

Contribution Title:	WELLPOSEDNESS OF THE TWO AND THREE DIMENSIONAL FULL WATER WAVE PROBLEM
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Invited speaker:	Topical session
YRS seminar:	NO

We consider the problem of global in time existence and uniqueness of solutions of the 2-D infinite depth full water wave equation. It is known that this equation has a solution for a time period  $[0, T/\epsilon]$  for initial data of type  $\epsilon\Phi$ , where  $T$  depends only on  $\Phi$ . We show that for such data there exists a unique solution for a time period  $[0, e^{T/\epsilon}]$ . This is achieved by better understandings of the nature of the nonlinearity of the water wave equation.

This paper is now accepted by Invent. Math. and is available at  
<http://www.springerlink.com/content/c3v28534883m7131/fulltext.pdf>