Random Walk



THE VORTEX STREET The image above is known as a Kármán vortex street—a repeating pattern of swirls (vortices) caused by an instability in the flow of a fluid as it passes over an object with a broad, flattened front called a bluff body. The phenomenon is named after Theodore von Kármán, the aerodynamics pioneer who was the founding director of what is now known as the Graduate Aerospace Laboratories at the California Institute of Technology (GALCIT).

Unlike most such images—in which the swirls would have been visualized thanks to dye injected into a stream of fluid—this version was created by computer (and by mechanical engineer Tim Colonius), using numerical data from a simulation that tracked individual particles as they moved and tumbled past one another.