Hexagonal Gyro-elastic lattice: Dispersion surfaces



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29th August 2019 43 / 59

Dispersion surfaces for $\alpha = 0.9$



Frequencies 3.79 and 4.02 (inside the pass band) can be lead to interfacial waveforms. 2 Frequency 3.95 (inside the stop band) can lead to edge modes.

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Gyro-elastic waveguides

29th August 2019 44 / 59

Interfacial waveforms along a zig-zag interface ($\alpha = 0.9$)



Interfacial waveforms ($\omega = 3.79$)

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Interfacial waveforms ($\omega = 4.02$)

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Interfacial waveforms along a zig-zag interface ($\alpha = 0.9$)



29th August 2019 48 / 59

Applications of gyro-elastic lattices: Topological protection



 $\alpha = 0.9, \Omega = \omega,$ Forcing

Forcing frequency is 3.95

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29th August 2019 49 / 59

A gyro-elastic topological insulator: transient simulation

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Gyro-elastic waveguides

29th August 2019 50 / 59

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