# SEMPARIS – Séminaires en région parisienne

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## Seminaire exceptionnel

**Mardi 15 Octobre 2019, 16 :30**
LPTM, 4.13 St Martin II
Domaines : physics.flu-dyn

Titre : *Hydrodynamic quantum analogs : droplets walking on the impossible pilot wave*

Orateur : **John Bush ( MIT Cambridge, Mass. USA )**

Résumé : *Yves Couder and Emmanuel Fort discovered that droplets walking on a vibrating fluid bath exhibit several features previously thought to be exclusive to the microscopic, quantum realm. These walking droplets propel themselves by virtue of a resonant interaction with their own wave field, and so represent the first macroscopic realization of a pilot-wave system of the form proposed for microscopic quantum dynamics by Louis de Broglie in the 1920s. New experimental and theoretical results allow us to rationalize the emergence of quantum-like behavior in this hydrodynamic pilot-wave system in a number of settings, and explore its potential and limitations as a quantum analog.*

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