

Northwestern University's Interdisciplinary Committee on Evolutionary Processes (ICEP)

2007 Darwin Lecture Series

Dr. Robert M. Hazen

Genesis: The Scientific Quest for Life's Origins

Thursday, February 22, 2007—5:30 PM Reception, 6:00 PM Lecture Pancoe-ENH Abbott Auditorium, Pancoe-ENH Life Sciences Pavilion

2200 Campus Drive, Evanston Campus

Robert M. Hazen is a Research Scientist at the Carnegie Institution of Washington's Geophysical Laboratory and Clarence Robinson Professor of Earth Science at George Mason University.

Questions about life's origins and evolution are among the most profound and controversial topics in science. To tackle life's origin in the laboratory using the scientific method is a daunting challenge. The new field of emergence – the study of complex systems that arise through the interaction of many components – provides a powerful framework for that search. We are surrounded by emergent systems: molecules link to form cells, ants interact to form colonies, and brain cells network to form the conscious mind. In each instance, numerous interacting individual "agents" produce complex systems with new, often delightfully unexpected properties and behaviors. Life's origins can be modeled as a sequence of emergent steps, leading from geochemical simplicity to biochemical complexity.

http://www.wcas.northwestern.edu/evolution/index.htm

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