairman, Board of Governors, National Design and Research Forum (NDRF)

"A program under ASIST - Augmented Social Innovations through Science and Technology"

f i in | IEEE YESIST12

<https://ieeeyesist12.org/>

1:23:27 / 2:01:26



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Customers

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Countries

**581**

Global Chapters



5:14 / 2:34:08

