



HSU Department of Mathematics 71st

# KIEVAL LECTURE

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How the Study of Complex Wave Phenomena Inspires Beautiful Mathematics

Waves are all around us: ocean waves, sound waves, rainbows...scientists have spent countless hours trying to understand them, to predict them and to harness from them the energy that they encapsulate. In this talk, I will try to convey how the mathematical study of these physical phenomena have also created and inspired a whole set of new mathematical tools that are elegant, powerful and also incredibly beautiful in their abstract nature. These tools are now used to answer open problems in completely different settings, from number theory to probability to symplectic geometry and more.

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