Chaotic Roll Motions of Ships in Regular Longitudinal Waves(PDF)

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Title: Chaotic Roll Motions of Ships in Regular Longitudinal Waves

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关键词: parametric resonance; Lyapunov characteristic exponents; longitudinal waves.

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摘要:

Parametric resonance can lead to dangerously large rolling motions, endangering the ship, cargo and crew. The QR-factorization method for calculating (LCEs) Lyapunov Characteristic Exponents was introduced; parametric resonance stability of ships in longitudinal waves was then analyzed using LCEs. Then the safe and unsafe regions of target ships were then identified. The results showed that this method can be used to analyze ship stability and to accurately identify safe and unsafe operating conditions for a ship in longitudinal waves.

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备注/Memo: -

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