

STAR/IRAS CONFERENCE, July 29 – August 5, 2006

## EMERGENCE: NATURE'S MODE OF CREATIVITY

Conference Co-Chairs: George Fisher, Johns Hopkins University  
Ursula Goodenough, Washington University

The concept of emergence provides new ways of thinking about cosmic and biological evolution, and challenges some widely held paradigms about the nature of Nature. It also opens up exciting possibilities for reinterpreting many traditional religious views about creation, causality, morality, and the very nature and purpose of human being. IRAS will hold two conferences, in 2006 and 2007, that explore the potential of this concept to revolutionize our worldviews.

Emergent properties arise as a consequence of relationships – for example, the relationships between water molecules that generate a snowflake, or the relationships between proteins that generate motility, or the relationships between neurons that generate a memory. They can be reduced to their component parts (snowflakes → water), but they are “something more” or “something else” than their component parts and hence novel and innovative. Emergent properties also give rise to yet more emergent properties, generating the vast complexity of our present-day cosmic, biological, ecological, and cultural contexts.

At the 2006 conference, scientists will offer rigorous explanations of what emergence entails (e.g. self-organization, autocatalysis) in language accessible to a general audience, and will describe the centrality of emergence to the dynamics and evolution of the cosmos and planet Earth, the origins of life, and the dynamics and evolution of organisms and ecosystems. In 2007 we will explore how emergence is manifest in the evolution of human beings and in shaping our mental, emotional, linguistic, cultural, artistic, and spiritual modalities.

During both conferences, scientists, theologians, philosophers, clergy, and conferees will consider, in plenary sessions and in numerous workshops, how an understanding of emergent modes of creativity offers us ways to feel at home in the universe, on the planet, and in our daily lives, expanding and even transforming our sense of place, gratitude, reverence, obligation, and the sacred.

PLENARY SPEAKERS: Stuart Kauffman, Santa Fe Institute and U. Calgary, dynamics of complex systems; Michael Silberstein, Elizabethtown College, emergence of the classical world from the quantum; Michael Wysession, Washington U., emergence of complex planetary structures from gravity, thermodynamics, and chemistry; Bruce Weber, Cal State Fullerton and Bennington College, emergence of life; Ursula Goodenough, emergence of embryos and death; Terrence Deacon, UC Berkeley, emergence and brain evolution; Barbara Smuts, U. Michigan, animal societies and the emergence of social conventions; Guy Hoelzer, U. Nevada, structural emergence in ecosystems and ecosystems; Gordon Kaufman, Harvard U., A religious view of emergence: God as creativity; Mary Evelyn Tucker, Forum on Religion and Ecology, and Brian Swimme, California Institute on Integral Studies, an emerging planetary civilization. Chapel talks: George Fisher and Gretchen van Utt, Harundale Presbyterian, emergence in religious thought.

There will be a professionally designed and led program for children and youth ages 3-17. Clergy and seminarians will meet during the conference to shape conference materials for use in their ministry. CEUs upon request.

Information on IRAS is at [www.iras.org](http://www.iras.org); Star Island is described at [www.starisland.org](http://www.starisland.org). Information on conference fees, room and board, and registration is at [www.iras.org/conference.html](http://www.iras.org/conference.html), or contact Bonnie Falla, IRAS registrar, 810 1/2 N. Ninth St. Allentown PA 18102; email: [bfalla@enter.net](mailto:bfalla@enter.net).