

# **Evolution of ecosystem properties**

**Simon A. Levin (Princeton University, USA)**

By marrying theory and empirical work, we can elucidate the patterns of key macroscopic measures within ecosystems, develop explanations of variation in those patterns, and develop predictive models of responses to changing environments. Beyond that, we need to bridge the gaps across scales, from the ecological to the evolutionary, from the physical and biological to the cultural and ethical. Ultimately, only by providing such linkages between the microscopic and the macroscopic can we further the science needed to achieve a sustainable future. This lecture will explore new approaches from evolutionary game theory, with application to a range of applications from marine and other systems