A proof of the completeness of Lamb modes

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Abstract

The aim of this paper is to give a precise proof of the completeness of Lamb modes and associated modes. This proof is relatively simple and short but relies on two powerful mathematical theorems. The first one is a theorem on elliptic systems with a parameter due to Agranovich and Vishik. The second one is a theorem due to Locker which gives a criterion to show the completeness of the set of generalized eigenvectors of a Hilbert-Schmidt discrete operator.

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1