

# Computational Sciences

AT MARQUETTE UNIVERSITY



## Presents

### Dr. Robert Hazen

- Research scientist at the Carnegie Institution of Washington's Geophysical Laboratory
- Clarence Robinson Professor of Earth Science at George Mason University
- Author of more than 300 articles and books on science, history & music

### Genesis: The Scientific Quest for Life's Origins

**6 p.m. Tuesday, October 27, 2009**

Olin Engineering, Room 202

1500 W. Wisconsin Avenue, Milwaukee

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.

**This event is free and open to the public**

Sponsored by the Department of Mathematics, Statistics and Computer Science Program in Computational Sciences and the Marquette University Chapter of Sigma Xi, and in cooperation with the College Endowment Association

Parking is available in the Wells Street Parking Structure at 1240 W. Wells Street. For more information, visit [www.mscs.edu/computational\\_sciences](http://www.mscs.edu/computational_sciences) or e-mail [computational\\_sciences@mscs.mu.edu](mailto:computational_sciences@mscs.mu.edu)



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