





स्मार्ट ग्रिड, स्मार्ट मीटर, संचार प्रौद्योगिकी और साइबर सुरक्षा पर राष्ट्रीय सम्मेलन और विद्युत क्षेत्र में साइबर सुरक्षा पहल पर एक दिवसीय कार्यशाला

National Conference on

SMART GRID, SMART METER, COMMUNICATION TECHNOLOGIES AND CYBER SECURITY

One day workshop on

# CYBER SECURITY INITIATIVES IN THE POWER SECTOR

Conference: 14-15 February, 2024)

(Workshop: 16 February, 2024

स्थान: सीपीआरआई, बेंगलुरु (केवल भौतिक मोड) Venue: CPRI, Bengaluru (Physical Mode only)





# केन्द्रीय विद्युत अनुसंधान संस्थान

# **CENTRAL POWER RESEARCH INSTITUTE**

(भारत सरकार की सोसाइटी, विद्युत मंत्रालय / Govt. of India Society, Ministry of Power) प्रो. सर सी वी रामन रोड, पो बा सं. 8066, सदाशिवनगर डाक घर Prof. Sir C V Raman Road, P B No. 8066, Sadashivanagar Post Office बेंगलर / Bengaluru – 560 080

www.cpri.res.in

### **CPRI PROFILE**

Central Power Research Institute was set up in 1960 by the Government of India to function as a National organization for applied research in power sector and to serve as an independent body for the testing and certification of power equipment. It is a premier research and testing institute in the field of power sector meeting the expectations of industries and the nation. CPRI laboratories have modern testing equipment to meet the testing requirement as per National and International standards. It has been offering its services for over five decades to the power sector in its quest for innovation, new product development, import substitution, quality assurance etc. CPRI is accredited by many International bodies and test reports issued by CPRI are accepted worldwide.

Also CPRI is imparting training and capacity building to the personnel of utilities, industries, manufacturers & academic institutions. CPRI has a vast experience and expertise in the areas of material characterization, simulation, diagnostic, calibration, system analysis and several other areas. The Head Office and the main set-up of the institute is at Bangalore and other units are at Bhopal, Hyderabad, Nagpur, Noida, Guwahati Kolkata and Nashik.

This conference is supported by all divisions and units of CPRI.

### **ABOUT THE ORGANIZING DIVISIONS**

This conference is jointly organised by Metering Utility Automation Division and by Smart Grid Research Laboratory supported by all the divisions of CPRI, Bangalore and other CPRI units. CPRI has established Energy Meter testing facilities which caters to Type test, Acceptance test, Tamper test and additional tests as per tender specification of utilities, etc. Also, DLMS/COSEM Protocol testing for Static Energy Meters/Smart Meters as per National and International standards. The labs are accredited as per ISO/IEC 17025:2017 standards by NABL. The division also has NABL accreditated calibration facility for both at Lab and at Site. Meter test facilities are available at Bangalore, Bhopal Noida and Hyderabad units.

The Smart Grid Research laboratory offers testing services of Communication Protocol and Security Conformance for Intelligent Electronic Devices (IEDs) / Gateways/ RTUs as per IEC 61850. The IEC test facility is accredited by UCA IUG as Level 'A' laboratory with Independent Test Lab with certified ISO / IEC 17025: 2017 Quality Systems. The division has also facility for testing of RTUs / FRTUs for communication protocol and security conformance as per IEC 60870-5-101 / 104 with IEC 60870-5-7 security implementation and IEC 62351 for cyber security. The division also has facility for taking up AMI system testing which is being utilized by various AMI Service providers and funding agencies. The division also provides consultancy services for implementation of Smart Grid and AMI / smart meter implementation, Distribution Automation, SCADA System, Substation automation systems, Cyber security and Communication Systems for various utilities, industries, and other organizations.

# **ABOUT THE CONFERENCE**

The power utilities are taking up automation projects and AMI system projects under various schemes including RDSS and other schemes for making the power system network more smart and controllable. There are various technological and security aspects that are required to be taken care while implementing such projects. Effective communication network is the key for success of any automation and AMI project while Cyber Security plays an important aspect that is to be taken care from the design stage.

This face-to-face conference is organized to discuss following topics for the benefit of all stake holders including Power Transmission, Distribution, Generation utilities with the aim of sharing the emerging trends and technologies available in the market. This will also give a platform to share the knowledge and experience in the field implementations and the lessons learnt during the implementations and their best practices.

The conference topics for the technical sessions will include the following topics:

- Overview of Smart Grid
- Smart Metering Technology
- DLMS / COSEM Protocol
- AMR & AMI Technologies
- Cyber Security for Smart Meters / AMI
- Utility perspective on smart metering & billing efficiency
- Net Metering
- Cyber Security in Communication system
- Digital Substation / Substation Automation Systems
- Power System Security

#### WHO SHOULD ATTEND?

The conference is aimed at professionals of Power Utilities, Meter Manufacturers, Captive Power Plants (CPP), AMI Service Providers, Integrators, R&D Engineers, Test houses, Consultants, Regulators, Renewable energy producers, Faculties and students from Academic Institutes and other stake holders in power and energy.

