



Heliostat Consortium Seminar Series

Brought to you by the Resource, Training, and Education (RTE) topic area



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Host: Dr. Rebecca Mitchell

Title: Concentrating Solar
Technologies at the
National Solar Thermal
Test Facility

When: December 8th
1-2 PM MDT

Zoom:
[https://nrel.zoomgov.com/
j/1603899348?pwd=dEtDU
mRHSEI5RkVzN3pIRGFxcW
FaUT09](https://nrel.zoomgov.com/j/1603899348?pwd=dEtDUmRHSEI5RkVzN3pIRGFxcWFaUT09)

Abstract:

Sandia National Laboratories, one of the founding entities in Concentrating Solar Research, has been actively working on power tower systems for more than 40 years. In this presentation, Dr. Margaret Gordon will cover the capabilities at the National Solar Thermal Test Facility including the solar furnace, solar tower and heliostat field, and solar simulator. Our current research at the 200 ft tall tower and field of >200 Heliostats, spans applications from power generation, to thermal energy storage, to industrial process heating. To accomplish these research projects, sandia has a dedicated optics research program. Current metrology capabilities, including the Beam Characterization System, SOFAST – high precision mirror surface measurement, UFACET – for outdoor high speed mirror measurements, along with techniques using LiDAR, flux characterization techniques, and others will be discussed.

Bio:

Dr. Gordon completed her doctorate in inorganic chemistry with a focus on sol-gel chemistry of polar inorganic anions, crystallography, and density functional theory simulations at the Northwestern University in 2002. After her study of zeolites for gas separation membranes at Sandia National Laboratories as a post doctoral researcher, she joined the technical staff at Sandia National Laboratories. Her research in photocatalysis, surface chemistry and composite materials resulted in numerous publications and several patents. From 2017 to 2021 she served as the Deputy Director for the DuraMAT Consortium which is focused on funding infrastructure, research capabilities, and longer-term research in durable materials for photovoltaic (PV) systems to lower the levelized cost of electricity. Since 2021, Margaret has managed the Concentrating Solar Technologies group of 30+ members at Sandia, and the National Solar Thermal Test Facility which is the only large-scale high-flux testing facility in North America.