

ARTIFICIAL LIFE

EMERGENCE

EVOLUTION

OF
LIFE-LIKE FORMS
IN
HUMAN-MADE
ENVIRONMENTS



FEB. 5-9, 1990
SANTA FE
NEW MEXICO



SELF-ORGANIZING COMMITTEE

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Tuesday, February 6

- 9:00-9:25 a.m.** **Modelling Evolutionary Optimization by RNA Folding-Peter Schuster**
- 9:30-10:25 a.m.** **Diffusion Controlled RNA Evolution in Capillaries-John McCaskill**
- 10:30 a.m.** **Break**
- 11:00-11:40 a.m.** **RNA Evolution-Gerald Joyce**
11:45-12:25 p.m. **Constraints on and Prospects for Life Elsewhere in the Universe-Ben Zukerman**
- 12:30 -2:00 p.m.** **Lunch**
- 2:00-2:40 p.m.** **Evolution of Hierarchical Organization-Leo Buss**
2:45-3:25 p.m. **Title to Be Announced-Danny Hillis**
- 3:30 p.m.** **Break**
- 4:00-4:20 p.m.** **Simple Self-Reproducing Machines-Alvy Ray Smith**
4:25-4:45 p.m. **Title to Be Announced- Eugene Spafford**
4:50-5:10 p.m. **Evolutionary Mechanics: Towards a Thermodynamics of Evolution-Jim Crutchfield**
- 5:15-5:35 p.m.** **Computer Worms and the Turing Test-Russell Brand**
- 5:40 p.m.** **Dinner Break**
- 7:30 p.m.** **Virus Panel**
Harold Thimbleby, Hyman Hartman, Eugene Spafford, Russell Brand, and David Jefferson
- Demonstrations**
- A Self-Assembling Model of a Bacterial Flagellar Motor-Richard Thompson**
- Agar: An Animal Construction Kit-Michael Travers**
- An Experiment in Synthesizing Emergent Intelligent Behavior in Artificial Creatures and Populations-Jim Donnett**
- Self-Programming Virtual Robots-Harold Morris**
- The Artificial Insect Project-Randall Beer**
- An Evolutionary Approach to Building Autonomous Robots-Brian Yamauchi**
- Learning from Natural Selection in an Artificial Environment-David Ackley**
- Simulating Bacterial Chemotaxis to Investigate Robust Movement-Steven Janke**

