



NATIONAL RURAL DEVELOPMENT & RESEARCH SOCIETY'S  
**Suryodaya College of  
Engineering & Technology**  
**Polytechnic (2<sup>nd</sup> Shift)**  
**NAAC Accredited**



Survey No. 117 / 1 & 117 / 3 Vihirgaon, Umrer Road, Tah. & Dist Nagpur (M.S.) 441204



ISTE

Sponsored One Week Short Term Training Program  
on



***“ARTIFICIAL INTELLIGENCE TECHNIQUES IN  
SOLAR ENERGY APPLICATIONS”***

Organized by  
**Electrical Engineering Department**

The Department of **Electrical Engineering, Suryodaya College of Engineering & Technology, Nagpur** has successfully organized ISTE Sponsored One Weeks Short Term Training Program (STTP) on **“Artificial Intelligence Techniques In Solar Energy Applications”**. This program is focused on the practical aspects of Artificial Intelligence techniques in solar energy applications. The intension is to give the audience, familiarization and hands-on experience on elements of Artificial Intelligence and make them aware of the current and future trends in AI based Solar applications. It also aims at discussing about research issues and solutions proposed in applications of AI.

This STTP was organized with a view to make the participants aware about **Artificial Intelligence Techniques In Solar Energy Applications**. During the entire STTP session, the participants have learnt about different aspect of AI technics. The main focus was on the practical aspects of Artificial Intelligence techniques in solar energy applications.

**Dr. V. G. Arajpure Principal, Suryodaya College of Engineering & Technology, Nagpur**, had inaugurated the programme. In his inaugural address, **Dr. V. G. Arajpure Principal** Sir focused on th importance of solar energy & AI, also online education system in present days. Principal sir also focused on the need to deal with the rapid changes and shifting paradigms in the education field. “Without such training, teaching is often reduced to one – way lecturing”, he said.

**Mr. Prasun Kulshreshta, Founder of MYpencildotcom online Magazine group, Chief Guest** for the inaugural function. **He present overview of Solar engineering & Market drive worldwide** with different case studies.



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**Dr. Rasika R. Chafale (Management Chairperson ) , Dr. V. G. Parhate Vice Principal Suryodaya College of Engineering & Technology, Nagpur, Prof. Prasanna P. Titarmare (Convener and Head of Electrical Engineering Department), Prof. Ram Wayzhode (Head of Mechanical Engineering Department), Prof. Vivekanand Thakare (Head of Computer Engineering Department), Prof. Dr. Ashtashil Bhambulkar (Head of Civil Engineering Department), Prof. Shailesh Bilthiriya (Head of Electronics Engineering Department),** also graced the inaugural function.

**09 th August, 2021,** afternoon Session explored the participants with "MPPT for solar assisted EVs" **by Dr Makrand Lokhande , EE, VNIT. He** present an overview on An MPPT, or maximum power point tracker is an electronic DC to DC converter that optimizes the match between the solar array (PV panels), and the battery bank or utility grid.

**10 th August, 2021,** Morning Session & Same day afternoon Session cover the "solar irradiance prediction", **by Mr. Nazmul Arefin, IOT Advisor,DCS, Pune. He** present an overview on Predicting solar irradiance has been an important topic in renewable energy generation. And how Prediction improves the planning and operation of photovoltaic systems and yields many economic advantages for electric utilities. And Explained irradiance prediction using statistical methods.

**11th August, 2021,** Morning Session delivered on the area of "AI technic for solar PV tracking" **by Prof. Rahul Dekate, SCET & Same day afternoon Session explored the knowledge on "Sun and AI: How Solar Energy Systems can be improved", Prof. Prasanna P. Titarmare, Head (Electrical Engg.) SCET, Nagpur**

**12th August, 2021,** Morning Session valuable guidance by **Dr. Rajendra Rajuskar, Associate Prof., Abasaheb Garware College, Pune** on "Artificial intelligence in Solar Power System" & Same day afternoon Session he share the knowledge on **Hands on "introduction to Artificial Intelligence".**

