

Control of Battery Storage in Power Systems

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Abstract: In this talk we consider the control of storages in power systems. This is a challenging problem because storage operations are strongly coupled over time where past actions influence future states of the system. We analyze this online problem, where decisions are made with imperfect knowledge of the future, and present some results on optimal online algorithms under storage energy constraints and nonlinear degradation cost functions. We will also discuss the economics of energy storage, and how to make it profitable in the current market.

Bio: *Baosen Zhang* is an Assistant Professor in the department of Electrical Engineering at the University of Washington. He received his undergraduate degree in engineering science from the University of Toronto, Toronto, ON, Canada, in 2008 and the Ph.D. degree Department of Electrical Engineering and Computer Science, University of California at Berkeley in 2013. Before joining UW, he was postdoctoral scholar at Stanford University.

His interest is in the area of power systems and cyberphysical systems, broadly defined. He was awarded several fellowships during his graduate studies. He was selected as one of Forbes 30-under-30 professionals in energy in 2015.

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