

# Sir James Lighthill

## Distinguished Lectureship in Mathematical Sciences

Provost Lawrence G. Abele established the Sir James Lighthill Distinguished Lectureship Award to honor leaders in mathematical sciences and to attract them to visit the Florida State University to give lectures, inspire students and interact with the faculty and students.



### PROFESSOR PETER LAX

Courant Institute of Mathematical Science  
New York University

Member, National Academy of Sciences of the U.S.A.  
National Medal of Science  
Wolf Prize

PUBLIC LECTURE

### *The Paradox of Education*

4:00 p.m.

Wednesday, November 17, 2004

Werkmeister Reading Room

116 Dodd Hall

(Refreshments to be served at 3:30)

The paradox is that science and mathematics are developing with leaps and bounds at more than exponential rate. Does that mean that what we teach in high school and college is falling behind by leaps and bounds? Not necessarily; for, as Hilbert had observed, new discoveries bring simpler methods and new points of view which replace the older, more cumbersome ones. This is equally true in mathematical education; I will illustrate this with many examples in algebra and geometry. The basic sciences, physics, chemistry, biology have revised drastically their high school and college curricula. We mathematicians should follow their example.

BORN: May 1, 1926, Budapest, Hungary

GOVERNMENT SERVICE:

President's Committee on the National Medal of Science 1977; National Science Board 1980-86;

DOE Related:

Theory Division, Advisory Committee, LANL; Senior Fellow, Los Alamos Scientific Laboratory;

Review Committee, Oak Ridge National Laboratory

*Sir James Lighthill was a great mathematical scientist of the twentieth century, his contributions in the diverse field of fluid dynamics were insightful, fundamental and enduring. He had an uncanny ability to find mathematical descriptions of physical processes that were deceptively simple and yet captured the essence of complex fluid dynamical phenomena in such fields as aeroacoustics, water waves and biofluidynamics. For more than half a century the famous Lighthill acoustic analogy has formed the basis of procedures for computing the noise produced by aircraft engines. His formulation of the general principles of fluid waves has led to greater understanding and prediction capabilities for ocean currents and flood movement. His pioneering, interdisciplinary contributions to biofluidynamics ranged from blood motion to animal flight. He was awarded an honorary degree by FSU in 1996.*