



IEI - TLC - NEWS

IN-HOUSE NEWS LETTER OF
THE INSTITUTION OF ENGINEERS (INDIA)

TIRUCHIRAPPALLI LOCAL CENTRE

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CHAIRMAN: **Er. R. SELVARAJ, FIE**

HON. SECRETARY: **Er. S. LAKSHMANAN, MIE**

Special Edition of Newsletter on

**33rd National Convention of Electrical Engineers 2017 -
organized by**

The Tiruchirappalli Local Centre of IEI

The CHAIRMAN, HON. SECRETARY OF IEI - TLC

&

IEI - TLC - NEWS

WISHES YOU AND YOUR FAMILY A





CONVENOR'S DESK, NCEE 2017



Dear Fellow Engineers,

Greetings to all.

Soon after the approval from ELDB, the planning work for 33rd National Convention of Electrical Engineers 2017 (NCEE 2017) started in April 2017. An impressive First Information brochure was made and sent to IEI HQ and to all prospective collaborators, sponsors, authors, exhibitors etc., Various sub-committees were formed for proper planning and smooth conduct of NCEE 2017. Totally five reviews were held to review the progress and take course correction.

I am very happy to inform you that the 33rd National Convention of Electrical Engineers 2017 (NCEE 2017) was held during 24-25 November 2017 in a professional manner with the participation and involvement of leading Industries / Institutions, resource persons, special invitees, fellow engineers and delegates. We earned all round appreciations from all. I convey my sincere thanks and regards to all members of National Advisory committee, Organising committee and sub-committees. I appreciate the efforts and support of Dr. N. Kumaresan, Convenor / Technical Committee for sharing the work in organizing the NCEE 2017. My special thanks are to Er. J. Sankaran, Er. P. Rajamani (National Advisory Committee members) and Er. P. Nagamanickam for their guidance right from the beginning.

My advance wishes to all of you for a Happy Christmas and New Year. Let us all get ready to plan more technical events in the coming New Year.

With kind regards and wishes,

Dr. Dharmalingam,

Convenor, NCEE 2017



CHAIRMAN SPEAKS.....

Dear Engineers,

Warm & Best Greetings to all.

Very happy to meet all of you through our IEI-TLC E Newsletter dedicated for NCEE 2017.



It is a great pleasure for me to appreciate that the editorial team of IEI-Tiruchirappalli Local Centre in bringing out the special issue by taking lot of initiatives for covering the events of NCEE 2017.

- NCEE 2017 is a great event in the annals of IEI-Tiruchirappalli Local Centre.
- 33rd National Convention for Electrical Engineers conducted by IEI-TLC in association with BHEL, Tiruchirappalli & NIT, Tiruchirappalli at NIT, Tiruchirappalli on Nov 24-25, 2017 in the Topic “Hybrid AC-DC power systems for the Effective Utilization of Renewable Energy” was done in a grand & befitting manner. Appreciation came from all the participants for the smooth conduct of the convention.
- We sincerely appreciate the efforts of Dr S Dharmalingam, the Convener of NCEE 2017 and Dr N Kumaresan, Convener / Technical Committee of NCEE 2017 and the Chairmen and members of various Sub-Committees for the conducting NCEE 2017 successfully.
- We are highly indebted to the efforts Er J. Sankaran, Former ED -BHPV-BHEL-Visakhapatnam and Past Chairman of IEI-TLC & Er P. Nagamanickam, GM, Spares Business & R and M and Past Chairman of IEI-TLC for their Excellent Support, Direction & Motivation for the meticulous planning of activities of NCEE 2017.
- We sincerely thank Er P. Rajamani, Chairman, ELDB, Members of ELDB, Council Member Er T.M. Gunaraja, all Council Members from Tamilnadu State, Er G. Renganath, Chairman, TNSC and Er R. Ramadoss, Hon Secretary, TNSC for extending their support to Tiruchirappalli Local Centre for the successful conductance of NCEE 2017.
- We reciprocate our thanks to Er Nilanjan Sengupta Director -Technical and Er Sudeep Chakravarthy Assistant Director-Technical for their support from IEI-HQ in carrying out the 33rd Convention of Electrical Engineers successfully.

