

BOUNDARY-SPANNING SEMINAR SERIES

# Listening to a Landscape: Perspectives on big data in the field of bioacoustics

Seminar by Tessa Rhinehart  
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**Abstract:** Like many disciplines, ecology is in the midst of a "data revolution" driven by recent availability of massive amounts of data. One approach, automated acoustic surveying, shows particular promise for studying sound-producing animals like birds, wolves, and frogs. These surveys combine inexpensive, autonomous sound recorders with artificial intelligence capable of identifying the recorded sounds.

As in other fields, the data revolution in ecology presents novel challenges and opportunities. This seminar discusses three of these challenges -- developing machine learning methods, interpreting uncertain machine learning outputs, and communicating and collaborating across disciplines -- through the lens of the Kitzes Lab's research developing automated acoustic survey methods.

**Bio:** Tessa Rhinehart is a Research Programmer in the Kitzes Lab at the University of Pittsburgh. Her interests are in combining machine learning, statistical modeling, and remote sensing to answer large-scale questions in conservation biology and land management. Prior to her work in the Kitzes Lab, Tessa graduated from Swarthmore College with majors in Mathematics and Biology.

**Seminar overview:** this seminar series nurtures learning across academic boundaries. Expect rich conversations, spanning machine learning to catalysts, from lab bench to smokestack, with an eye toward protecting nature. Sponsoring units include: KU's Center for Environmentally Beneficial Catalysis (CEBC), the Internet of Catalysis National Science Foundation Research Traineeship (NRT), Information and Telecommunication Technology Center (ITTC), and the Departments of Chemistry, Chemical and Petroleum Engineering, and Electrical Engineering and Computer Science

**You belong here!** We invite everyone from the KU community to join us for this inclusive seminar.

**9:00 a.m.**  
**September 1, 2020**

**Join us by Zoom:**

<https://kansas.zoom.us/j/94193463789>  
Passcode: 2020

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