**13th August, 2021,** Morning Session cover on the area of "Hybrid solar-wind system" **by Dr. Arghya Mitra, EE, VNIT, Nagpur & Same day afternoon Session valuable session on "Practical on Artificial intelligence" by Dr. Rajendra Rajuskar, Associate Prof., Abasaheb Garware College, Pune**

**14th August, 2021,** Morning Session on "Project on Solar Power System", **by Dr. Rajendra Rajuskar, Associate Prof., Abasaheb Garware College, Pune**



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**14th August, 2021**, afternoon, the STTP was concluded by STTP Organizing Committee based on sessions covered during the One Weeks STTP program. After conduction of test, Valedictory function was conducted in the august presence of **Dr. V. G. Arajpure Principal, (Suryodaya College of Engineering & Technology, Nagpur), Mr. Mahesh Gupta (Mazhi Metro, Ast. Manager, Nagpur), Dr. Rasika R. Chafale (Management Chairperson ) , Dr. V. G. Parhate Vice Principal Suryodaya College of Engineering & Technology, Nagpur, Dr. Ashtashil V. Bhambulkar (Convener and Head of Civil Engineering Department)**, Prof. Ram Wayzhode (Head of Mechanical Engineering Department), Prof. Vivekanand Thakare (Head of Computer Engineering Department), Prof. PrasannaKumar Titarmare (Head of Electrical Engineering Department), Prof. Shailesh Bilthiriya (Head of Electronics Engineering Department), also graced the inaugural function were present along with the participants. The participants were delighted to share their views & were excited to be a part of the STTP. The STTP was concluded on a positive note & with a big round of applause from the participants with the promise of arranging such STTP's in future too.

STTP Organizing Committee, Department of **Electrical Engineering, Suryodaya College of Engineering & Technology, Nagpur**, would like to thank Hon. **Shri. Deepakji Chafale sir**, President, NRDRS, for giving us an opportunity to organize STTP on **"Artificial Intelligence Techniques In Solar Energy Applications"** & for always providing such platforms to enhance our technical knowledge and skills. We would also like to thank **Mr. Ranjeet Chafale Sir**, Secretary NRDRS, for his constant support & motivation, **Mr. Abhishek Belkhede Sir**, Director **Suryodaya College of Engineering & Technology** constant support, **Dr. V. G. Arajpure Principal Sir**, Principal of **Suryodaya College of Engineering & Technology**, for his valuable guidance & suggestions, Vice Principals **Dr. Vivek Parhate**, HODs, All teaching & Non-Teaching Staff of **Suryodaya College of Engineering & Technology** for their kind cooperation. Our special thanks to ISTE for permission for organising such a wonderful STTP. On the behalf of Organizing Committee, we sincerely promise you that in the coming years too we will keep on organizing such STTP's related to the field with some more innovative ideas. Attached below is the Glimpse of one Weeks STTP on **"Artificial Intelligence Techniques In Solar Energy Applications"** from 09<sup>th</sup> August, 2021 to 14<sup>th</sup> August, 2021.



Day 1, Photo of Inauguration Function in present of Dr. V. G. Arajpure Principal, Dr. V. G. Parhate Vice Principal, Prof. Prasanna Titarmare ,Convener of STTP, Dr. Nitin D. Ghawghawe, Principal GCOE Chief Guest , All Expert Speaker , Prof. Rahul Dekate, Prof. (Ms.) Shital Yende, Prof.(Ms.) Priyanka Gaurkhede and all staff of Electrical engineering department along with Participant.

