



JOHNS HOPKINS
Center for Environmental
& Applied Fluid Mechanics

Weekly CEA FM Seminar: Fall 2013

Date: **Friday, September 13, 2013**
Time: 11:00 AM
Location: Gilman 50 (Marjorie M. Fisher Room)
Speaker: **Dr. Itzhak Fouxon** (Weizmann Institute Of Science - Israel)
Title: ***"Fractal Distribution of Inertial Particles in Turbulence and Formation of Rain in Warm Clouds"***

Abstract

In this talk we will see how to describe the spatial distribution of inertial particles in the turbulent (or chaotic) flow. The particles are repelled from the randomly distributed turbulent vortices which have finite life-time. Thus the unknown statistics of the turbulent vortices produces a non-trivial random distribution of particles in space. We will see that this distribution is fractal and it can be described quantitatively in terms of one phenomenological constant when inertia is weak. The implications of this finding for the problem of formation of rain in warm clouds will be considered.

Bio



Dr. Fouxon received his doctorate in the Weizmann Institute of Science in Israel working on different facets of the problem of turbulent transport with Prof. Falkovich. During his post-doctoral studies Dr. Fouxon worked on granular materials and on the uses of thermodynamics of black holes (with the inventor of the notion of black hole's entropy Prof. Bekenstein). Later Dr. Fouxon worked in the condensed matter department in Tel-Aviv University. Today Dr. Fouxon lectures in the Weizmann Institute of Science working in turbulence and granular materials.