



Chartered Engineers Pacific

(aka Western Canada Group of Chartered Engineers)

<http://www.charteredengineerspacific.ca>

NOTICE OF EVENING PRESENTATION Wednesday, 20th November 2019, 7 to 9 pm

Venue: Conference Rooms, Accent Inns, Burnaby
3777 Henning Drive, Burnaby V5C 6N5 Tel: 604-473-5000

Topic:

Every Drop Counts – Industry 4.0 (Smart Water Solution of Future)

Speaker:

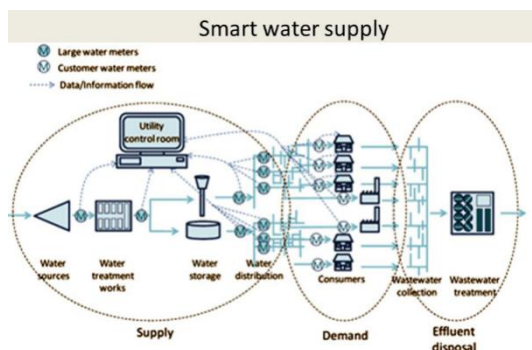
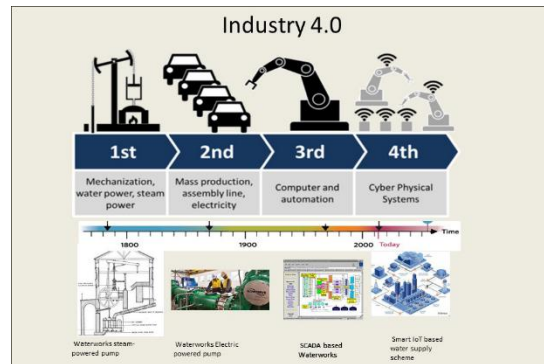
Prof. Dr. Joyanta Kumar Roy

Ph.D(Tech), SrMIEEE(USA), MIET(UK), FIETE, FIWWA
Chairman, IEEE Circuits and Systems Chapter, Kolkata section, R-10
Immediate Past Chairman, IET(UK) Kolkata Network
Excom member: IEEE CSS-IMS, IEEE C&S chapter, Kolkata Section, R-10
Technical Consultant (Automation)
GKW Consult GmbH, India, Vision EIS Consulting Pvt. Ltd.
Director, System Advance Technologies Pvt. Ltd.
Visiting Professor, ECE Dept., Narula Institute of Technology
Former Dean (Research & Consultancies)
Professor & Head ECE Dept.
MCKV Institute of Engineering



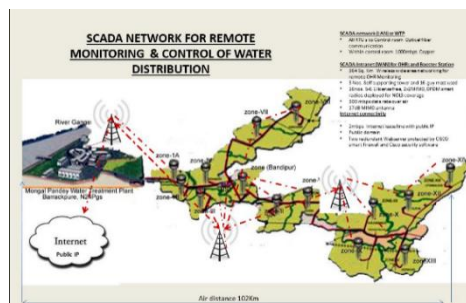
Abstract:

A city cannot be called truly smart if it does not have smart water generation and distribution system. There are many essential layers to the smart water infrastructure, which include smart sensor and sensing system, remote automation and surveillance, data analytics, cloud computing, Internet of Things and cyber-security. This smart water infrastructure is part of a new generation Industry 4.0. The technology Industry 4.0 is the current trends, which uses not only the latest machinery but also cyber-physical systems. It operates in building blocks



of modular infrastructure with interconnected cyber-physical layers to communicate; interact with machinery and human over the Internet of Things. The technology optimized the production cost of potable drinking water, maintain the water quality in the treatment process and optimized energy consumption. It also minimizes the non-revenue water, detects and measures leakage in distribution, monitor

and control water demand in real-time, regulate distribution according to demand, increase life of distribution and pumping machinery as well communicate with all consumers to maintain the harmony of demand and supply through the Internet of Things to maximize financial revenue. This technical discussion covers the technology behind Smart water solution from treatment to the tap with some case studies. The readiness of the technology, benefits, and challenges of implementation, the scope of future research and development are also to be discussed in the technical discussion.



Keywords: Smart city; Smart water; Water quality surveillance; SCADA; Internet of Things, Cyber-Physical systems;



Speaker's BIOGRAPHY

Prof. Dr. Joyanta Kumar Roy, PhD, has been associated with academics and industry in the field of Electronics and Automation Engineering for the last 35 years. His present assignments include Visiting Professor, Narula Institute of Technology (*Autonomous unit of MAKAUT*), India; Company Director, System Advance Technologies, Kolkata, India and Founder Chairman, Eureka Sciencetech Research Foundation, Kolkata. He is also a Freelance Consultant to a number of Industries for providing design support towards Smart Technology in the water industry. Earlier, he served three engineering institutions in India with various capacities including Principal, Dean and Professor.

He is a Senior Member of IEEE and an immediate past Chairman of IET Kolkata network, Fellow Member of IETE and IMWA, a regular reviewer of IEEE and Springer Journals. He is working as associate editor of S2IS journal. He has published a significant number of scientific and technical publications in the form of a book, book chapters, design documents, peer-reviewed SCI-indexed research papers, etc. His research interest includes the development of smart measurement and control system, multifunction sensors, IoT based m-health, and technology-assisted living, Smart home and city.

List of academic and civil awards

- Shiksha Bharati Puraskar
- Life Time Achievement Award for Education Excellence with Gold Medal
- Global Education Leadership Award
- Golden Educationist of India Award
- Biography published in *Who's who in the world*
- IET (UK) TRAVEL AWARD 2015
- Certificate of Outstanding Contribution in Reviewing Journal- Measurement, Elsevier (incorporation with International Measurement Confederation)

No Registration Required:

50 seats are available, *first-come-first seated*. This event is provided free of charge, includes a coffee/snacks table and welcomes all interested members and guests.

Excellent opportunity to network among multi-discipline engineers and others!