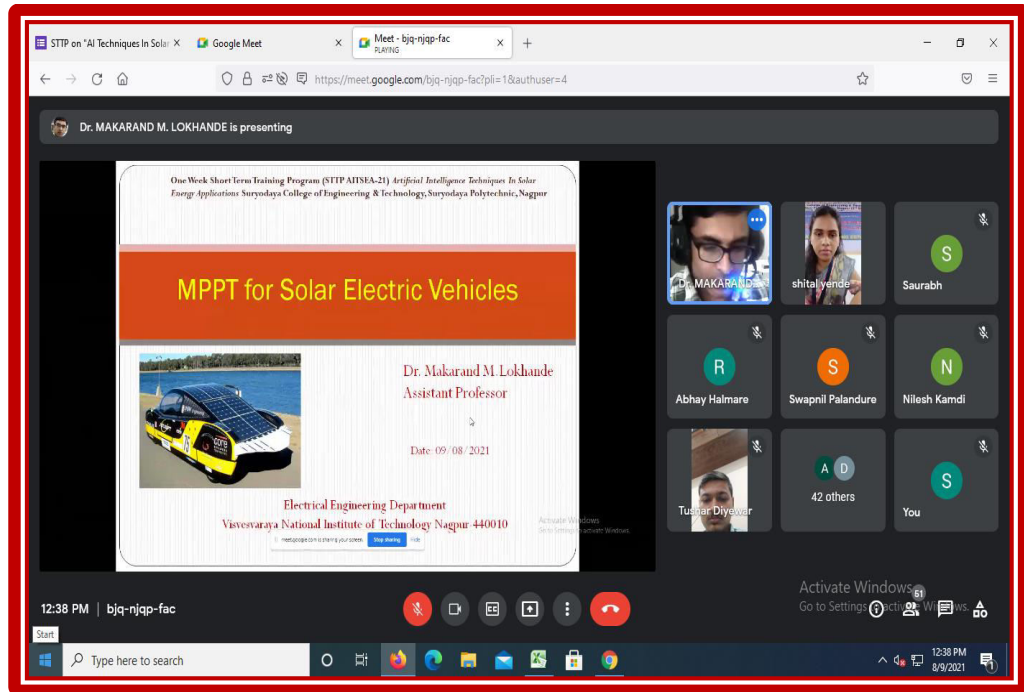




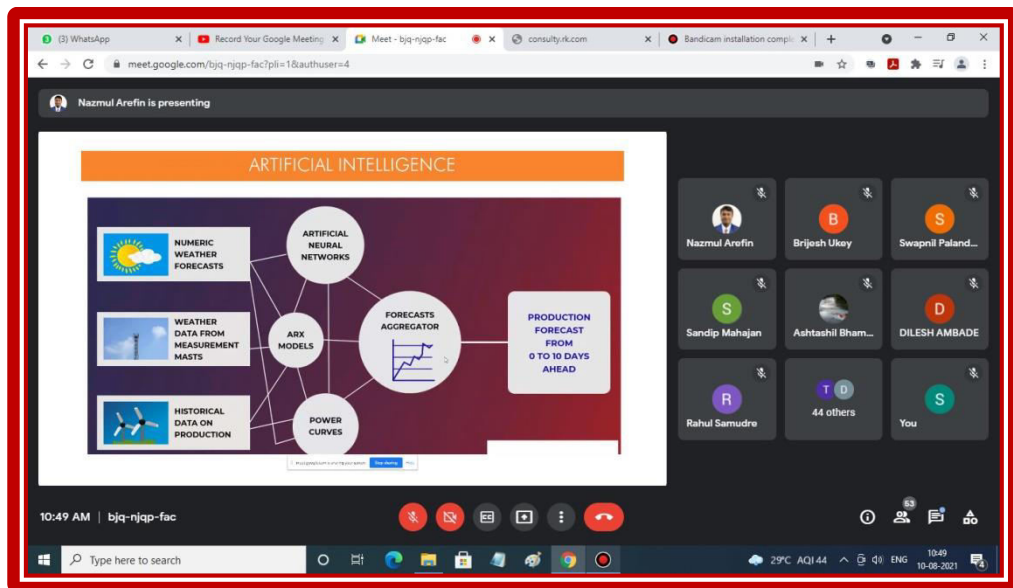
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**Day 1 Session 2 Photo on “MPPT for Solar Electric Vehicles” for Electrical Engineers by Dr. M. Lokhande, Assistant Professor, VNIT, Nagpur.”**



