## **Registration Form**

Flexible A.C. Transmission Systems and Power System Voltage Stability: Recent Advances (July 11-22, 2011)



Name:		
Design	ation:	STE L

Date: ----

Place-----

# Participation

Staff development programme is open to full time regular/permanent teachers of AICTE recognized degree level engineering colleges and technical universities/deemed universities. The interested candidates are required to send the duly filled registration form forwarded by the competent authority to the course Convener at the earliest but not later than 5<sup>th</sup> June 2011. The list of selected candidates will be displayed on university website www.dce.edu on 15<sup>th</sup> June 2011. The selected candidates will be paid maximum AC-3 tier rail fare subject to production of railway ticket by the shortest route as per AICTE / DTU norms. The accommodation will be made available either at DTU hostel or nearby on prior request, but they are required to bring their beddings and lock. The selection is on first come first served basis depending upon the availability of the seats.

## Address for Correspondence

Prof. Narendra Kumar Head, Department of Electrical Engineering Delhi Technological University (Formerly Delhi College of Engineering) Shahabad Daulatpur, Bawana Road, Delhi- 42 Tel.(O):011-27871047 Email: sdpdtu2011@gmail.com

# Important Dates

Last date for receiving Application:05-06-2011.Notification about Selection:15-06-2011.Confirmation from Participants:20-06-2011.

# ALL INDIA COUNCIL FOR TECHNICAL EDUCATION (AICTE) STAFF DEVELOPMENT PROGRAMME

On

"Flexible A.C. Transmission Systems and Power System Voltage Stability: Recent Advances"





Organized by DEPARTMENT OF ELECTRICAL ENGINEERING Delhi Technological University

(Formerly Delhi College of Engineering) Bawana Road, Delhi-110042, Website: www.dce.edu

### About SDP

The proposed staff development programme aims to bring together teachers, researchers, scientists, engineers, and scholars to exchange and share their experiences, new ideas, and research results about all aspects of flexible AC transmission systems (FACTS) devices in order to improve the power system performance and discuss the practical challenges encountered and the solutions adopted.

## Theme of SDP

The proposed staff development programme is being conducted to develop technical skills and to bring awareness in the fast growing field of Electrical Engineering. The teachers who are involved in research will be able to develop a sound base for further research in the field of FACTS and Voltage stability. The increase in electrical power demand, together with environmental constraints and competition of the electricity markets force the power system to operate closer to their thermal and stability limits.

Flexible AC Transmission systems (FACTS) devices can increase the power system loading margin and alleviate power system congestion. The loading margin is used as a measure of system robustness at a given operating point, when voltage stability constraints arise. A power system is considered voltage secure when a sufficient loading margin from the base case to the point of voltage instability exists. Each FACTS device controls one or more of the network variables with criteria based on specific control schemes. Hence the proposed topic for the staff development Programme is of great relevance for power utilities, teachers, researchers and engineers.

#### About DTU

Delhi Technological University formerly Delhi College of Engineering is a leading world class Technological University, a key node in national and global knowledge network, thus empowering India with the wings of knowledge and power of innovations. Established in 1941 by Government of India, erstwhile DCE now DTU is one of the premier Institutions of engineering and technology education in India. It has played a unique and important role in the advancement of technical education. It has played the role of mother institution in establishing IIT Delhi, College of Pharmacy and College of Arts Delhi, NSIT Delhi and many more institutions.

#### About Electrical Engineering Department

The Department of Electrical Engineering has significantly grown during the last seventy years since its inception. With the advent of growth in Industrial Electronics, Industrial Communications and Energy Sources and Utilization, the department has acquired an important place in the National Capital Region of Delhi. Presently the Department runs undergraduate programme in Electrical Engineering, Electrical and Electronics Engineering and also offers post-graduate programmes in the area of Control and Instrumentation and Power System Engineering, in addition to Ph.D. programme. The department also offers a B.Tech part-time programme for working professionals who hold diploma in Electrical Engineering. The department is preparing to introduce full time P.G. program in Power Electronic System and Electrical Energy Systems.

## Topics to be Covered

- Power System Modeling
- Power System Dynamics and Stability
- Reactive Power Control and Voltage Stability
- Automatic Generation Control
- Modeling of Synchronous Machines and Stability
- FACTS Devices and their Modeling
- Power Flow Studies with FACTS Devices
- Power Quality Enhancement using FACTS Devices
- Enhancement of Voltage Stability using FACTS Devices
- Integration of Renewable Energy Sources
- Sub Synchronous Resonance (SSR) and Damping
- Al Techniques
- MATLAB and PSCAD Simulation

#### Organizing Committee

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Co-Conveners

Prof. P.B. Sharma, Vice-Chancellor Prof. Moin Uddin, Pro-Vice Chancellor Prof. N.K. Jain, Dean Continuing Edu. Prof. Narendra Kumar Prof. Madhusudan Singh S.T. Nagrajan, M. Rizwan and Dr. Suman Bhowmick Prof. Narendra Kumar Convener, SDP-2011 Head, Dept. of Electrical Engineering Delhi Technological University (Formerly Delhi College of Engineering) Shahabad Daulatpur, Bawana Road, Delhi- 42 E-mail:- sdpdtu2011@gmail.com