



Wisconsin Public Utility Institute



## **Jake Blanchard** **UW-Madison, Dept. of Engineering** **Physics**

Jake Blanchard is a professor of nuclear engineering at the University of Wisconsin-Madison and is currently Chair of the Engineering Physics Department. He received his PhD in nuclear engineering from the University of California-Los Angeles in 1988. He was selected as a Presidential Young Investigator in 1990 and as a Fellow with the UW Teaching Academy in 1995. He received a UW-Madison Chancellor's Distinguished Teaching Award in 2002 and the Harvey Spangler Award for Technology Enhanced Instruction in 2008.

Jake's research interests include radiation damage in fission and fusion environments, fusion reactor design, and nuclear microbatteries. He designs fusion and fission reactor components that are capable of withstanding extreme thermal and radiation loads. He also conducts research directed towards the invention of nuclear microbatteries, which are long-lived, radioisotope-powered batteries for MEMS devices. One interesting application is the development of a nuclear powered RF transmitter that will allow these devices to communicate with each other wirelessly. Jake has published over 50 articles in refereed journals in several major engineering fields, including fusion technology, solid mechanics, materials, and applied physics.