

Contact: Erin Colliau
Email: depsec@pha.jhu.edu
Phone: Public Information: 410-516-8649
Phone #2: Press Information: 410-516-7347
Website: www.pha.jhu.edu/superstrings

September 27, 2005

FOR IMMEDIATE RELEASE

"SUPERSTRINGS"- Einstein & His Violin **November 12, 2005 – JHU Interfaith Center**

Baltimore, MD. released September 27, 2005: Brian Foster, Professor of Physics at Oxford University (England) and Jack Liebeck, violinist, will present a lecture/concert on Saturday November 12, at 7 p.m. in the Johns Hopkins University Interfaith Center located at 3509 N. Charles Street, Baltimore. **This concert is free and open to the Public. No reserved seating will be provided.**

Superstrings is a lecture that celebrates Einstein Year by linking Einstein's favorite instrument, the violin, with many of the concepts of modern physics that he did so much to found. The performance begins with an introduction to Einstein's life and involvement with music and how his ideas have shaped our concepts of space, time and the evolution of the Universe. These slides are accompanied by selections from J.S. Bach's Sonatas and Partitas for Solo Violin, some of Einstein's favorite music.

The lecture then proceeds with a discussion of some of our modern ideas that build on the structures of Einstein and define the so-called "Standard Model" of particle physics, in which the evolution of the Universe after the Big Bang can be understood by the interplay of a small number of fundamental forces on a few featureless "elementary" particles, the quarks and leptons, and their antimatter equivalents.

At several points in the lecture, solo violin music inspired by the ideas that are being discussed is played. This music has been specially commissioned by two outstanding young UK composers, Emily Hall and Anna Meredith. Furthermore, Jack uses his J.B. Guadagnini violin, the "ex-Wilhelmj", to illustrate by analogy several of the ideas discussed by Brian in the lecture.

Although in many ways a fantastic success, the "Standard Model" leaves many questions unanswered and leads to several paradoxes. Modern ideas of Superstrings may well lead to a much more satisfactory theory, although at the cost of predicting a whole host of new particles as yet undiscovered. Superstring theory also predicts that the universe has extra "hidden" dimensions of space whose size is so small that they are invisible to our everyday experience. Nevertheless, they may give rise to measurable effects in the next generations of "atom

smashers" due to start operation at CERN in Geneva in a couple of years time. The lecture ends by looking at these possible effects and with a duet for two violins in which lecturer and soloist join forces to illustrate the production of mini Black Holes in the unimaginably violent collisions at CERN.

“Life without music is inconceivable to me. I know that the most joy in my life has come to me from my violin” – Albert Einstein

For further information please call (410) 516-8649 <http://www.pha.jhu.edu/superstrings>

This concert is free and open to the Public. No reserved seating will be provided. This event is sponsored by the Johns Hopkins University Department of Physics & Astronomy in recognition of the World Year of Physics, celebrating the 100th anniversary of Einstein’s “miracle year”.