**Day 2 Session 1 Photo on “Solar Irradiance Prediction” by Mr. Nazmul Arefin, Senior Advisor DCS, Pune.”**



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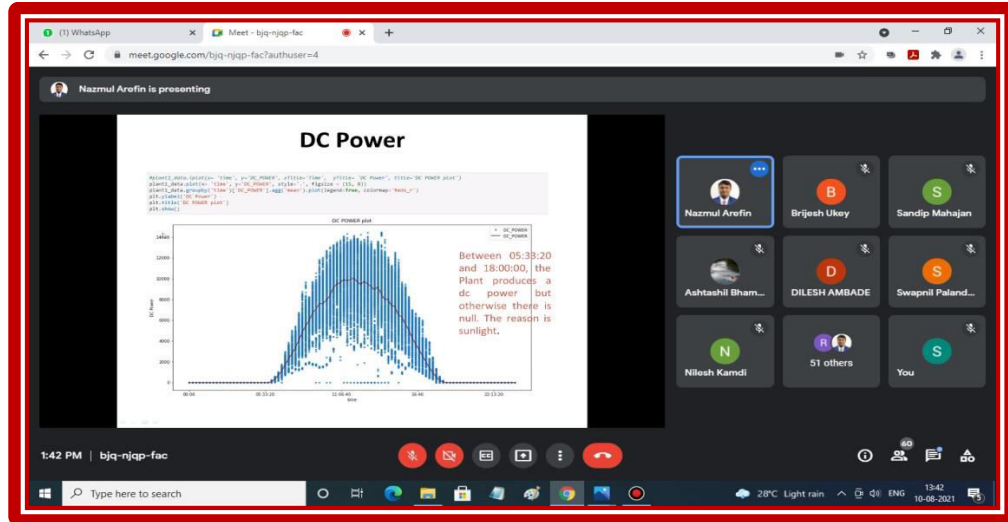
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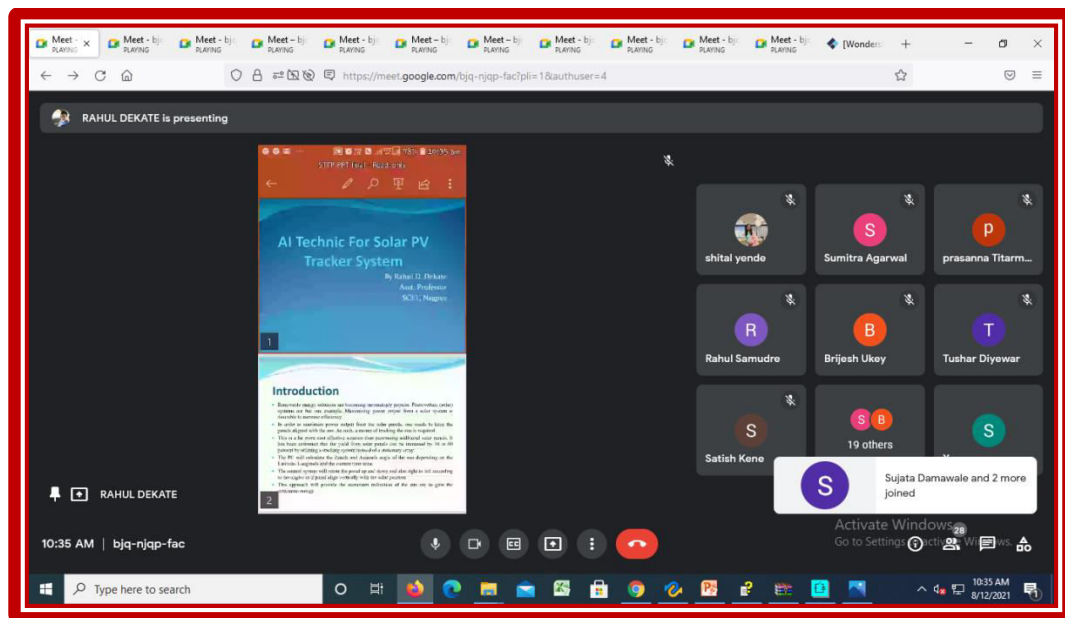
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Day 2 Session 2 Photo on “Solar Irradiance Prediction” by Mr. Nazmul Arefin, Senior Advisor DCS, Pune.”



