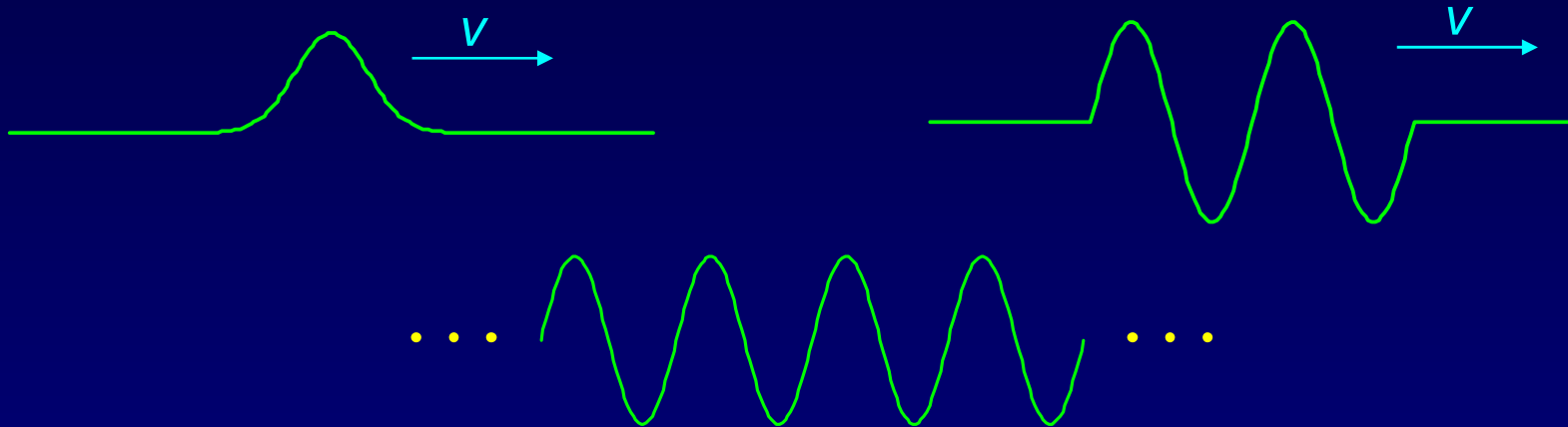# Wave Forms and Superposition

We can have all sorts of waveforms, but thanks to superposition, if we find a nice simple set of solutions, easy to analyze, we can write the more complicated solutions as superpositions of the simple ones.



It is a mathematical fact that any reasonable waveform can be represented as a superposition of harmonic waves. This is Fourier analysis, which many of you will learn for other applications.

We focus on harmonic waves, because we are already familiar with the math (trigonometry) needed to manipulate them.