

# Accelerator Physics and Technology Seminar

## Accelerating Plasma and Radiation Surface Science Using Transient Grating Spectroscopy

**Angus Peter Campbell Wylie, MIT**

**Date:** Tuesday, September 10

**When:** 4:00 pm CDT

**Where:** One West (WH1W) and Zoom

**Abstract:** As interest in fusion energy has increased in recent years, pressure to hasten reactor materials research has similarly increased. Transient grating spectroscopy (TGS) offers non-destructive and rapid access to thermal and elastic data of the near-surface of materials, ideal for the investigation of ion-irradiated materials. With a tunable depth of investigation, on the scale of microns, TGS has a broad range of applications from thin-films, coatings, and ion-implantation to more bulk-like properties. In this talk recent results using a new plasma and ion-irradiation in-situ (PI3) TGS will be presented, specifically in tungsten irradiated with tungsten ions and separately with helium plasma exposure to form tungsten fuzz."