

**Distinguish Lecturer Program**  
**IEEE Instrumentation & Measurement Society (IMS)**  
**March 01, 2019**



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**Organized by:**

**IEEE Joint CSS-IMS Chapter, Kolkata**

**In collaboration with:**

**Dept. of Electrical Engineering,  
Indian Institute of Engineering Science and  
Technology, Shibpur, West Bengal**

**Talk Title: High Reporting Rate  
Measurements for Smart(er) Grids**

**Professor Mihaela Albu**

***(Dept. of Electrical Engineering, Politehnica University of Bucharest, Romania)***

The talk will address:

o **The measurement paradigm in power systems;**

- System inertia, real time and steady-state
- Instrument transformers; limited knowledge on the infrastructure
- PQ, SCADA and PMUs
- Power system state estimation; WAMCS
- IEDs, PMUs, microPMUs
- Time-stamped versus synchronized measurements

o **Measurement channel quality and models for energy transfer**

- Voltage and frequency variability; rate of change of frequency
- The steady-state signal and rapid voltage changes (RVC); rms-values reported with 100 frames/s;
- Measurement data aggregation; filtering properties
- Time- aggregation algorithms in the PQ framework
- Statistical approaches;

o **Applications and challenges**

- Communication channel requirements; delay assessment in WAMCS
- Smart metering with high reporting rate (1s)
- The presentation provides an overview of these techniques, with examples from worldwide measurement solutions for smart grids deployment.

**Enquiry: Neelbrata Roy, Research Scholar, IEST, M: 09073022184; email: cssimskolkata@gmail.com**

Updates will be available at :

[http://ewh.ieee.org/r10/calcutta/css\\_ims/index.html](http://ewh.ieee.org/r10/calcutta/css_ims/index.html).

Registration is mandatory, for online registration, use the link:

<https://goo.gl/forms/6pg1Me1wXXvZEPfL2>

**Venue: Seminar Hall, Electrical Engineering, Time : 3:00-5:00 pm**  
**Indian Institute of Engineering Science and Technology,**  
**Shibpur, Botanic Garden, Howrah - 711 103, West Bengal. India.**