## REGISTRATION FEE AND DISCOUNT FOR CONFERENCE

SI.	Institutions	Registration fee
1	General registration fees	Rs.10,000+18% GST per head
1a)	For 3 participants	Rs.9,000+18% GST per head (including 10% discount)
1b)	For 4 or more participants	Rs.8,000+18% GST per head (including 20% discount)
2	Faculty Members from Educational Institutions	Rs.7,000+18% GST per head (including 30% discount)
3	Students of Educational Institutions	Rs.5,000+18% GST per head (including 50% discount)
4	Officials from State Govt./ Central Govt./	Rs.7,000+18% GST per head (including 30% discount)
	Public Sector Units / Power utilities	NS.7,000 + 18 /8 GST per flead (including 50 /8 discount)

Registration fee shall be paid in advance by online only through CPRI web portal, the link for making payment is: https://cpri.res.in/online-testing/pay\_online

**Note**: On this payment portal, choose payment made against as "Training /Workshop/ Seminar/ Conference/ Webinar", select Unit as "CRTL, Bengaluru", division as "Metering and Utility Automation Division (MUAD)", Choose event as "Smart Grid, Smart Meter, Communication Technologies and Cyber Security for Power Sector, all other information as appropriate may be provided in respective fields.

It may please be noted that it may take 3 working days to reflect in CPRI account so kindly arrange to make the payment well in advance. Once the payment is made, bank transaction details may be shared with the programme contacts.

Registration fee mentioned are for Indian nationals and it includes conference kit, course material, tea/coffee with snacks and lunch. Registration form may be completed in all respect and shall be sent to the program coordinators along with the registration fee details. Kindly use separate form for each participant, downloaded/photo copy of registration form is acceptable. It may please be noted that this is a non-residential programme. However, there is limited accommodation on twin accommodation facility available in our guest house at nominal charges and the same may be utilized on request on first come first serve basis.

Note: There is no separate participation fee for the one day workshop.

## **EVENT SPONSORSHIP OPPORTUNITIES**

There is opportunity for sponsoring this event. The name and logo of the sponsor will be displayed at prominent locations in the venue of conference and in the conference proceedings.

Category/Type	Amount	Benefits
Platinum	Rs.2,00,000/-	This includes participation for 6 delegates, display of company logo at conference venue and printing of company logo on the delegate kit and conference proceedings
Gold Rs.1,50,000/-		This includes participation for 4 delegates, display of company logo at conference venue and printing of company logo on the delegate kit.
Silver	Rs.1,00,000/-	This includes participation for 2 delegates, display of company logo at conference venue and printing of company logo.

### **INVITATION FOR TECHNICAL PAPERS**

It is requested to all researchers and professional to submit their research findings, field experiences and ideas in the form of technical papers in IEEE format to the programme coordinators (Smt. S Sudha / Shri Pradish M). The accepted papers which are presented in the conference will be published in the conference proceedings. The authors/co-authors, other than the presenting author, will be required to register as delegates by paying applicable delegate fee, so as to participate in the conference. Few selected papers will be considered for publishing in "Power Research – A journal of CPRI".

# One day workshop on

# CYBER SECURITY INITIATIVES IN THE POWER SECTOR

Workshop: 16 February, 2024 Venue: CPRI, Bengaluru

## **ABOUT THE ORGANIZING DIVISION**

The Institute promotes applied Research leading to technology development in Power Sector. With the State-of-the-art infrastructure, CPRI has been carrying out R&D in the areas of electrical Power Generation, Transmission and Distribution in the endeavor to assist the Power Utilities to supply reliable, uninterrupted, safe and quality power to the consumers at affordable cost. The workshop is being organised by the R&D Management division, CPRI. The division has been instrumental in creating a conducive environment for collaborative research between R&D Institutions, Industry and Academia.

### ABOUT THE WORKSHOP

The workshop is aimed at professionals of Power Utilities, Meter Manufacturers, Captive Power Plants (CPP), AMI Service Providers, Integrators, R&D Engineers, Test houses, Consultants, Regulators, Renewable energy producers, Faculties and students from Academic Institutes and other stake holders in power and energy who are interested in taking up R&D works and for taking forward the outcomes of the R&D Projects funded by CPRI to the end users and for commercialization.

### The Workshop topics for the technical sessions will include:

- Exploring Cyber Security Challenges Threats and Detection Strategies
- Quantification of Cyber Attack Risks with Strategies for Prevention and Mitigation
- Emerging Cyber Security Risks Hardware Trojans
- Cyber Security Testing Facility at CPRI

### **REGISTRATION FOR WORKSHOP**

There is no separate participation fee for participating in the workshop alone. However, registration for participating in the workshop is mandatory. Participants who would wish to participate in the conference and workshop or only for the conference shall make the registration fee as mentioned in this brochure. All participants shall fill in the registration form provided along with this brochure.

