

# FisMatEcol Boletín

Dic 2022

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Eventos



# NECSI

## EXECUTIVE PROGRAM

FEBRUARY 27 - MARCH 2, 2023 // VIRTUAL



# COP 15





Oportunidades

# Undergraduate Complexity Research



Detail from Plant forms, an Impression Figure by Margaret Watts Hughes, pigment on glass, date unknown (recolored). Courtesy of Cyfarthfa Castle Museum and Art Gallery via [PublicDomainReview.org](http://PublicDomainReview.org)

in-need of great post-docs in soil  
biogeochemistry



(<https://jobs.colostate.edu/postings/117276>),

analytical chemistry

(<https://jobs.colostate.edu/postings/117278>),

and microbiology (soon) for world-changing  
CO<sub>2</sub> removal (soil biosequestration)

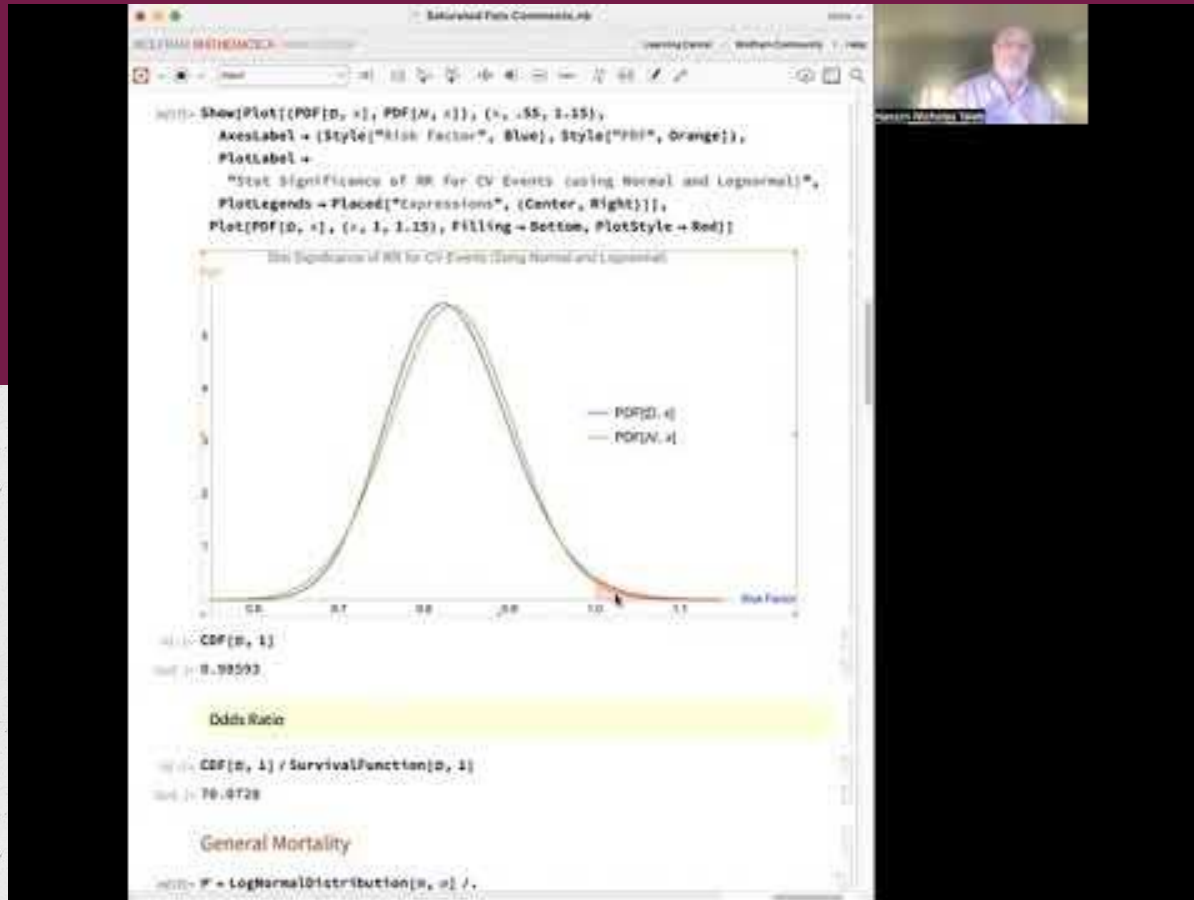
research in beautiful Fort Collins CO. Apply  
now!

