iFAST: The International Forum on Advanced Environmental Sciences and Technology

A series of distinguished seminars by eminent scientists

8 p.m. CDT, 9 p.m. EDT, Wednesday, May 6, 2026
1 a.m. GMT, 9 a.m. China, Thursday, May 7, 2026

BRAJESH SINGH
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https://www.westernsydney.edu.au/hie/people/leadership-team/professor-brajesh-singh

Brajesh Singh is a professor of soil biology at School of Agriculture & Environment, University of Western Australia. Through his fundamental research, he identifies the quantitative relationships between microbial diversity and ecosystem/host functions and how natural/anthropogenic pressures such as climate change affect this. His applied research harnesses the knowledge gained in fundamental research to improve agriculture productivity, restoration success and environmental sustainability. Outcomes from his research have informed multiple policy decisions at national and international levels, and he is currently working with multiple government and inter-governmental bodies including European Commission and United Nations agencies such as the Food and Agriculture Authority (FAO) to support the implementation of relevant sustainable development goals. He serves as chairman of UN-FAO's Intergovernmental Panel on Soil and previously acted as the chair of the FAO-International Network on Soil Biodiversity. His research has received support from the Australian Research Council, other national and international funding agencies, and multiple industries.

Soil biodiversity: Assembly, drivers and ecosystem services

Abstract This presentation will identify drivers of soil biodiversity and will provide evidence for biotic regulation of key ecosystem functions (e.g., primary productivity, nutrient cycling, pathogens suppression) from micro- to global scales. Direct and indirect impacts of soil biodiversity on key ecosystem functions will be highlighted. I will also demonstrate that integration of ecological and evolutionary theories, and system-based approaches can substantially help in translating emerging knowledge into effective solutions for increased agriculture productivity, climate adaptation and environmental sustainability.

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Zoom webinar ID: 934 8142 2012 (zoom.us/j/93481422012)

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