My Advance Wishes to You & Your Family members for A Happy New Year 2018.

With Best Wishes.

(R Selvaraj)



NCEE 2017

INAUGURAL FUNCTION

The inauguration of the mega event - the 33rd National Convention of Electrical Engineers 2017 - organized by the Tiruchirappalli Local Centre of The Institution of Engineers (India) was held on 24th Nov. 2017, Friday at EEE auditorium, NIT, Tiruchirappalli. As a part of this National Convention, a national conference on “Hybrid AC/DC power Systems for effective utilization of renewable energy” was also held. This National Convention, sponsored by Electrical Division of IEI is the apex activity held once a year aiming at achievement of technical and professional growth through intensive technical content and mutual interaction.

The EEE auditorium and the adjoining areas were nicely decorated. For this occasion, a special design for Rangoli was made and implemented with the support provided by a team of girls from BHEL, Tiruchirappalli.



After customary invocation and lighting of lamp, Er. R. Selvaraj, Chairman, Tiruchirappalli Local Centre, The Institution of Engineers (India) welcomed the gathering.



The briefing on the theme for the National Convention was given by Dr. S. Dharmalingam, Convenor, NCEE 2017. He briefed on the development of AC/DC hybrid power systems. Currently, in the generation sector, many distributed energy resources, such as photovoltaic systems, fuel cells have emerged that generate power in DC form. Many of the modern electrical loads, as well as energy storage systems, are either internally DC or work equally well with DC power and connect to the AC systems through converters. Thus, application of DC power would allow the elimination of many AC-DC and DC-AC conversion stages, which would in turn result in considerable decrease in component costs and power losses, and increase in reliability. This is leading to the emergence of hybrid AC/DC systems. A favorable solution is to build a hybrid dc and ac grid at distribution levels, to couple dc sources with dc loads and ac sources with ac loads. Hence the National Seminar is on “Hybrid AC/DC Power Systems for Effective Utilization of Renewable Energy”.





The function was presided over by Er. P. Rajamani, Chairman, Electrical Engineering Division Board, IEI. In his presidential address, he complimented the Tiruchirappalli Local Centre on organising the program in a professional manner.



In the inaugural address of Er. K. S. Popli, CMD, Indian Renewable Energy Development Agency Ltd. delivered by Mr. A. Chandrashekar, GM, IREDA, highlighted the tremendous growth taking place in the renewable energy sector in India in the last 2-3 years with a set target of 175 GW by 2022. With the infrastructure cost of renewable energy coming down due to advancements in manufacturing, the renewable energy cost is also coming down to less than Rs. 3/- per unit.



Releasing the Souvenir, Er. S. Akshayakumar, Chairman, Tamil Nadu Electricity Regulatory Commission complimented IEI for selecting a very relevant topic for the conference. Government of India is banking heavily on renewable energy for energy security. With most of the present day electronic gadgets working on DC power, power generated through renewables could be easily distributed through local DC power distribution system. Also hybrid AC/DC power distribution with bidirectional conversion facility would be the order of the day in future.



Releasing the e-proceedings CDs prepared for the conference, Prof. (Mrs.) Mini Shaji Thomas, Director, NITT expressed her happiness in choosing NIT for holding the convention which would pave the way for close working between industry and academia. Laboratory facilities available at NIT could be utilized for simulating any development that is contemplated in renewable energy field.



As part of the National Convention, Electrical Engineering Division Board of IEI conferred Eminent Engineer Awards to leading Electrical engineers. For the year 2017, the recipients of the award are -

1. Er. K. S. Popli, Chairman and Managing Director, IREDA, New Delhi (received by Mr. A. Chandrashekar, GM, IREDA)
2. Er. S. Akshayakumar, Chairman, Tamil Nadu Electricity Regulatory Commission
3. Prof. (Mrs.) Mini Shaji Thomas, Director, NITT and
4. Dr. S. Dharmalingam, Former General Manager, BHEL, Tiruchirappalli.

