Report on 21st Thomas Alva Edison Memorial Lecture:

Speaker: Prof. Chanan Singh, Department of Electrical and Computer Engineering, Texas A&M University, College Station, Texas.

Topic: Resource Diversification to accommodate intermittency and improve reliability.

Venue: EE, Committee Room, Block II, IIT Delhi
Date and Time: 11-10-2017, 5PM-6PM.

Brief Report:

Prof. Chanan Singh was invited under the PES-IAS and PELS-IES Chapters to deliver 21st Thomas Alava Edison Memorial Lecture at IIT Delhi on Oct. 11th, 2017. The talk was given at the committee room in the Department of Electrical Energy, IIT Delhi.

Prof. Singh began his lecture by introducing his university and broad research activities of his research group and department.

Prof. Singh talk mainly focuses on intermittency nature of RES like wind and solar and power electronics interface to alter the inertia in the system. He talked on implications for the reliability of power systems – both adequacy and stability. He was addressing the question How can we mitigate the effects of variability of resources such as wind and solar? His talk later on was focused on adequacy issue and the role of several possible solutions with special emphasis on resource mix and geographical diversity.

The talk was well attended by good number of research students and few Faculty members. The attendees interacted with Prof. Chanan Singh after his presentation ended for further understanding and queries.

Brief Biography:

Prof. Chanan Singh is a Regents Professor and Irma Runyon Chair Professor in the Department of Electrical and Computer Engineering, Texas A&M University, College Station, Texas. He has also served as a Guest Professor at Tsinghua University, Beijing, China. He is also the Vice President, Associated Power Analysts, Inc., 1980-Present.

His research and consulting interests are in the application of probabilistic methods to power systems. He has authored/co-authored around 400 technical papers and three books and has contributed to several books.

He has consulted with many major corporations like California ISO; Central Electrical Agency, India; Edmonton Power, Canada; Electric Reliability Council of Texas; Electric Power Research Institute ; Eletrobrass, Brazil; ESKOM, South Africa; General Electric Co.; Houston Lighting & Power Co.; Korea Electric Power Co.; Korea Power Systems Reliability Research Center; Ministry of Transportation & Communications, Ontario, Canada etc.

He is a Registered Professional Engineer, State of Texas and has completed many funded projects. Examples of some recent projects are like Modeling and Analysis of Interdependent Cyber-Physical Systems with Applications to Power Grids, Conacyt, $24,000, 2011-2012), Integration of Storage Devices into Power Systems with Renewable Energy Sources,PSERC,$240,000, 2010-2012, The Future Grid to Enable Sustainable Energy Systems: An Initiative of the Power Systems Engineering Research Center, Dept of Energy, $5,512,900, 2011-2013, Reliability Assessment and Modeling of Cyber Enabled Power Systems with Renewable Sources and Energy Storage, , PSERC, $220,000, 2014 - 2016. He is the editor of many reputed Journals like European Transactions on Electric Power (ETEP), IEEE Transactions on Power Systems, IEEE Power letters etc. has delivered lectures and short courses in countries like US, Japan, Brazil, China, South Africa, Australia and Singapore.

Dr. Singh is a Fellow of IEEE and the recipient of the 1998 Outstanding Power Engineering Educator Award given by the IEEE Power Engineering Society. For his research contributions, he was awarded a D.Sc. degree by the University of Saskatchewan, Saskatoon, SK, Canada, in 1997. In 2008, he was recognized with the Merit Award by the PMAPS International Society. In 2010, he was the inaugural recipient of the IEEE-PES Roy Billinton Power System Reliability Award.