 JOB ALERT  Interested in conducting exciting research in #landbased solutions for UK #climatechange mitigation? Then, check this 2-yr #postdoc at @ScienceShef <http://bit.ly/3Or71Ym>. Deadline Jan 9th. Any questions, contact me. Please, RT. Thanks! #UKRIFLF #SciJobs #NetZero

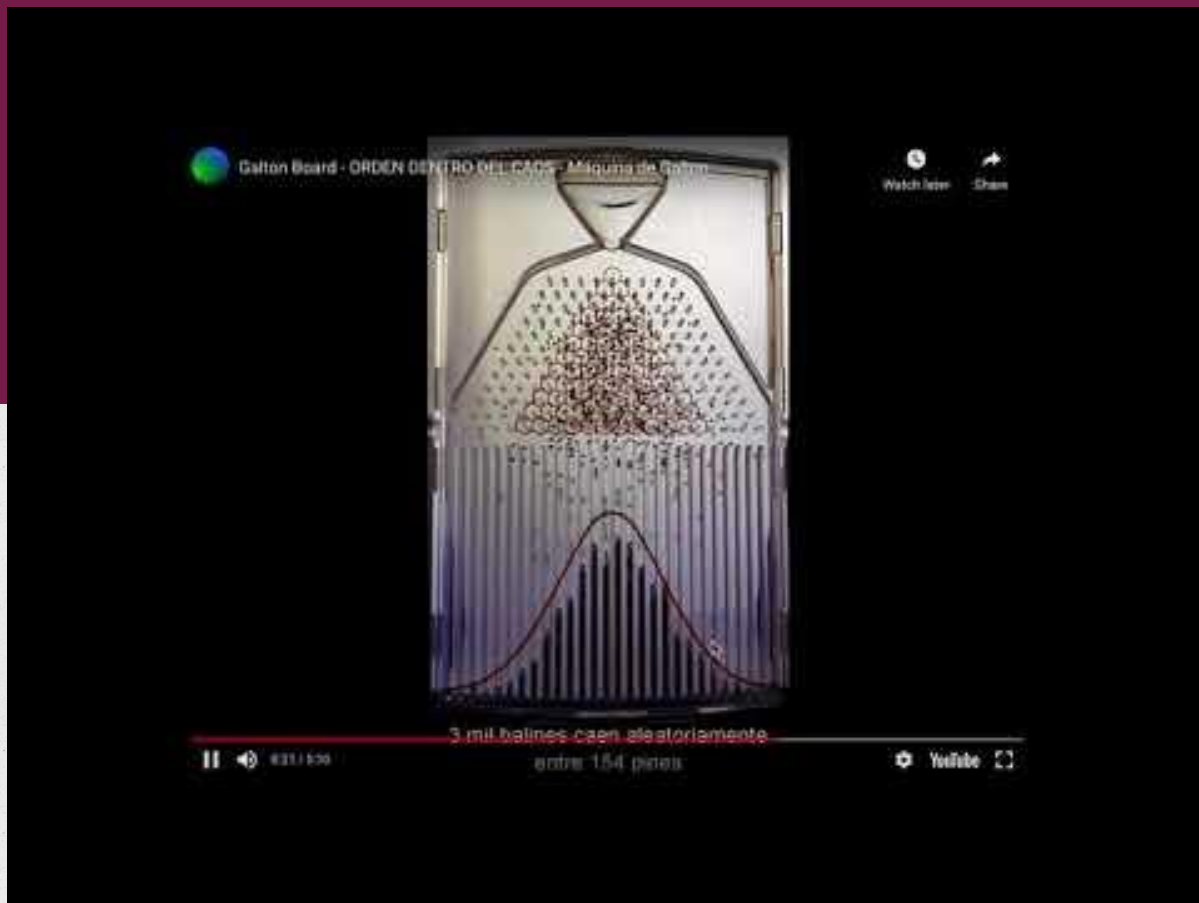


Conceptos

# Pensamiento propagandista Vs Pensamiento científico

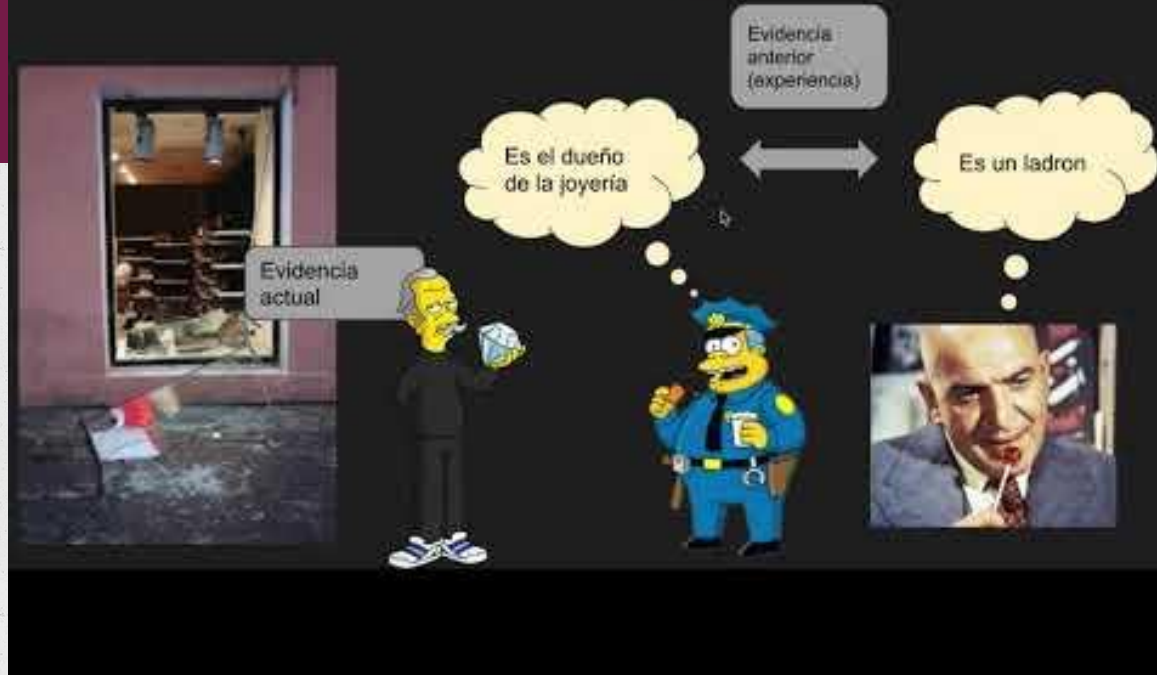


# Aleatoriedad



# Probabilidad

¿Qué es la probabilidad? (a la Pólya)



# Entropia fisica 01





# Entropia fisica 02



# Entropia (estadística)

## Entropy (for data science)



**...Clearly Explained!!!**

Cursos



# Harvard CS50

*Full University Course*





No pudiste ir?  
Disponible en línea, grabado!!!

Curso-taller intensivo  
**PSICOBÍOTICOS Y  
ALIMENTOS  
PSICOLÓGICOS**

Alimentación para la salud mental

16 y 17 de Julio  
9 a 13 hrs

8 hrs valor curricular  
Constancia avalada

contacto@otrasenda.org  
5562433168



Disponible en línea, grabado!!!

Cultura

**EL MAS IMPORTANTE**

**DEL**



Artículo



# Temporal and spatial dynamics in soil acoustics and their relation to soil animal diversity

Marcus Maeder , Xianda Guo, Felix Neff, Doris Schneider Mathis, Martin M. Gossner 

Published: March 8, 2022 • <https://doi.org/10.1371/journal.pone.0263618>

Article

Authors

Metrics

Comments

Media Coverage

Peer Review



## Abstract

Introduction

Materials and methods

Results

Discussion

Supporting information

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## Abstract

