MITMECHE

MECHANICAL ENGINEERING COLLOQUIUM SERIES 2014-2015

The Ascher H. Shapiro Lecture in Fluid Mechanics

Sports Ballistics

Christophe Clanet

Director, The Hydrodynamics Laboratory
École Polytechnique & National Center
for Scientific Research (CNRS)

on Friday, February 20th at 4:00pm in 3-270

We describe and classify the trajectories of sports projectiles that have spherical symmetry, cylindrical symmetry, or (almost) no symmetry. This classification allows us to discuss the large diversity observed in the paths of spherical balls, the flip properties of shuttlecocks, and the optimal position and stability of ski jumpers.

Ascher H. Shapiro (1916-2004) was Professor of Mechanical Engineering at MIT (S.B. 1938, Sc.D.1946 in MechE). He was appointed assistant professor at MIT in 1943 where he taught fluid mechanics. He was Ford Professor from 1962 to 1975, Institute Professor from 1975 and Emeritus Institute Professor in 1986. He was Chair of the Institute's Faculty in 1964-1965 and head of the MechE Department from 1965 to 1974. His two-volume treatise, “The Dynamics and Thermodynamics of Compressible Fluid Flow”, is a classic. His book “Shape and Flow: The Fluid Dynamics of Drag” explained boundary layer phenomena and drag in simple, non-mathematical terms. In 1961, he founded the National Council for Fluid Mechanics Films, in cooperation with the Educational Development Center, and released a series of 39 Fluid films, which have since then been widely used. He was elected to American Academy of Arts and Sciences in 1952, the National Academy of Science in 1967, and National Academy of Engineering in 1974. He was awarded multiple educational and research awards.

Refreshments will be served before the seminar.
Please contact Tony Pulsone at pulsone@mit.edu with any questions.

MITMECHE

http://mechecolloquium.scripts.mit.edu/home/