NPS Defense Energy Program Presents:

DEFENSE ENERGY SEMINAR WWW.NPS.EDU/ENERGY

The Storage and Utilization of Solar Thermal Energy: Central Receivers for Solar Fuel Production

21 February 2013 ▪ Glasgow 102 ▪ 0800

With Guest Lecturer Prof. Nathan P. Siegel

Mechanical Engineering Department
Bucknell University

Prof. Nathan P. Siegel

The intent of this seminar is to provide an introduction to solar thermal energy conversion and storage technologies, and to present some of the information and tools needed to assess the feasibility of solar-based energy solutions for different applications. Solar energy is the only persistent energy resource available on Earth. Every day, the amount of energy delivered from the sun to the Earth far exceeds primary energy consumption.

Topics will include:

- A general discussion of energy usage at the utility scale
- An assessment of solar resource availability in the United States and abroad
- An introduction to several solar conversion and storage technologies with an emphasis here on solar thermal energy conversion
- An overview of likely near term solar energy research directions

Abridged Biography:

Dr. Nathan Siegel has been an Assistant Professor of Mechanical Engineering at Bucknell University since August of 2011. He teaches courses in the thermal sciences including fluid mechanics and heat transfer as well as an upper division elective in solar thermal technology.

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