The awards were presented to the recipients by Er. P. Rajamani, Chairman, Electrical Engineering Division Board, IEI.



Recipients of Eminent Engineer Awards





Recipients of Eminent Engineer Awards



Every year, Electrical Engineering Division Board, IEI selects three Young Engineers, below 35 years of age to encourage the upcoming talents, on pan India basis and confers Young Engineers award. For the year 2017, the recipients of the award are:

- 1) Dr. P. Chandrasekhar, Assistant Professor, National Institute of Technology Warangal,
- 2) Er. J. Ganeswara Rao, Executive Engineer, Central Electricity Authority, Ministry of Power (GoI), Kolkata,
- 3) Dr. K. Vijayakumar, Assistant Professor, Malaviya National Institute of Technology, Jaipur, Rajasthan.

The awards were presented to the recipients by Er. R. Selvaraj, Chairman, Tiruchirappalli Local Centre.

Recipients of Young Engineer Awards





Recipients of Young Engineer Awards



Subsequently Dr. Ranganath, Chairman, TN State Centre, Dr. T. M. Gunaraja, Council member of IEI and Mr. S. Sampath, Chief Executive, M/s. Velmurugan Industries, Tiruchirappalli and past chairman of CII, Trichy zone offered felicitations. They appreciated the efforts taken by Tiruchirappalli Local Centre in organizing the National convention on an important and apt topic.



Felicitations



Finally Er S Lakshmanan, Hon. Secretary, Tiruchirappalli Local Centre, proposed the vote of thanks.

This function was well attended by special invitees, past chairmen of IEI TLC, fellow engineers and more than 150 delegates.





Special Invitees, Fellow Engineers and Delegates at a glance





Special Invitees, Fellow Engineers and Delegates at a glance



NCEE 2017



COLLABORATORS AND SPONSOR'S

BHEL, Tiruchirappalli and National Institute of Technology Tiruchirappalli are closely associated with this event. Also, this event is sponsored by leading organizations IREDA, Honeywell, Dalmia Cements, Velmurugan Industries, SWElect, TNPL, Vedanta and leading educational institutions like Kalasalingam University, Periyar Maniammai University. Other fellow professional institutions- Computer Society of India, Tiruchirappalli Indian Society for Non Destructive Testing, Tiruchirappalli Chapter, Indian Welding Society, Southern Zone, The Indian Institute of Metals, Tiruchirappalli Chapter, The Indian Institute of Welding, Tiruchirappalli Branch also extended their support for this mega event.

Collaborators

Bharat Heavy Electrical Limited, Tiruchirappalli
 National Institute of Technology, Tiruchirappalli

Gold Sponsors

Indian Renewable Energy Development Agency Limited, New Delhi
 Honeywell Automation India Limited, Pune

Silver Sponsor

SWELECT, Chennai

Sponsors

Dalmia Cement (Bharat) Limited, Dalmiapuram
 Velmurugan Industries, Tiruchirappalli

Co - Sponsors

Kalasalingam University, Krishnankoil
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 Tamil Nadu Newsprint and Papers Ltd, Pugalur
 Computer Society of India, Tiruchirappalli Chapter
 Indian Society for Non Destructive Testing, Tiruchirappalli Chapter
 Indian Welding Society, Southern Zone
 The Indian Institute of Metals, Tiruchirappalli Chapter
 The Indian Institute of Welding, Tiruchirappalli Branch

The Institution of Engineers (India)
TIRUCHIRAPPALLI LOCAL CENTRE &
Electrical Engineering Division Board



TECHNICAL EXHIBITION

A technical exhibition was also arranged as part of this National convention. The exhibition was opened by Er. S. Akshayakumar, Chairman, Tamil Nadu Electricity Regulatory Commission. Stalls were put up by the following organisations:

1. M/s. Cygni Energy Private Limited, Hyderabad
2. M/s. Velmurugan Group of Companies, Tiruchirappalli
3. M/s. K. L. N. College of Engineering, Pottapalyam, Sivagangai





