



NASA Glenn Research Center
UNIVERSITY STUDENT
DESIGN CHALLENGE

Speaker Series
**Power, Energy Storage
and Conversion**



Timothy Peshek

Dr. Timothy Peshek joined NASA in January 2017 in the Photovoltaics and Electrochemical Systems Branch after working in the area of photovoltaics research and development for nearly 10 years. Prior to joining NASA, Dr. Peshek was Research Assistant Professor of Materials Science and Engineering at Case Western Reserve University using big data analytics to study solar cell degradation processes. Dr. Peshek's previous experiences included a technical lead position for a startup company developing power electronics for solar arrays and research into the utility of thin-film solar absorbers at the National Renewable Energy Laboratory and Arizona State University. Dr. Peshek is the author of over 30 articles and was 1 of 10 global recipients of a Google Little Box Challenge research award.

Glenn Expertise: Power, Energy Storage and Conversion

Aerospace power system capabilities at Glenn Research Center encompass all technology readiness levels from basic research through flight hardware. This includes extensive capabilities in power system analysis and modeling, and all requisite skills, expertise, and facilities for power generation, energy storage and electric power distribution. Power generation entails the development of solar cells, solar arrays, primary fuel cells, radio-isotope power systems, fission power systems, and associated thermal systems. Energy storage comprises buildup of batteries, regenerative fuel cells, and flywheels. Electric power distribution capabilities include regulation of power generation and storage systems; delivery of both low-and high-voltage generated power to users; provision of conditioned power to a wide variety of loads; and automatic controls to facilitate the management of power systems. Glenn has extensive expertise in integrating each of the respective technologies into end-to-end systems that can be tested, verified, and validated in Center facilities.



NASA Glenn's new LED solar simulator.

<https://www.nasa.gov/content/university-student-design-challenge-2017-2018>

**To join us on 2/28/18 at 3:00 p.m. EST,
please log in at <https://go.nasa.gov/2AftEem>.**