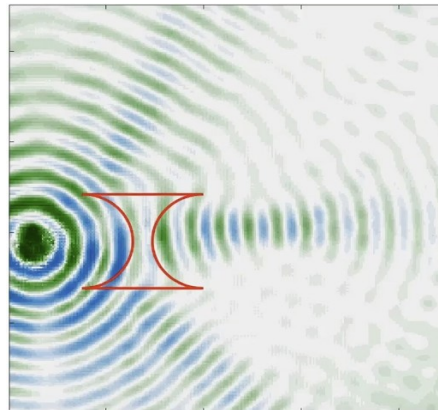


**17 November 2021, 11:30 – Online seminar**

## **A laboratory approach to hydro-elastic waves**

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Hydro-elastic waves (HEW) appear at a very large scale in the marginal ice zone, where the ocean is covered by a thin layer of ice. The physics of HEW is dominated by the bending elasticity of the thin sheet covering the liquid, but their propagation is much slower than plate (Lamb) waves due to the fluid inertia. In this seminar, I will describe our experimental approach to HEW. I will first focus on the typical parameter range in which they can be observed at the laboratory scale. In a second step, I will show that HEW open promising possibilities for wave control. In particular, I will present experimental configurations that allow for building a HEW based "optics" and revisiting Snell's law, geometrical optics, and Fourier optics in a hydrodynamical experiment. Last, I will describe HEW propagation in periodically structured media, revealing the emergence of band gaps and Dirac points.



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