M S THACKER MEMORIAL LECTURE AND STATE OF THE ART LECTURE

As part of this National convention, M S Thacker Memorial Lecture was delivered by Dr. M. Ramamoorthy, Chancellor (Retd. Director general CPRI, Bangalore), K L University, Green fields, Gundur district and the state of the art lecture was delivered by Mr. Karriprasad, General Manager / SC & PV, BHEL, EDn, Bangalore. Subsequently a presentation was made by Er. Sudeep Chakraverty, Assistant director (Technical), IEI on “PE/Int.PE Certification Process”

M S Thacker Memorial Lecture



State of the art lecture



Presentation on PE/Int.PE Certification Process





INVITED TALKS

Following invited talks by specialists from Industries and professor from IITM, Chennai were arranged as part of technical sessions.

1. "Solar Energy - Current Trends & Scenario" by Mr. Arun Rebero, M/s. CONTURA SOLAR (INDIA) Pvt. Ltd., Trichy.
2. "Power electronics in energy system", by Mr. Sasidhar Rayasam, General Manager-R&D, Cygni Energy Private Limited, Hyderabad.
3. "Distributed Management Systems in Smart Power Grids", Dr. Shanthi Swarup, Professor, IITM, Chennai.
4. "Smart Grid Technologies" by Mr. Vivek Sridhar, CEO, M/s SHIROI Energy, Chennai.





PANEL DISCUSSION

On 25th November (Day 2) the event started with a Panel discussion on future of Electrical Engineering. Er. P. Rajamani, Chairman and members of ELDB (Er. R. R. Tanwar, Er. Mahendra Ratanlal Kothari, Er N Paul George, Prof Himansu Bikas Goswami, Er Suneel Grover) and Dr. N. Ammasai Gounden, Professor, EEE, NITT participated in the panel discussions. No. of delegates actively participated in the discussions. The recommendations arrived at were highlighted during the valedictory function.





VALEDICTORY FUNCTION

The Valediction of the mega event - the 33rd National Convention of Electrical Engineers 2017 - organized by the Tiruchirappalli Local Centre of The Institution of Engineers (India) was held on 25th Nov. 2017, Saturday at EEE auditorium, NIT, Tiruchirappalli.

Er S Lakshmanan, Hon. Secretary, Tiruchirappalli Local Centre, Tiruchirappalli Local Centre, IEI welcomed the gathering. Er. R. Selvaraj, Chairman, Tiruchirappalli Local Centre, IEI presided over. Dr. N. Kumaresan, Convener, Technical committee of the conference provided a detailed reporting on the Technical Sessions. Er. P. Rajamani, Chairman, Electrical Engineering Division Board, IEI highlighted the recommendations arrived at in the panel discussions.





Dr. N. Ammasai Gounden Professor, EEE, NITT complemented IEI for selecting a very relevant topic for the conference. He underlined that attending such National Conferences give ample opportunities for the delegates to interact with eminent personalities in the field of Electrical Power Engineering. He also mentioned that emergence of Renewable Energy has paved the way for designing Hybrid AC/DC transmission corridors and availability of equipments such as Power Quality Analyzer have made Research in the field of RE easier since they directly give the harmonic Spectrum of non-sinusoidal wave forms.

Er J. Sankaran, Former Executive Director, BHEL, Vizag in his special address stressed on the importance of maintaining quality of Power with control of harmonics generated by the electronics sub-systems. He suggested that disposal of e-waste that would emerge from large scale usage of solar cells is also to be paid attention to.





In his valedictory address, the Chief Guest Dr. S. Sundar Manoharan, Vice Chancellor, Periyar Maniammai University, Thanjavur, complimented IEI, Tiruchirappalli Local Center for the successful conduct of the National convention of Electrical Engineers. He told that Tamilnadu state takes pride by ranking first in wind power generation in the country. He told that PMU campus is Zero carbon, eco-friendly and energy efficient. PMU has bio-mass gasification facility and grid solar systems for research and the energy generated is utilized for campus and hostel requirements. The expertise gained is shared with institutions and industries as well.