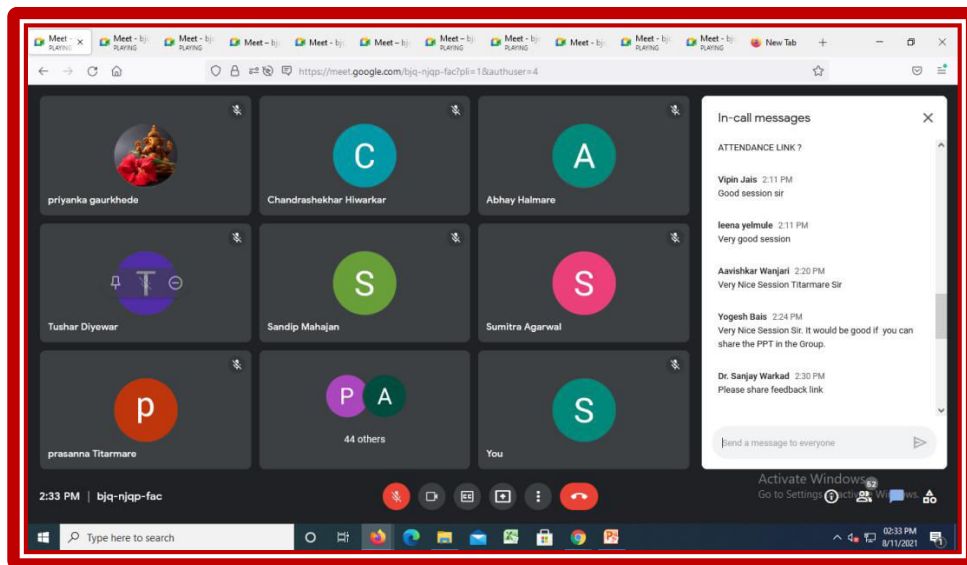
Day 3 Session 1 Photo on “AI Technique for Solar PV Tracker System”, Prof. Rahul D. Dekate , Asst. Professor, SCET, Nagpur.”



