

1st IEEE International Conference of Chhattisgarh region held at NIT RAIPUR

International Conference on Power, Control and Computing technologies (ICPC2T) 3-5 January 2020

The Department of Electrical Engineering of National Institute of Technology Raipur organized the first IEEE International Conference on Power, Control and Computing technologies (ICPC2T) from 3rd January to 5th January 2020 at DDU Auditorium, Raipur. The event was technically co - sponsored by the IEEE Student Branch , NIT RAIPUR and IEEE Bombay Section (India). Shri Shailendra Shukla, Chairman, CSPDCL was the Chief Guest of Inaugural Function. Pre - Conference Workshops, Technical Paper Presentations, Tech Expo and Cultural eve were some of the unique attractions of the Conference.



The first day of the programme was held at E - hall, NIT RAIPUR on 3rd January 2020, beginning with AI-Camp and two other Pre-Conference Workshops. The Speaker of the first schedule of the Conference was ALI MUSTAFA who has set up Google Crowdsourcing community in India and in other 23 countries and presented his work with Google Crowdsourcing at Neutral IPS in Canada for Inclusive Images 2.0. He had given 100+ talks in more than 20 cities of India. This workshop introduced participants to

Artificial Intelligence. Participants built hands-on AI/ML models and were trained on real image data. The second Workshop was on Hardware in loop simulation and SCADA. This workshop aimed to develop the participants aptitude in the field of hardware simulation in the loop by implying hands on approach and training in various fields of virtual hardware, running simulation in real time and software related training in Typhoon HIL with other simulation software (like MATLAB, PSIM etc.). It included real time simulation Demos of MPPT Boost Charger, Simple microgrid, Electric vehicle, Grid connected converter PQ etc. by the implementation of SCADA.

The Second Schedule of the International Conference was held at DDU AUDITORIUM, Raipur on 4th January 2020 from 10:00 am and it all started with the welcoming of guests by felicitating them with Saplings, lamp kindling ceremony by Shri Shailendra Shukla, Dr. Shrish Verma, Dr. N.D. Londhe and others followed by the Welcome Speech of Dr. N.D. Londhe - HOD, Department of Electrical Engineering, NIT RAIPUR in which he urged the students and participants to learn, deliberate and share their ideas to others during this gala event. Dr. Subhojit Ghosh - Organising Secretary of ICPC2T, briefed the Conference and announced that more than 95% of the authors have already registered for paper presentation during the Conference and thanked and appreciated all for the contributions. Dr. Shirish Verma - Dean Academics, NIT RAIPUR welcomed and congratulated the audience and shared his thoughts and reflected the theme of the Conference. He told that this kind of International Conference has been organized for the first time in Chhattisgarh. Dr. Vineet Kotak - Vice Chairman, IEEE Bombay Section appreciated the Organizing Committee and urged everyone to take the advantage of the Conference. The Chief Guest of the Programme - Dr. Shailendra Shukla - Chairman, CSPDCL, Raipur also delivered the speech in which he talked about the Power Sectors and their problems, Technology in Transmission and Generation, Automatic meter reading system, Efficiency improvement, and need for renewable power generation etc. The inaugural session ended on a very high note with the Vote of thanks by Dr. R.N. Patel - Organising Chairperson of the Conference, followed by the National Anthem.

The first keynote speaker who delivered his guest lecture was Prof. Dr. SAAD Mekhilef - University of Malaya, Malaysia and the Director of Power Electronics and Renewable Energy Research Laboratory - PEARL. He is the author and co-author of more than 250 publications in International journals and proceedings. He told about the increasing trends of Power Electronics in our day to day life; today all electrical appliances need Power Electronic

Interfaces. Therefore there is a need for improving all the Power Electronic components and thus save Energy. He told that there is a potential to improve electric cars and ensure up to 65% of the Energy saving. AC Datacentre Architecture, DC Datacentres, Energy saving in day to day life were all covered in his informative keynote address. The second Keynote speaker was Prof. Dr. Almoataz Y. Abdelaziz - Department of Electrical Power Engineering, Future University of Egypt; He is the chairman of IEEE Education Society, Egypt and has authored or co-authored more than 400 referred journals and Conference papers, 25 book chapters and 3 edited books with Elsevier and Springer in his research areas which includes the applications of Artificial Intelligence. He delivered his lecture on Energy Utilisation and told that in the last 100 years - the earth warmed up by 1°C. He briefly explained about the Power Quality trends, Hosting capacity approach, Distributed Energy Resources and the Renewable Energy.

