

Fisher behavior and fish population dynamics in the Gulf of Mexico: How does fisher behavior affect stock assessment?



Science & Mathematics Colloquium Series

Presentation by Steve Saul

Assistant Professor, Faculty of Science and Mathematics
ASU College of Integrative Sciences and Arts

Wed., Jan. 25, 2017, 3 pm
Cooley Ballroom A, Student Union
ASU Polytechnic campus

Refreshments at 2:45 p.m.

Fisher decision-making can influence the effectiveness of management measures and determines the spatial and temporal locations of fishery-dependent observations. In many stock assessments, observations from fishers are used to infer the abundance of fish populations. To understand some of the ways that fisher behavior can influence our perception of abundance, Saul developed a spatially explicit, bio-economic, agent-based model of the reef fish fishery in the Gulf of Mexico. He will discuss flaws in current statistical methods and how they may lead to biased stock assessment trends and inappropriate management responses. An expanded version of his model is under development, to understand the response of fishing fleets and fish populations to event-related closures and oil pollution, and to explore different management strategies.

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

Steve Saul applies agent-based modeling, remote sensing, and statistical analyses to understand the links between the structure and spatial distributions of habitat, fish populations, and fishing activities in support of natural resource management.



Dr. Saul has conducted many stock assessments for the National Marine Fisheries Service. He has evaluated the effect of the oil spill on the fisheries and fishing communities in the Gulf of Mexico, developed high resolution habitat maps for small island developing countries in the South Pacific, worked with fishing communities and the local government in Tonga, and taught best fishing practices to recreational anglers in South Florida,

Saul earned his doctorate and master's from the University of Miami, in marine biology and fisheries.

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