HEARNE EMINENT LECTURE SERIES

Dr. Seth Lloyd
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Friday
April 15
5 PM
Room 130
Nicholson Hall

HORACE HEARNE JR. INSTITUTE FOR THEORETICAL PHYSICS

QUANTUM LIFE

How biological systems use quantum mechanics

A **PUBLIC LECTURE** BY
DR. SETH LLOYD
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Recent experimental evidence suggests that living organisms are using quantum mechanics in a sophisticated fashion to enhance the efficiency of photosynthesis.

Bacteria are essentially performing a quantum computation to extract energy from light.

Dr. Lloyd will show how plants and bacteria perform quantum information processing, and will discuss how living creatures engage in all sorts of quantum activities in their efforts to survive and reproduce.

Dr. Lloyd's research interests include:

- Quantum information: quantum computation and quantum communications
- Quantum control and measurement: quantum limits to control and sensing
- Complex systems: characterizing and controlling complex systems

LSU College of Science Department of Physics & Astronomy