



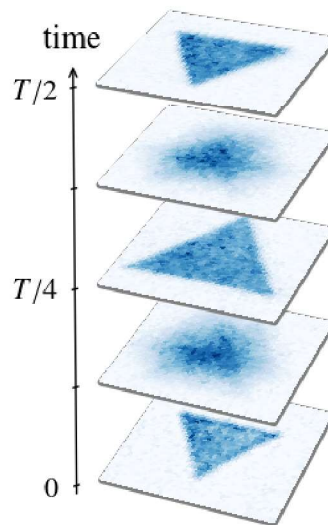
# Yale Physics

**Jean Dalibard**

Laboratoire Kastler Brossel, Collège de France

**April 28, 2025 at 3:30 p.m. in SPL 57**

Scale invariance, a hidden symmetry explored with quantum gases



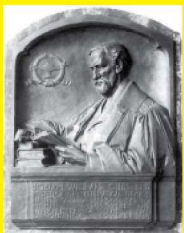
Scale invariance, a concept initially introduced in high-energy physics, has gained numerous applications in the physics of quantum fluids. It is applicable to strongly interacting Fermi gases, two-dimensional Bose gases, as well as few-body systems that exhibit the “Efimov effect.” In this Memorial Lecture, I will illustrate how scale and conformal invariance emerge in cold atomic gases. I will use various examples ranging from thermodynamics to soliton physics to specific structures with periodic time evolution called “breathers”.

Host: Nir Navon



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*The Hanan Rosenthal Memorial Lecture was established in honor of physicist Hanan Rosenthal, a brilliant graduate student at Columbia University and instructor at Yale. This annual lecture in atomic physics, Rosenthal's field, is given by a distinguished leader in the field. Originally, the lecture series alternated between Columbia and Yale, which were both significant in Hanan Rosenthal's career; in recent years, the lecture has been held only at Yale University.*