Totally 44 papers were presented in various technical sessions in the two day conference. Following six papers were selected as best papers and the authors of best papers were recognized with a certificate.

Authors	Paper title
N. Sekhar, P. Lakshmana Rao, N. Kumaresan, and M. P. Selvan, NIT, Tiruchirappalli	Experimental Investigation on the Operation of Stand-alone Wind-driven DFIG-Solar PV System
N. S. Suresh, and S. Arul Daniel, NIT, Tiruchirappalli	Comparison of various Control Strategies for Distributed Inverters Tied to a Micro-Grid
P. Padmagirisan, V. Sankaranarayanan and A. Joseph Godfrey, NIT, Tiruchirappalli	Control of a Solar Powered Single Stage Induction Heating System
¹ R. Seyezhai, ² S. Dhivya and ¹ D. Umarani, ¹ SSN College of Engineering, Chennai, ² Tata ELXSI, IIT Research Park, Chennai	Evaluation of Modulation Strategies for Single-Phase Quasi Z-Source Inverter
K. M. Sreedivya, D. Devaraj and P. Aruna Jeyanthi Kalasalingam University, Krishnankoil	Sliding Mode Control based Power System Stabilizer for Damping the Low Frequency Oscillations
R. Meenal and A. Immanuel Selvakumar, Karunya University, Coimbatore	Solar Resource Assessment and Life Cycle Cost Analysis of Solar PV in India



As part of feedback for the entire event, Er. Suneel Grover, FIE, Member, ELDB appreciated Tiruchirappalli Local Centre of IEI for having conducted the National Convention in a grand and professional way. He lauded the continuous efforts taken by the Convenor, NCEE 2017, Chairman, TLC and all others.

The two days event concluded with the vote of thanks by Dr. S. Dharmalingam, Convenor, NCEE 2017 follows by the National anthem. A group photo of the available committee / sub-committee members was taken.





Both the inaugural function and valedictory function were nicely compered by

1. Dr. M. Venkata Kirthiga, Assistant Professor, EEE, NITT &
2. Dr. S. Moorthi, Assistant Professor, EEE, NITT



The complete photos taken during the event has been uploaded in www.ieitiruchi.org under the menu item NCEE 2017.



33rd National Convention of Electrical Engineers
National Seminar on 'Hybrid AC/DC power Systems for effective utilization of renewable energy'
24 - 25 November 2017

Sub-Committees

Convenor: Dr. S. Dharmalingam

Chairman: Er. R. Selvaraj

Programme Committee

Chairman /	Dr G. Swaminathan, NITT
Convenor	Er. R. Vijaya Kumar, DGM/Comm, BHEL
Members	Dr. S. Nadaraja Pillai, Sastra University Er. R. Thangavelu, DGM/ ERP, BHEL

Souvenir, Advertisement, Publicity and Exhibition Committee

Chairman /	Dr N. Anantharaman, NITT
Convenor	Dr N. Sivakumaran, NITT
Members	Er B. Chandrakanth Er. Maruthachalam Anand

Hall Arrangement Committee

Chairman /	Dr S. T. Ramesh, NITT
Convenor	Er N. Rajasekaran, BHEL
Members	Mr. N. Sridhar, BHEL Mr. V. G. Kadirvell, BHEL

Transport and Reception Committee

Chairman /	Er. S. Samidas, BHEL
Convenor	Er. L. M. Subramaniam, BHEL
Members	Er. G. Balakrishnan Er. K. R. Udhayakumar

Registration Committee

Chairman /	Er. E. SalaiKuberan, BHEL
Convenor	Er. A. Anand, BHEL
Members	Er. M. Anvar Ali, BHEL Er. S. Madhavan, BHEL

Catering Committee

Chairman /	Er S. Karuppasamy, BHEL
Convenor	Er D. Varatharajalu, BHEL
Members	Er R. Sivaramakrishnanan, BHEL Er V. Annamalai

On behalf of the Institution of Engineers (India), Tiruchirappalli Local Centre, published by
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