Title: The Physics of Information: From Entanglement to Black Holes

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Abstract: Do ideas about information and reality inspire fruitful new approaches to the hardest problems of modern physics? What can we learn about the paradoxes of quantum mechanics, the beginning of the universe and our understanding of black holes by thinking about the very essence of information? The answers to these questions are surprising and enlightening, but also controversial. The topic of information within physics has involved some of the 20th century's greatest scientists in long-running intellectual battles that continue to the present day. In this special debate, hosted by the CBC's Bob McDonald of 'Quirks and Quarks', you will enjoy a lively discussion between four prominent physicists who have thought long and hard about these questions. <kw> information, quantum mechanics, quantum cryptology, entropy, everything computes, properties equals information, uncertainty principle, quantum computer, hologram, black hole, event horizon, coherence, Schrodinger, interference and predictability, quantum state, teleportation, entanglement</kw>
The Physics of Information

Held on December 5, 2007, in Waterloo, Ontario, Canada

Part of PI’s popular Public Lecture Series and featuring:

Leonard Susskind
Stanford University, Perimeter Institute

Seth Lloyd
MIT

Anthony Leggett
University of Illinois, Perimeter Institute, U of W

Chris Fuchs
Perimeter Institute

Special Host
Bob McDonald
Of CBC Radio’s “Quirks and Quarks”