The observation and assessment of animal biodiversity using acoustic technology has developed considerably in recent years. Current eco-acoustic research focuses on automatic audio recorder arrays and acoustic indices, which may be used to study the spatial and temporal dynamics of local animal communities in high resolution. While such soundscapes have often been studied above ground, their applicability in soils has rarely been tested. For the first time, we applied acoustic and statistical methods to explore the spatial, diurnal, and seasonal dynamics of the soundscape in soils. We studied the dynamics of acoustic complexity in forest soils in the alpine Pfynwald forest in the Swiss canton of Valais and related them to meteorological and microclimatic data. To increase microclimatic variability, we used a long-term irrigation experiment. We also took soil samples close to the sensors on 6 days in different seasons. Daily and seasonal patterns of acoustic complexity were predicted to be associated with abiotic parameters—that is, meteorological and microclimatic conditions—and mediated by the dynamics of the diversity and activity of the soil fauna. Seasonal patterns in acoustic complexity showed the highest acoustic complexity values in spring and summer, decreasing in fall and winter. Diurnal acoustic complexity values were highest in the afternoon and lowest during the night. The measurement of acoustic diversity at the sampling site was significantly associated with soil communities, with relationships between taxa richness or community composition and acoustic complexity being strongest shortly before taking the soil samples. Our results suggest that the temporal and spatial dynamics of the diversity and community composition of soil organisms can be predicted by the acoustic complexity of soil soundscapes. This opens up the possibility of using soil soundscape analysis as a noninvasive and easy-to-use method for soil biodiversity monitoring programs.



