



Discrete and continuous hydrodynamic models for droplet-Faraday pilot wave dynamics

Paul Milewski

Department of Mathematical Sciences, University of Bath, UK

We will discuss hydrodynamic based models for droplet-Faraday pilot waves, focussing on two wave generation models: (i) A "nonlinear spring" model of impact and (ii) Discrete periodic localised impacts. We discuss the advantages and disadvantages of each model, with emphasis on the predictions of quantisation, energy considerations, stability and dynamics of the discrete model.