



# 北京理工大学

## 数学与统计学院学术报告

### Low regularity well-posedness for two-dimensional hydroelastic waves.

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**摘要:** The hydroelastic wave problem describes the interaction between elastic structures and hydrodynamic excitation. It is a free boundary problem in mathematical fluid mechanics and can be written as a quasilinear dispersive system of order  $5/2$ . In this talk, I will talk about the low regularity local well-posedness of the two-dimensional deep hydroelastic waves. By constructing a cubic modified energy that incorporates a paradifferential weight chosen carefully, we prove that the hydroelastic waves are locally well-posed in  $H^{s+\frac{3}{2}} \times H^s$  for  $s > \frac{3}{4}$ . This is based on the joint work with Jiaqi Yang.

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