


CTEMPs Hands-On Fiber-Optic Sensing (DAS & DTS)

One-Day AGU Training Workshop — In Person

When: TBD (AGU will confirm date in early October) · **8:30 AM – 5:00 PM CT**
Where: Ernest N. Morial Convention Center, 900 Convention Center Blvd., New Orleans, LA 70130
Room: Assigned by AGU (to be announced)

Registration
All workshop attendees must (1) register for AGU25 and (2) purchase a separate workshop ticket.
Registration link: coming in early October (we will update this flyer).

Capacity: Limited seating; **target cap 40 seats**.
Modality: In-person only (no virtual/hybrid option per AGU).

Workshop at a Glance

A fast-paced, hands-on introduction to Distributed Acoustic Sensing (DAS) and Distributed Temperature Sensing (DTS) for Earth and environmental applications. Learn the essentials of field deployment, acquisition, quality control, and first-look processing/interpretation through live demos, curated datasets, and practical exercises.

Format: Full-day (long workshop)
Hours: 8:30 AM – 5:00 PM CT (breaks provided; lunch per AGU)
Audience: Researchers, Grad students, and practitioners in geophysics, hydrology, civil/environmental engineering, natural hazards, and environmental sensing.

What You'll Learn

- Fundamentals of DAS & DTS hardware/interrogators (capabilities, limitations, safety)
- Installation & coupling options (native soil, sand backfill, conduit)
- Acquisition planning (sampling, gauge length, SNR, bandwidth, time sync, metadata)
- QC & troubleshooting (noise sources, coupling diagnostics; vibroseis & ambient examples)
- First-look processing workflows (filtering, spectrograms, coherence, stacking/decimation)
- Environmental & geohazards use cases

Preliminary Agenda (subject to minor adjustments)

08:30 – 09:00 Welcome, goals, introductions
09:00 – 09:30 Overview of fiber-optic distributed sensing (DAS & DTS)
09:30 – 10:15 Physics of light in optical fibers & core fundamentals (sampling, gauge length, SNR)
10:15 – 10:30 Break
10:30 – 11:00 DTS applications (hydrology/heat tracing; calibration & QC concepts)
11:00 – 11:30 DAS applications (seismic, infrastructure, environmental monitoring)
11:30 – 12:15 Unit demonstrations: live signals, QC & troubleshooting
12:15 – 13:15 Lunch & instrument time (hands-on)
13:15 – 14:00 Splicing demonstrations
14:00 – 14:45 DAS details & quick-look processing (filtering, spectrograms, coherence; acquisition planning)
14:45 – 15:00 Break & optional instrument/splicing time
15:00 – 15:45 DTS details (double-ended setups, calibration workflows, QA/QC)
15:45 – 16:30 Experiment design activity (team exercise: deployment plans & acquisition parameters)
16:30 – 17:00 Open Q&A, resources, next steps

Detailed room assignment and any timing adjustments are provided by AGU in early October.

Instructors

- Eileen Martin (Colorado School of Mines)
- Chris Kratt (University of Nevada, Reno)
- Mark B. Hausner (Desert Research Institute)
- Meagan Wengrove (Oregon State University)

- Hannah Glover (Oregon State University)
- Sara Sayyadi (University of Nevada, Reno)

Questions?

Content (not registration): Sara Sayyadi — **ssayyadi@unr.edu**
Registration, timing, and room details: Please refer to AGU communications and the official AGU registration portal once available.

Draft last updated: 05 Sep 2025 (CT).
This flyer will be revised once AGU publishes the official schedule and registration link.
