



Wednesday

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## The Rise of Complexity in Nature

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Nature writ large is a mess. Yet, underlying unities pervade the long and storied, albeit meandering, path from the early Universe to civilization on Earth. Evolution is one of those unifiers, incorporating physical, biological, and cultural changes within a broad and inclusive cosmic-evolutionary scenario. Complexity is another such unifier, delineating the growth of structure, function, and diversity within and among galaxies, stars, planets, life, and society.

This talk will summarize a research agenda now underway not only to search for unity in Nature but also, potentially and more fundamentally, to quantify both unceasing evolution and increasing complexity by modeling energy, whose flows through non-equilibrium systems arguably grant opportunities for evolution to create evermore complexity.