

# Manufacturing Our Future: Energy Solutions

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**November 10, 2022, 11:00am to 11:45am**

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## **Abstract:**

There are many grand challenges that humanity faces in the realms of medicine, energy, and security. In this seminar, we will discuss three research topics aligned with those challenges. First, we will learn how micro-and nano structures enabled effective thermal management of electronics and the potential application to health therapeutics. Second, we understand the importance of renewable energies and how it can be enabled by the innovative design of thermal energy storage systems. Finally, we will see how nano-scale piezoelectric materials have the potential to power remote sensors for many applications, including agriculture, infrastructure, and health. We will close out the seminar with a brief discussion of how Diversity-Equity-Inclusion and Educational Philosophy can impact Iowa State University..

## **Biography:**

Chris Oshman is currently serving as a Science-Technology-Policy Fellow with the Advanced Manufacturing Office in the U.S. Dept. of Energy. He was a Post-Doctoral Fellow at the Colorado School of Mines and at the Le Studium Institute for Advanced Studies. His doctoral work at the University of Colorado was focused on Micro-Nano fabrication. He is a licensed Professional Engineer and was a high school Physics teacher. In his free time he enjoys international travel, scuba diving, and is an avid cycle commuter.

**\*This seminar counts towards the ME 600 seminar requirement  
for Mechanical Engineering graduate students.**

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