

Discovering the Process in the Pattern

Integration and spatial analysis
of disparate ecological data

Science and Mathematics

Colloquium Series



Wed., March 4, 3 p.m.

Student Union, Cooley Ballroom, B/C
ASU Polytechnic campus

Empirical and theoretical research has demonstrated a clear need to quantify the spatial-temporal relationships exhibited among individual organisms, and between organisms and environmental gradients, whenever ecological data are analyzed or modeled. While much emphasis has been placed on the statistical ramifications of failing to account for confounding influences like spatial autocorrelation, less attention has been given to the interpretive importance of spatial-temporal analysis in revealing the ecological patterns and processes hidden in structured data.

Drawing examples from invasive plant species dynamics, rodent evolution, and wildlife-to-livestock disease transmission, Humphreys will discuss why the best reason to perform spatial-temporal analysis is not statistical correctness, rather it is to better understand species behavior, space use, and interaction.



John Humphreys
Postdoctoral Researcher,
Jornada Experimental
Range and Long-Term
Ecological Research Station

John Humphreys is a postdoctoral researcher in predictive disease ecology at the Jornada Experimental Range and Long-Term Ecological Research station in Las Cruces, New Mexico. Humphreys also holds research positions with the Applied Forest and Wildlife Ecology Laboratory at Michigan State University and the USGS Patuxent Wildlife Research Center in Laurel, Maryland.

He received his PhD from Florida State University in 2018, where he designed novel spatial statistical approaches to integrate environmental, phylogenetic, and morphological data. His research is focused on the development of new spatial-temporal modeling techniques to quantify the roles of climate change and human dominated landscapes in shaping species distributions, altering community assembly processes, and facilitating wildlife-to-livestock infectious disease transmission.

Faculty and practitioners discuss their current research and field projects in the Science and Mathematics Colloquium Series, held throughout the academic year at ASU's Polytechnic campus. All seminars are free and open to the public.