Technical paper presentations were done in three parallel sessions from distinguish Faculty and Scholars from various Universities of India and Abroad, who gave the paper presentation on their Research areas. The papers were selected after a rigorous review process since July 2019. The sessions were held whole day. The day ended with fabulous performance by Mr. Debanjan Bhattacharjee, Saria Artist, who entertained young minds by his musical performance. Debanjan Bhattacharjee is an Indian classical sarod player and composer from Kolkata. A disciple of the renowned Ustad Aashish Khan, he received the President's Gold Medal Award in 2008 and was nominated for a Global Indian Music Award in 2012. He is a proponent of Indian classical techniques and wishes to share them, both to ensure their continuation and to breathe new life into them. Debanjan is an avid and experienced collaborator and has participated in musical exchanges with artists ranging from Azerbaijan to Germany, and has performed in more than 28 countries. The cultural eve also included the performance by Raaga Club, NIT RAIPUR, Folk performance, solo dance performance and special classical dance performance mesmerized and refreshed the audience. The event ended with the Conference Gala Dinner at Night.

During the last day there was a Keynote talk by Dr. Ramesh Bansal, University of Sharjah, UAE, who gave a talk on Battery Storage Technologies. Prof. R. C. Bansal is a distinguished scientist, fellow and chartered engineer IET-UK, fellow engineer Australia and senior member of IEEE (USA). He has published over 275 journal articles and is also an editor for distinguished journals like IET Renewable power generation and Electric Power Components and Systems. With over 25 years of R&D experience, he has

been to the University of Queensland (Australia), University of South Pacific and many other universities. His research interests include areas of renewable energy and conventional and Hybrid Power Systems and Grid Integration of renewable energy etc.

There were further rounds of Technical Paper Presentations in the major domains of Autonomous control systems, artificial intelligence, cyber security, multi robotic systems, cryptography, renewable energy resources, power electronics, smart grid, computer vision, internet of things, application of artificial intelligence and machine learning in healthcare etc.

The last keynote address was given by Dr. Akshay Kumar Rathore, Concordia University, Canada, on the topic of advances in Power Electronic Systems. Prof. Akshay Rathore is a Prominent Lecturer of IEEE Industry Applications and has been awarded with 2014 Isao Takahashi Power Electronics Award as well as 2017 IEEE IES David J. Irwin Early Career Award. He has served as youngest distinguished Lecturer at IEEE (USA). He is currently working as Associate Professor at the Electrical and Computing Engineering Department at Concordia University, Montreal, Canada. He has research expertise in Electrical Machines for Automotive Applications, Multilevel Inverters etc. He did research work with University of Illinois Chicago and University of Wuppertal. He has over 60 journal publications and numerous conferences, editorial activities, honours and awards.

An INNOVATION EXHIBITION: “**TECH EXPO**”, was also conducted during 4th and 5th Jan. 2020. This competition aimed at promoting Student Patents for innovative Projects by UG/PG and PhD students of NIT Raipur. The students got opportunity to showcase their Innovative Ideas and Projects, which have Potential for Patents and Commercialization, in front of a Qualified Team of Experts from Academia and Industries. The event was organized by Career Development Centre (CDC), NIT Raipur in association with IEEE Student Branch NIT Raipur under financial support of TEQIP-III, NIT Raipur. Selected UG/PG Projects were presented in the form of working prototypes/models and Poster presentations. The Criterion for Selection of winners was: Innovative Component and Commercialization Potential leading to promoting ‘Startups’. The winning Teams were awarded with Cash Prizes and Acceleration Grant by CDC (for Patenting and/or Startup Registration). The participating students also got opportunities for Networking with Academia and Industry Partners for collaborations and/or Funding for further development of their Idea to Commercialized Products.

The Valedictory Session began with a talk by Dr. Pradeep Sinha, Director of IIIT Naya Raipur. Dr. Pradeep Sinha, an Engineer turned academician is an internationally acclaimed author of computer textbooks. He has been instrumental in commissioning the First National Supercomputing Facility at C-DAC Pune and led C-DAC's team to design and commission the PARAM Yuva II supercomputer in 2013 at C-DAC Pune which ranked 69th among the world's Top 500 Supercomputers. Dr. Sinha is a fellow of IEEE, a fellow of CSI and ACM Distinguished Engineer. He has been awarded with VASVIK Research Award and Intel Pathfinder Award.

During the Valedictory Session, the Best Paper Awards were given for presenters of each track. The Best Poster Awards were also given to the presenters. The winners, Participants, the Organizing Department and Special Contribution by all the Volunteers and Student Members of IEEE Student Branch, NIT Raipur was profusely appreciated by Dr. P K Sinha, Chief Guest, Mr. K. D. Diwan, Guest of Honor, Dr. Shrish Verma (Dean Acad., NITRR), Dr. S. Gupta (Dean R&C, NITRR), Dr. S. Sanyal (TEQIP Coordinator, NITRR) and Dr. N. D. Londhe (HoD, EE and Conference General Chair). Dr. R N Patel, Organizing Chair of the Conference proposed the Vote of Thanks to all present during this Historic Event.

The college fraternity promises fostering interactions and invoking Innovation culture at NIT Raipur by organizing many such events in future as well.

Some of the event pictures:









