CFAES

SCHOOL OF ENVIRONMENT AND NATURAL RESOURCES SEMINAR SERIES

THURSDAY, OCT. 3, 2019 | 4:10 P.M. | 103 KOTTMAN HALL

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Harnessing Collective Intelligence for Environmental Decision-Making

Many social-ecological issues of great importance to human well-being, such as climate change, biodiversity loss, and overexploitation of natural resources are embedded within coupled human and natural systems. Problem solving in these complex systems is difficult. Understanding them requires identifying nonlinearities, feedback loops, and integrating different forms of knowledge to create models that allow various decision-makers to better communicate the dynamics of these problems. However, creating such models is challenging. Model building too often lags behind decision-making needs because of gaps in scientific knowledge about how these systems are structured, data scarcity, and the challenges in working across different disciplines and with different stakeholder communities. In this talk I will outline several emerging 'collective intelligence' (CI) approaches (e.g., participatory modeling, wisdom of crowds, swarm intelligence) that engage diverse stakeholders and scientists to better understand the nature of complex environmental problems. Using a variety of case studies (e.g., fisheries management, urban food security, and the Flint water crisis) I will demonstrate how new technological approaches to harnessing the CI of large groups is an efficient way to improve computational model building, model relevancy and support environmental decision-making.

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