

Accelerator Physics and Technology Seminar

Nanostructured Electron Sources for Accelerator Applications

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Date: Tuesday, August 6

When: 4:00 pm CDT

Where: Hornet's Nest (WH8X) and Zoom

Please note room change

Abstract: Photoinjectors, renowned for producing electron beams of unparalleled brightness, are pivotal to numerous high-impact scientific endeavors, including free electron lasers, ultrafast electron diffraction and microscopy experiments, and inverse Compton scattering x-ray sources. Among the critical components of the photoinjector, the photocathode plays a central role, as its quantum efficiency, mean transverse energy, response time, electron energy spread of emitted electrons, and lifetime/robustness collectively determine the quality of the electron bunch generated for the applications. In this talk, I will talk about various nanostructured electron sources developed and characterized for the next generation accelerator applications.