



Cyber Cowboys: Wrangling Big Data on the Frontier of Open Science



The White House Office of Science and Technology Policy and multiple US Federal Agencies have declared 2023 as “The Year of Open Science.” As researchers and educators, it is important to understand what open science is and why it goes beyond simply publishing in open access journals or releasing data at the end of a research study. New technologies such as generative Artificial Intelligence (i.e., OpenAI ChatGPT & Google Bard) are advancing rapidly, and universities are now backpedaling to try and integrate these tools into their traditional practices. One organization leading the way in open science and the adoption of AI is CyVerse, which has spent the last twelve years building cyber-infrastructure to enable thousands of scientists to work with big data across the internet using combinations of public research computing and commercial cloud. During this seminar, I will explore open science public resources and describe how to implement open science techniques and standard operating procedures into individual research, wet labs, research groups, or educational programs. You will also hear about example use cases from the CyVerse community in the fields of high throughput phenotyping, remote sensing using small uncrewed aerial vehicles, and earth observation systems.

Tyson Lee Swetnam, Ph.D.

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Date: Monday, April 3, 2023

Time: 2:00 – 3:00 p.m. US Central Time

Location: **Blocker 220** (in person)

Online: 998 4499 3279 (ID) & 724615 (PWD)

Faculty host: Seth Murray (SOSC)

Biography

Dr. Swetnam's research involves the applied use of cyberinfrastructure for spatial analysis in the earth and life sciences. His collaborative research portfolio spans dendrochronology, dendroecology, disturbance and landscape ecology, ecohydrology, geographic information systems, geoinformatics, geomorphology, natural resource management, plant sciences, and remote sensing. He is currently co-principal investigator (CoPI) and lead data scientist for geoinformatics with CyVerse, a National Science Foundation (NSF) supported cyberinfrastructure project in the Directorate of Biological Sciences. He is currently PI and CoPI on seven NSF and USDA awards which leverage CyVerse. Dr. Swetnam holds a joint appointment in the School of Natural Resources and the Environment, where he originally received a M.S. and Ph.D. in Watershed Management.

You can also click this link to join the seminar <https://tamu.zoom.us/j/99844993279?pwd=TkJodWFVRURyMmkwakl4SWZGeVJTQT09>