### Workshop Coordinators

Please contact the workshop coordinators for registration and queries related to this workshop

Dr. TULIKA BHATTACHARJEE Engineering Officer R&D Management Division tulikab@cpri.in / +91-9448800663 Shri ARKA CHAKRABORTY
Engineering Officer
R&D Management Division
arka@cpri.in / +91-9830717410

KINDLY VISIT CPRI WEBSITE FOR REGULAR UPDATES

### **IMPORTANT CONFERENCE DATES**

- Cut off date for submission of full length Technical Paper: 20 January, 2024
- Confirmation of Acceptance of Paper: 30 January, 2024
- Conference Date and venue: 14 15 February, 2024 at CPRI, Bangalore (Physical mode only)

**Note:** All updates pertaining to this conference will be updated in CPRI website only. Please visit CPRI website for regular updates.

### **CONFERENCE COMMITTEE**

Advisory Committee (Tentative List subject to receiving consent from proposed members and approval from CPRI)

Shri B A Sawale	Shri A K Rajput	<b>Dr. Tripta Thakur</b>	Shri Prashant Chaturvedi
CPRI	CEA	NPTI	MPERC
<b>Shri Atul Kumar Bali</b>	<b>Dr. S D Sudarsan*</b>	Shri Yogesh Kumar*	Shri Anand Shankar*
NSGM	CDAC	MVVNL	PGCIL
Shri Udayan Ganguly	Smt.S. Lakshmi	Shri D.V Chalapathi*	J.V.T.S Prasad*
CESC	TANGEDCO	APSPDCL	APCPDCL
Shri Sunil Singhvi IEEMA	Shri R S Rathore Genus Power		

<sup>\*</sup>Confirmation awaited

**Technical Committee** (Tentative List subject to receiving consent from proposed members and approval from CPRI)

(			
Shri Vivek Goyal	Dr. Pradeep Yemula*	Ms. Lakshmi Eswari	Shri Raman Garg
CEA	IIT Hyderabad	CDAC	REC
Dr. Anukram Mishra*	Shri Sarthak Mishra	Shri Sundeep Tandon*	Shri Rajesh Menaria*
Genus Power	GMR	<b>HPL Power and Energy</b>	Secure Meters
Shri Sujith Unnikrishnan*	Shri Shailendra Goyal	Shri Vipin Mishra*	Shri Manav Arora*
Schneider Electric	ZERA	Capital Power Systems	Avon Meters
Shri B Venakateshwar Rao	Shri Punit Vikam*	Shri Ashwani Duwedi	Shri Sreenatha Rao RSNV*
Visiontek*	Adani Enterprises	Allied Engineering Works	GE T&D India Limited
Shri Krishnan P V*	Shri Krishnan V	Shri Vishwas Gaurav	Shri Vijayan SR
BCITS Pvt Ltd.	Synergy Systems & Solutions	Siemens	Hitachi
Shri Sujay Kulkarni*	Shri Teja Chintalapati		
Ashida Electronics	DSCI		

<sup>\*</sup>Confirmation awaited

**Organising Committee** 

Shri Ramjeet Singh	Shri Swaraj Kumar Das	<b>Dr. Amit Jain</b>	<b>Dr. P Kaliappan</b>
CPRI	CPRI	CPRI	CPRI
<b>Dr. T Bhavani Shankar</b>	Smt. Sumbul Munshi	<b>Shri Manoj Kr. Jaiswal</b>	Shri V Shivakumar
CPRI	CPRI	CPRI	CPRI
Smt. Sudha S	Smt. Deepa J Warudkar	<b>Shri Pradish M</b>	Shri Sukumar Peta
CPRI	CPRI	CPRI	CPRI
<b>Dr. Priyamvada Chandel</b>	<b>Smt. Mridula Jain</b>	Dr. Tulika Bhattacharjee	Shri Shankaramurthy
CPRI	CPRI	CPRI	CPRI
Shri B L Jayadev	Shri Arka Chakraborty	Shri Shailesh Kapoor	Shri Shivendra Kr. Sinha
CPRI	CPRI	CPRI	CPRI
Shri Gujjala B Balaraju	Smt. Purnima Pandey	Shri Praveen Kumar K	<b>Shri Riaz K I</b>
CPRI	CPRI	CPRI	CPRI

### **Conference Coordinators**

Please contact the coordinators for any queries and regarding sponsorship, registration and paper submission.

Smt. S. SUDHA Joint Director, MUAD, CPRI sudha@cpri.in / +91-9611843364 Shri PRADISH M Engineering Officer, SGRL, CPRI pradish@cpri.in / +91-9448722416

मीटरन उपयोगिता स्वचालन प्रभाग / METERING UTILITY AUTOMATION DIVISION स्मार्ट ग्रिंड अनुसंधान प्रयोगशाला / SMART GRID RESEARCH LABORATORY केन्द्रीय विद्युत अनुसंधान संस्थान / CENTRAL POWER RESEARCH INSTITUTE (भारत सरकार की सोसाइटी, विद्युत मंत्रालय / Govt. of India Society, Ministry of Power) प्रो. सर सी वी रामन रोड, पो बा सं. 8066, सदाशिवनगर डाक घर

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