

## **Modelling eco-evolutionary dynamics: an integrative overview**

*Wednesday, 11 July 2018 12:00 (30 minutes)*

Analyzing humankind's interactions with our collective environment typically requires understanding eco-evolutionary dynamics in complex adaptive systems. This is especially important for mitigating anthropogenic impacts on the biosphere, managing the multifaceted services provided by ecosystems, and shaping social interactions among agents utilizing these systems. Understanding complex adaptive systems requires a marriage of ecological dynamics with evolutionary dynamics. This is because adaptations in living systems cannot be understood without accounting for the rich ecological and social embedding of populations and communities; conversely, predicting the future of ecosystems, especially when exposed to strong anthropogenic impacts, necessitates accounting for the prospect of rapid evolution, both biological and cultural. Bridging the often still profound gap between theories and applications, this presentation provides an integrative overview of modern modelling approaches linking ecological and evolutionary dynamics in real-world complex adaptive systems.

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