Videos



Libros

«Lee este libro, fortalece tu determinación y ayúdanos a recuperar la razón.»

—JORDAN B. PETERSON

GAD SAAD  
**LA MENTE  
PARASITARIA**



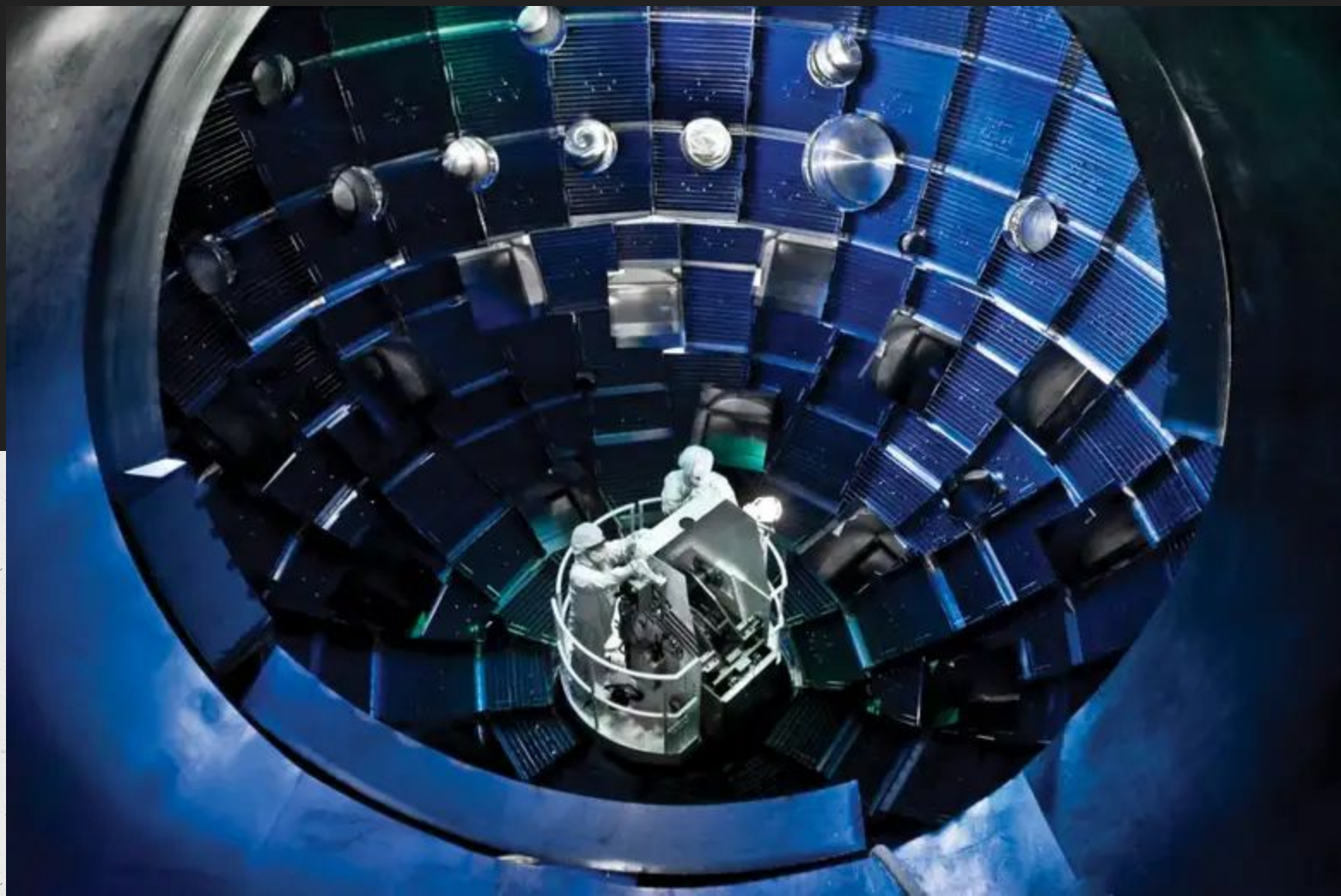
**CÓMO LAS IDEAS  
INFECCIOSAS  
ESTÁN MATANDO EL  
SENTIDO COMÚN**

Traducción de  
Verónica Puertollano

DEUSTO

Notas





GRUPO  
Prensa

# TLALPANHUÉHUETL DE MALINALCO

REPORTAJE  
ESPECIAL