

iFAST: The International Forum on Advanced Environmental Sciences and Technology

A series of distinguished seminars by eminent scientists

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Professor Simon Levin is the James S. McDonnell Distinguished University Professor in Ecology and Evolutionary Biology at Princeton University. He is interested in understanding how macroscopic patterns and processes are maintained at the ecosystem and biosphere levels, in terms of ecological and evolutionary mechanisms. Professor Levin is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, and the American Philosophical Society, and a Foreign Member of the Istituto Veneto and the Istituto Lombardo. He is a former President of the Ecological Society of America and the Society for Mathematical Biology. He has received numerous awards, such as the Kyoto Prize in Basic Sciences, the Heineken Prize for Environmental Sciences, the Margalef Prize for Ecology, the Tyler Prize for Environmental Achievement and a U.S. National Medal of Science.

Mathematical ecology: A century of progress, and challenges for the next century

The subject of mathematical ecology is one of the oldest and most exciting in mathematical biology and has helped in the management of natural systems and infectious diseases. Though many problems remain in those areas, we face new challenges today in finding ways to cooperate in managing our Global Commons. From behavioral and evolutionary perspectives, our societies display conflict of purpose or fitness across levels, leading to game-theoretic problems in understanding how cooperation emerges in Nature, and how it might be realized in dealing with problems of the Global Commons. This lecture will attempt to weave these topics together, tracing the evolution from earlier work to challenges for the future.



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Register for the Zoom conference at www.ou.edu/ieg/seminars

**Organizing Committee Chair: Jizhong Zhou (University of Oklahoma, USA; <https://www.ou.edu/ieg>)
Xueduan Liu (Central South University, China)**