

ESIC CURRENTS

February 14, 2025



ENERGY SYSTEMS INNOVATION CENTER

**An Energy Center Focused
On Education, Outreach,
and Research**

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Visit our website to learn more about
ESIC, memberships and how you can
become part of the ESIC community.

**ESIC Research Excellence Partnership
Membership (REP)** – Enabling
excellence in research

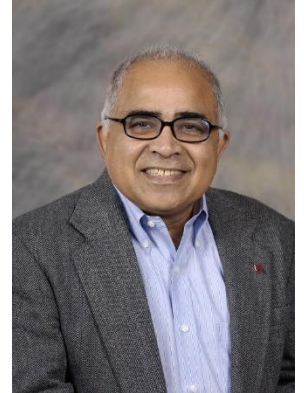
**ESIC Power Education Partnership
Membership (PEP)** – Supporting
power education

UPCOMING EVENTS ...

ESIC SEMINAR, WEDNESDAY, 2/19/25

Our next ESIC Seminar will be **Wednesday, Feb. 19 10am-11am**, featuring ESIC's own **Anjan Bose**. Anjan Bose will be presenting on **Evolution of Grid Operation and Control**.

To join us virtually, please follow this [TEAMS](#) link. If you are on campus, please feel free to drop by EME 26 to join us in-person for the seminar.



Missed out on a seminar? All ESIC seminars are recorded and posted to our website, click [HERE](#) to go back and watch videos from earlier seminars.

SPRING 2025 PRACTICUM UPDATE ...

STUDENT PLACEMENT IS UNDERWAY

The Energy Systems Innovation Center is currently placing our newest Spring Practicum students with our wonderful industry partners who will be hosting them this year. ESIC is connecting our students with their industry hosts for the opportunity to discuss how their time will be organized and begin to plan this highly educational week.

We look forward to another great year of industry engagement and continuing to develop the next generation of power engineers.

STUDENT ENGAGEMENT ...

“STUDENT SPOTLIGHT” SERIES FEATURE ON LINKEDIN

We invite you to view our Student Spotlight on [LinkedIn](#). Each week, Pearl Miglani, our intrepid communications coordinator, interviews ESIC students to provide a glimpse into their experiences, goals, and personal insights on the future of power engineering! We will begin to cover our terrific undergraduates who are pursuing careers in the power industry. Stay tuned as we begin this new series in the coming weeks.



GUIDING STUDENTS TO POWER ENGINEERING

As academics, fellow students, and industry stakeholders, you all have the potential to guide and mentor high school students and college undergraduates interested in working towards a power engineering degree. If you know of such a student, please encourage them to visit our [ESIC website](https://www.wsu.edu/esic) to find out more or ask them to contact us at esic.center@wsu.edu.

FROM THE ARCHIVES ...

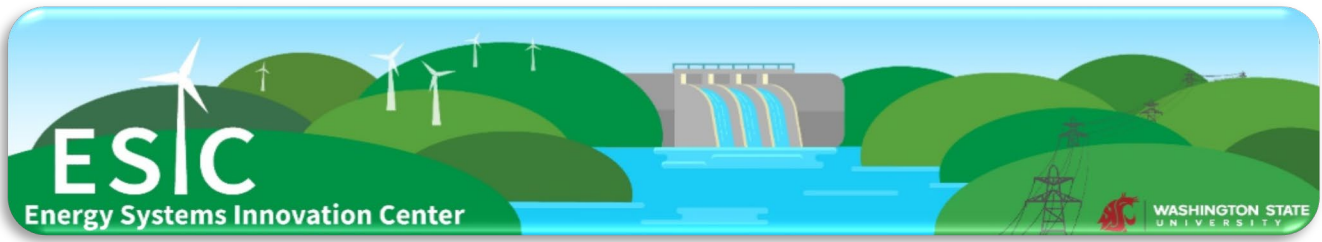
THE HISTORY BEHIND WSU POWER ENGINEERING

ESIC is part of a proud tradition of excellence in the field of power engineering. WSU has been heavily involved in power engineering for over 100 years and contributed to the advancement and continued modernization of our regional and national power industry. With this tradition, comes terrific historical photos. Pictured is the WSU Power Lab circa 1910. It is incredibly interesting to think of how these young engineers went on to influence the direction of our nation's power industry.



FOLLOW US ON LINKEDIN

To stay up-to-date on all things concerning ESIC and power engineering, follow us on our [LinkedIn](#) page where we post seminar updates, scholarships, job openings, and so much more!



EVOLUTION OF GRID OPERATION AND CONTROL

~by~

ANJAN BOSE

Regents Professor

Energy Systems Innovation Center

Wednesday, February 19 • 10 A ~ 11 A • EME 26

OVERVIEW

The digitalization of grid operation and control occurred in the 1960s with the hard wired measurement, communication and control being replaced by digital measurements and control signals being communicated on microwave channels. These SCADA-AGC systems were further augmented with analytical applications to develop the complete EMS in the 70s. These EMS have evolved into very large systems because of the continuing development of computation and communications. With the cost reductions of digitalization, these grid operation and control technologies are now being applied to the distribution systems and operator training.

BIO

Dr. Anjan Bose is globally known as a technical leader in the power grid control industry, a researcher in electric power engineering, and administrator in higher education. He is a Regents Professor at Washington State University, where he also served as the Dean of Engineering and Architecture (1998-2005) and in 2012-13 served as a Senior Advisor to the US Department of Energy (DOE) during the Obama administration. Major breakthroughs in power system control technology under his leadership are industrial practice today. He has consultant..o be a technical leader in this industry and a prominent

Dr. Bose is a Member of the US National Academy of Engineering, a founding Member and elected President of the Washington State National Academy of Engineering, a Fellow of the IEEE and is active in several international professional societies. He is also the author of *The Hippies of Telegraph Avenue* (2021); sharing his educational journey and life experiences during his first year in America.

