1.8: Waves in 2 and 3 Dimensions

So far, we’ve looked at waves in one dimension, traveling along a string or sound waves going down a narrow tube. But waves in higher dimensions than one are very familiar—water waves on the surface of a pond, or sound waves moving out from a source in three dimensions. These higher dimensional waves satisfy wave equations that are a natural extension of the one we found for a string, and—very important—they also satisfy the Principle of Superposition, in other words, if waves meet, you just add the contribution from each wave. In the next two paragraphs, we go into more detail, but this Principle of Superposition is the crucial lesson.

Contributors and Attributions

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