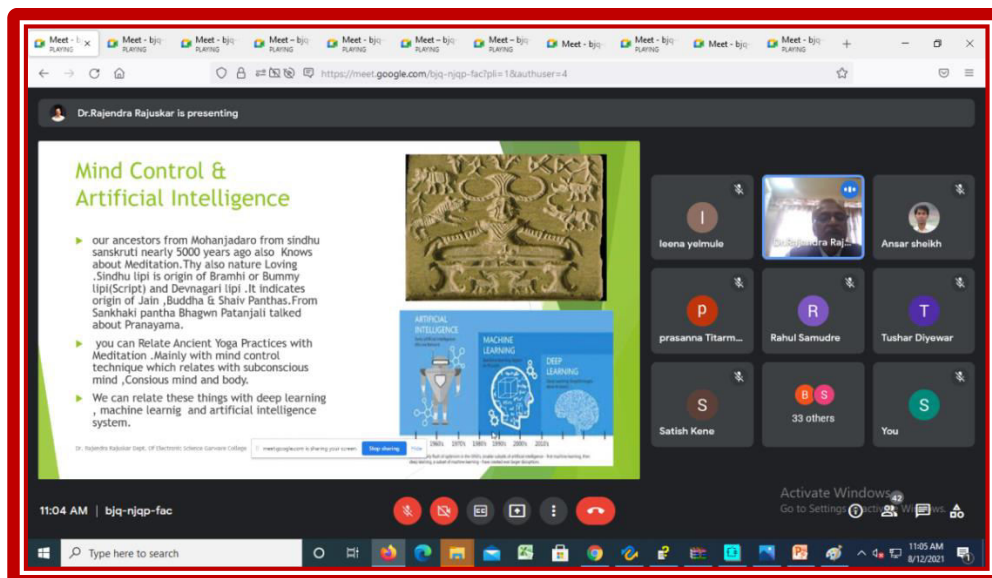
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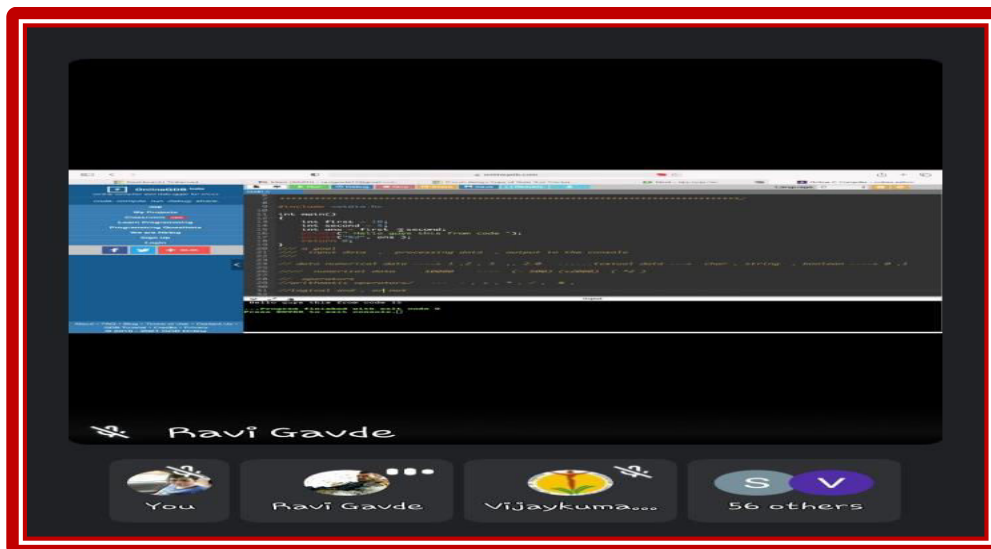
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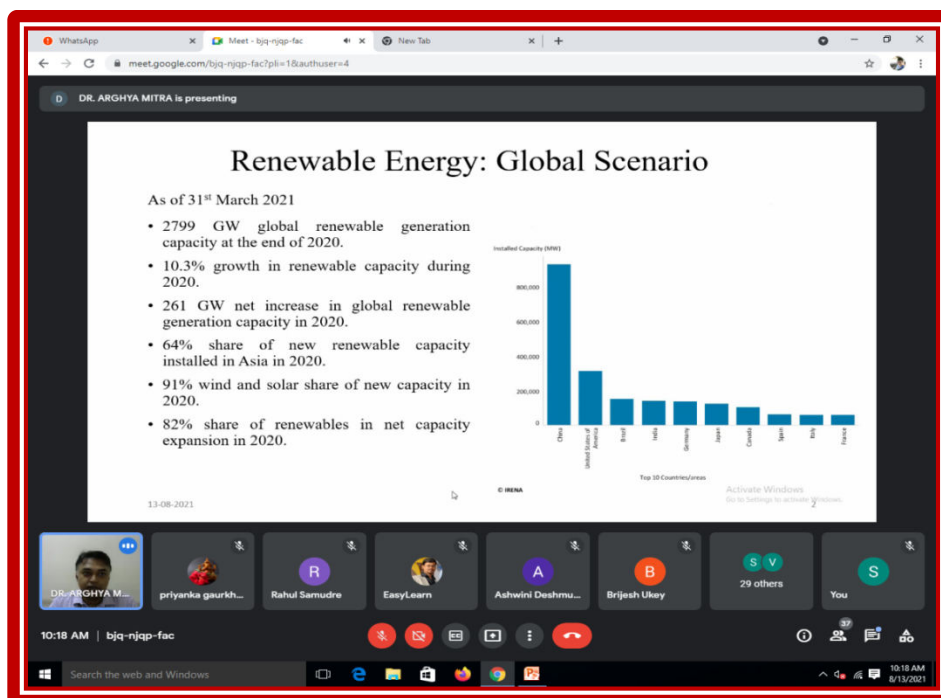
Day 3 Session 2 Photo on “Sun and AI: How Solar Energy Systems can be improved” by Prof. Prasanna P. Titarmare, Head (EE), S.C.E.T., Nagpur”



