

REALIZING PSEUDO-ANOSOV EGG BEATERS WITH SIMPLE MECHANISMS

UMEDA SAKI AND KOBAYASHI TSUYOSHI

Egg beater is a cooking material that is used to mix together yolk and white of eggs. Egg beater consists of a number of rods that stick into fluid and they make a periodic motion to stir the fluid. Such a motion gives an automorphism of the surface of the fluid with punctures introduced by the rods. It is natural to expect that if the automorphism is a complicated one (e.g. a pseudo-Anosov homeomorphism) then it can mix the fluid efficiently. In fact, this expectation is experimentally confirmed by Kin and Sakajo by using computer simulation. In this talk, we explain how to realize a pseudo-Anosov egg beater with using a simple mechanism (with a few gears).

NARA WOMEN'S UNIVERSITY