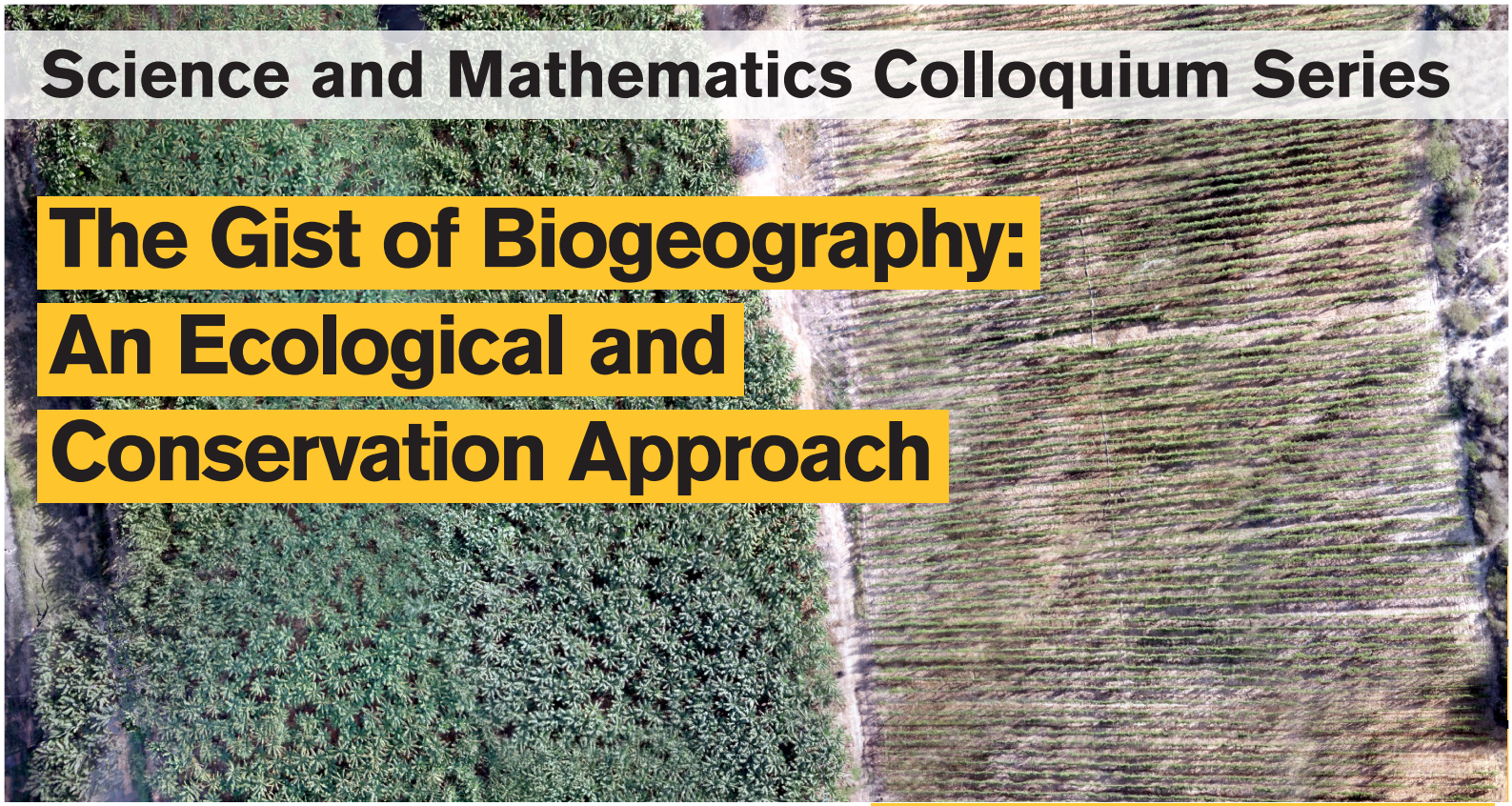
Science and Mathematics Colloquium Series



The Gist of Biogeography: An Ecological and Conservation Approach

Wed., Feb. 26 | 3 – 4 p.m.

Student Union, Cooley Ballrooms B/C
ASU Polytechnic campus

Join Professor Fábio Albuquerque as he discusses major challenges for the emerging discipline of conservation biogeography.

One challenge is to identify conservation areas and understand the factors and processes that govern the spatial distribution of those areas. When the biological information is available, the identification of high-priority conservation cells is a reliable, efficient way to represent species in a relatively small total area. Many biogeographical studies have identified sites that are individually rich in rare, endemic or total species. Because richness may be a poor indicator of global conservation priority, biogeographers have used complementarity-based algorithms to prioritize sites within regions.

When biological data are not available, planners use surrogates (e.g. vegetation communities, or mapped occurrences of a well-inventoried taxon) for species representation. Recently biogeographers proposed a promising surrogate that allows sites to be prioritized when species inventories are available for a subset of the planning area (predicted rarity-weighted richness or PRWR).

Biogeography is also being used to better understand and predict the impacts of climate change on plant abundance and distribution. By identifying the drivers of plant distribution and assessing potential changes in habitat suitability, biogeographical analyses can help practitioners to design more comprehensive strategies to conserve species.

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.

Fábio Albuquerque
Assistant Professor, ASU College of ntegrative Sciences and Arts

Dr. Albuquerque's research focuses on biogeography and macroecological issues, including the spatial patterns of species, spatial conservation prioritization, the effect of climate change on the distribution of native and exotic species, the effects of fragmentation and habitat loss on biodiversity, and drones. He has collaborated actively with researchers in several other disciplines of biology, particularly landscape ecology and botany. He earned his doctorate at the University of Alcalá (Spain),

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