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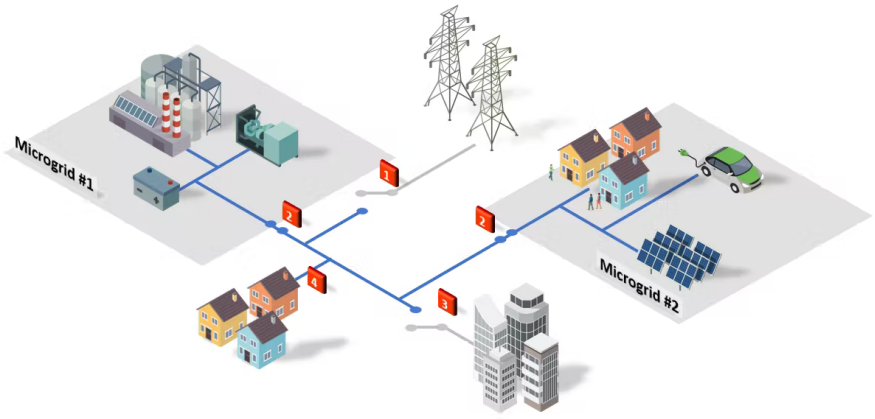
Stony Brook Professor To Give Talk on Using AI to Improve Power Grids

Prof. Peng Zhang Discusses Using Neural Networks for Resilient Networked Micogrids



Stony Brook, NY: This coming Tuesday, March 29 Prof. Peng Zhang from the Stony Brook University Department of Electrical and Computer Engineering will be giving a talk on coordinated network microgrids (or NMs) and how the introduction of deep learning AI can produce more resilient power grids in the case of major blackouts as well as more reliability in less extreme situations. The talk is a part of a speaker series emphasizing leading voices in Science, Technology, Engineering and Mathematics (STEM) and introducing exciting advancements in those fields to the general public. The event is being held online over Zoom just as the previous installments in the series have been. Prof. Zhang will be introducing the basic principles behind microgrids and discuss his plans for building a living laboratory to share big data sets among research communities. The goal of this plan is to stimulate innovation and develop the necessary technology to enable smart, interconnected, and especially sustainable communities and infrastructures.

About Network Microgrids: Network microgrids are an emerging technology that enhance the ability of a power grid to bounce back from major outage events such as blackouts. The key advancement in the field that is being worked on at SBU has been the integration of artificial intelligence, specifically continuous-depth deep neural networks, into microgrid technology to allow for more adaptive energy systems. It also provides a more cyber-secure option, as the use of neural networks allows the microgrid to improve itself over time to adapt to increasingly sophisticated cyberattacks.

About Prof. Zhang: Prof. Zhang has been a pioneer in microgrid research, publishing over 100 papers and 26 technical reports. He has written 2 books and was awarded a patent for work in the field. He has a joint appointment at Brookhaven National Laboratory in addition to his work at SBU. His work was foundational to the study of quantum grids, networked microgrids and software-defined smart grids.

You can register to attend the talk via Zoom here.

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Sources:
https://calendar.stonybrook.edu/event/stem-speaker-series-ai-enabled-provably-resilient-networked-microgrids-with-dr-peng-zhang/
https://www.stonybrook.edu/commcms/electrical/people/-core_faculty/zhang_peng.php

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