

## SEMINARIO ALEATORIO

456

**MORE THAN 10,000 PRE-COLUMBIAN  
EARTHWORKS ARE STILL HIDDEN**

**THROUGHOUT AMAZÔNIA:  
HOW STATISTICS CAN HELP  
ARCHAEOLOGISTS BETTER**

**UNDERSTAND THE RELEVANCE OF THEIR  
FINDINGS**

### RESUMEN:

Indigenous societies are known to have occupied the Amazon basin for more than 12,000 years, but the scale of their influence on Amazonian forests remains uncertain. A spatial model for the 960 archaeological sites observed so far is proposed and is combined with relevant auxiliary information to perform inference on unknown model components, such as the number and the locations of sites yet to be discovered. The results predicted that between 10,272 and 23,648 sites remain to be discovered and that most will be found in the southwest. We also identified 53 domesticated tree species significantly associated with earthwork occurrence probability, suggesting that past management practices influenced the current composition of the forest. These discoveries open opportunities for better understanding the magnitude of ancient human influence on Amazonia and its current state.

Presentado por



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**Doctor en Estadística (Universidad de Warwick, UK; 1987). Profesor de Estadística en la Universidad Federal de Río de Janeiro (UFRJ) en Brasil, desde 1996 hasta 2019. Profesor Emérito en la UFRJ desde 2021. Ha sido muy reconocido internacionalmente por su trabajo en el área de Estadística Bayesiana. Autor de libros como Monte Carlo Markov Chain: Stochastic Simulation for Bayesian Inference, Statistical Inference: an Integrated Approach y Building a Platform for Data-Driven Pandemic Prediction: From Data Modelling to Visualisation - The CovidLP Project.**

**Sus áreas de interés incluyen modelos dinámicos, estadística espacial y simulación estocástica.**

### Detalles del evento:

**Fecha:** Viernes 24 de abril, 2026

**Hora:** 13:00 (Hora Centro de México)

**Ubicación:** Sala de Conferencias  
ITAM  
Campus Río Hondo

**Conexión zoom:**

Meeting ID: **985 1635 2256**

Passcode: **595562**