
Colloquium

Collisions and coalescences between heavy particles in turbulent flow

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Numerous natural and industrial processes, such as rain initiation, planet formation, sediment transport, or spray atomization, involve the growth by coalescence of small impurities suspended in a turbulent fluid. They generally have a finite mass, so that they detach from the flow and cluster. After explaining how this mechanism enhance the rate at which they collide, I will present recent results on the role played by turbulent fluctuations. Using the results of direct numerical simulations, I will explain how a snowball effect leads on very short time scales to the formation of particles that are much larger than the average.

Wednesday, Feb 11th 2015

4:00 PM (Tea/Coffee at 3:30 PM)

Seminar Hall, TCIS