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Introduction to Laser System Modeling using SHaRE

6 – 8 December 2022

SHaRE is a collection of library functions used to calculate the beam metrics and irradiance distribution associated with laser (including HEL) and relay target engagements via scaling law analysis/modeling of propagation and atmospheric beam control. The library has been designed for use in MATLAB, Python, or as a linked library within a compiled C++ executable. The library addresses airborne, tactical, ground-based, and maritime lasers working in direct attack mode or employed with high-altitude or space-based optical relay mirror systems. The library can handle an arbitrary number of relay platforms in the path to the target, and allows full variability of system parameters, atmospheric models, engagement geometries, and incorporation of arbitrary propagation and beam control effects. The principal output of the toolbox is a collection of beam metrics from which irradiance on target and its properties may be quantified.

Cost: $1,850 per attendee

Venue: Online via Zoom for Government

Schedule: 10:00 – 18:00 Eastern Time each day

Registration: Credit Card Payment (register here**)**

Training Objectives:

- Introduce analysist to a common understanding of laser system modeling and simulation
- Introduce the modeling techniques applied to laser systems
- Develop familiarity with following tools set:
    - ATMTools toolbox in MATLAB
    - SHaRE toolbox in MATLAB
    - SHaRE toolbox in Python
    - SHaRE toolbox API
- Provide illustrative examples of how modeling approaches are selected for given applications
- Illustrate the application of these approaches to airborne, ground based, and maritime systems

For additional information, contact SHaRE@mza.com

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Scaling for HEL and Relay Engagements

Contact share@mza.com for information

Dec 6-8 10am-6pm ET

$1,850/student

Virtual training using Zoom for Government

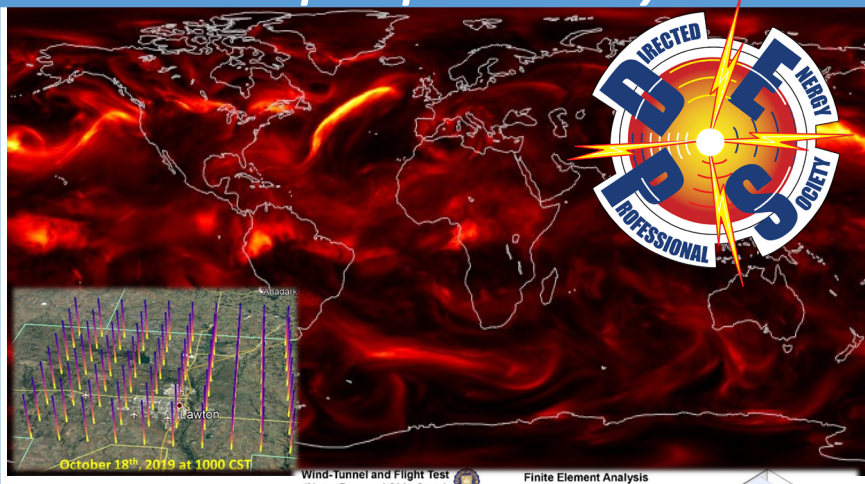
*In-person may be available in Albuquerque and Dayton**

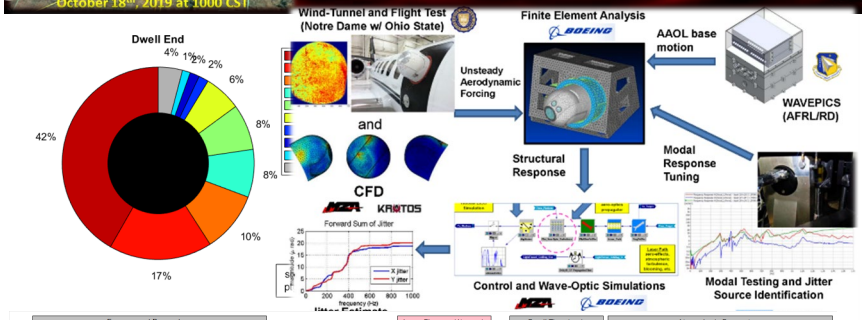
System Modeling

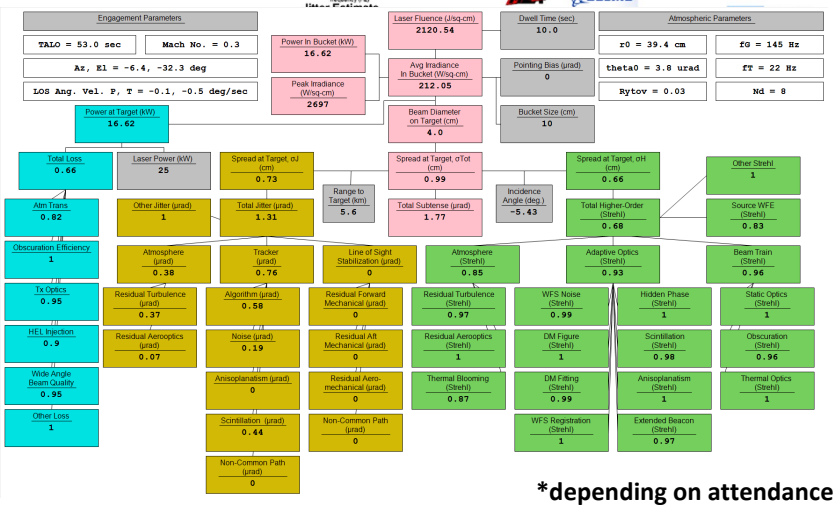
- *ATMTools and EngagementTools*
- *Propagation and beam control*
- *Aero-optical effects*
- *Modeling techniques with SHaRE*
- *SHaRE model development*
- *Hands-on with Matlab*
- *Example models*

New Features

- *SHaRE C++ API*
- *ATMOpy*
- *SHaREpy*
- *LEEDR Wx Cubes*







**depending on attendance*