Day 4 Session 1 Photo on “AI in Sloar Power System” by Dr.Rajendra Rajuskar Associate Professor, Electronic Science Dept. Abasaheb Garware College, Pune”

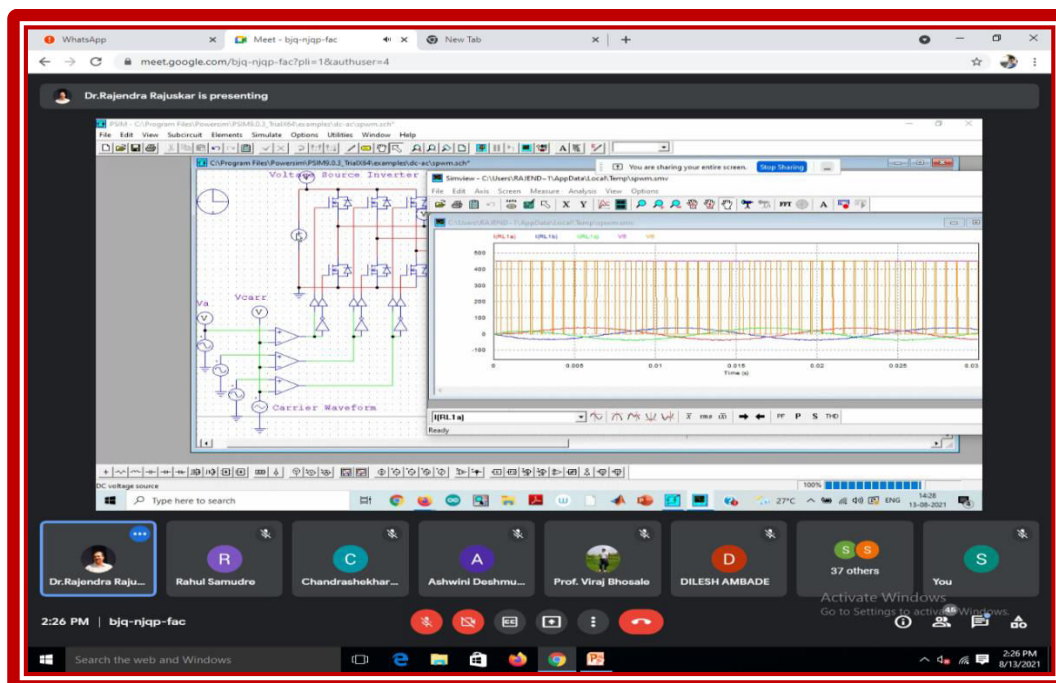


Day 4 Session 2 Photo on "Hands on "introduction to Artificial Intelligence" by Dr.Rajendra Rajuskar Associate Professor, Electronic Science Dept. Abasaheb Garware College, Pune"



Day 5 Session 1 Photo on "Hybrid Solar Wind System" by Dr. Arghya mitra , Asst. professor ,VNIT, Nagpur





**Day 5 Session 2 Photo on “Practical on Artificial intelligence” by Dr.Rajendra Rajuskar Associate Professor, Electronic Science Dept. Abasaheb Garware College, Pune”**



**Day 6 Session 1 Photo on “Project on Solar Power System” by Dr.Rajendra Rajuskar Associate Professor, Electronic Science Dept. Abasaheb Garware College, Pune”**



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Day 6 Session 2 Photo on “Valedictory Function in present of Dr. V. G. Arajpure Principal, Dr. V. G. Parhate Vice Principal, Prof. Prasanna Titarmare ,Convener of STTP, Dr. Nitin D. Ghawghawe, Principal GCOE Chief Guest , All Expert Speaker , Prof. Rahul Dekate, Prof. (Ms.) Shital Yende, Prof.(Ms.) Priyanka Gaurkhede and all staff of Electrical engineering department along with Participant.