



CRIS

INTERNATIONAL INSTITUTE FOR CRITICAL INFRASTRUCTURES

CRIS International Workshop on Critical Infrastructures: Wide Area Measurements for Power Systems

CEPEL - Rio de Janeiro

March 6 to 7, 2008

The Workshop

The main focus of CRIS - *International Institute for Critical Infrastructures* - activities is to promote an understanding of the interdependencies in the three infrastructures which are critical for the well-being of modern societies: electric power, communications, and computer networks. It is also the goal of CRIS to promote formation of research teams and groups with like interest so that they can identify and conduct research within the broad field of interest of CRIS.

At this venue, the main objective is to promote in-depth discussions about the timely theme of WAMS – Wide Area Measurements for Power Systems, from principles to applications, and associated enabling technologies as Phasor Measurement Systems. The Workshop will count on the participation of reference researchers from Brazil and USA. We are also glad to announce Prof. Phadke (pioneer in phasor measurement technology) as the keynote speaker of this event.

The venue

CEPEL – Electric Power Research Center – Rio de Janeiro – Brazil

Organization

The Workshop is an initiative and a responsibility of the International Institute for Critical Infrastructures. This event is sponsored by CEPEL, with the support of the National Electric System Operator (ONS) and Federal University of Rio de Janeiro (COPPE).

All CRIS activities will be held at CEPEL's main auditorium. A complimentary cocktail will be offered on March 6th and all attendees are our guests, for lunch, at Cepel's restaurant.



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The audience

- International guests invited by CRIS board
- Brazilian specialists nominally invited by the Organizing Committee

All presentations will be in English and no simultaneous translation will be provided. The discussions will also be held in English, but questions formulated in Portuguese will be welcome. In this case, the organizers will provide the translation, but the answers will be in English.

Program

The Workshop will be held in the following format:

- An opening session addressing the CRIS Institute
- Six sessions with 1 to 3 papers each, individually presented by the authors in 30 minutes, followed by 30 minutes for discussions involving the authors, the chairman and the audience.

The international guests will bring themes as relevant as:

- Ongoing project to use PMUs to improve the protection system to the utilities in California
- Recent research projects on wave propagation on power systems and the use in power system of some control techniques developed for stability of structures (buildings)
- Establishment of the best applications (businesswise) for synchronized measurement
- Development of the PMU standards, shortcomings of existing standard and expected changes.

Brazilian invited presenters, on the other hand, will discuss ongoing research initiatives and application projects, including the comprehensive PMS under consideration by ONS.

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DETAILED PROGRAM

Thursday – March 6, 2008			
		Presenter	Institution
08:30 to 09:00	Registration, coffee and welcome		
09:00 to 10:30	Opening presentation	Prof Arun Phadke Prof. Virgilio Centeno	VA Tech University
10:30 to 11:00	Coffee break		
11:00 to 11:30	PMU applications to Power System Protection	Prof. Arun Phadke	VA Tech University
11:30 to 12:00	Online Dynamic Security Enhancement Based on Integrated Computational Tools and Fuzzy Systems	Prof. Djalma Falcão	COPPE/UFRJ
12:00 to 12:30	Discussions session 1		
12:30 to 13:30	Lunch break		
13:30 to 14:30	Implementation project of a comprehensive PMS in the Brazilian Interconnected Power System	Dr. Hector Volskis	ONS
14:30 to 15:00	Discussions session 2		
15:00 to 15:30	Coffee break		
15:30 to 16:00	PMU Applications Business Case Study	Dr. Yi Hu	Quanta Technology
16:00 do 16:30	Standarization Efforts for Synchronized Measurements	Prof. Virgilio Centeno	VA Tech University
16:30 to 17:00	Discussions session 3		
17:30 to 18:30	Complimentary cocktail		
18:30	Adjournment		



Friday – March 7, 2008			
		Presenter	Institution
08:30 to 09:00	Coffee and welcome		
09:00 to 10:00	EMS Applications of PMU derived information	Dr. Luiz Corrêa	CEPEL
10:00 to 10:30	Discussions session 4		
10:30 to 11:00	Coffee break		
11:00 to 11:30	PMUs for Wave Propagation and System Control	Prof. James Thorp	VA Tech University
11:30 to 12:00	Measurements with High Undetectability Index in Power System State Estimation	Prof. Newton Bretas	USP
12:00 to 12:30	Discussions session 5		
12:30 to 13:30	Lunch break		
13:30 to 14:00	Identification of voltage collapse risk based on phasor measurements	Prof. Glauco Taranto	COPPE/UFRJ
14:00 to 14:30	Dominant oscillations modes and shapes extracted from WAMS	Dr. Nelson Martins	CEPEL
14:30 to 15:00	WAPS applications in Brazil	Dr. Roberto C Lima	FURNAS
15:00 to 15:30	Discussions session 6		
15:30	Adjournment		