I2COSSUPS

Superposition of two cosine waves, one having an optical path differnce δ with respect to the other. The sum is squared to result in the intensity.

We are looking at a time instance and graphs are shown for six different path differences.

$x := 0, .05 .. 4 \qquad \lambda := 1 \qquad A := 1$

$\delta 1 := 0 \quad \delta 2 := .1 \quad \delta 3 := .2 \quad \delta 4 := .3 \quad \delta 5 := .4 \quad \delta 6 := .5$

$$u1(x) := \left[A\cdot\cos\left[2\cdot\pi\cdot\left(\frac{x}{\lambda} - \frac{t1}{T}\right)\right] + A\cdot\cos\left[2\cdot\pi\cdot\left(\frac{x-\delta 1}{\lambda} - \frac{t1}{T}\right)\right]\right]$$

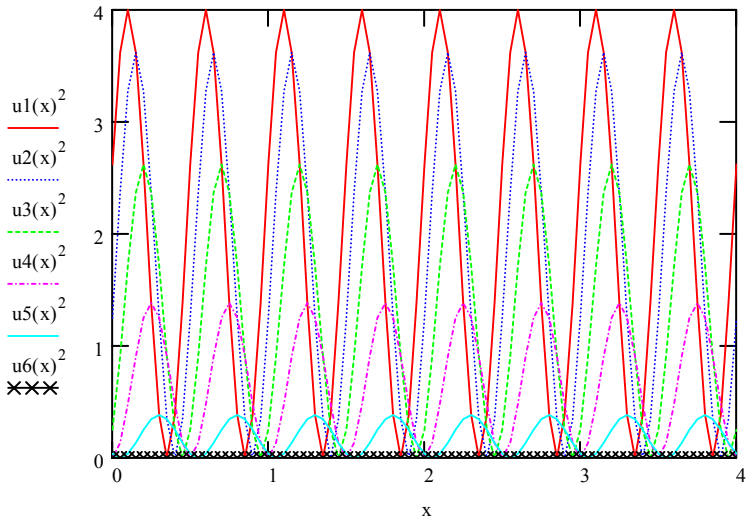
$$u2(x) := \left[A\cdot\cos\left[2\cdot\pi\cdot\left(\frac{x}{\lambda} - \frac{t1}{T}\right)\right] + A\cdot\cos\left[2\cdot\pi\cdot\left(\frac{x-\delta 2}{\lambda} - \frac{t1}{T}\right)\right]\right]$$

$$u3(x) := \left[A\cdot\cos\left[2\cdot\pi\cdot\left(\frac{x}{\lambda} - \frac{t1}{T}\right)\right] + A\cdot\cos\left[2\cdot\pi\cdot\left(\frac{x-\delta 3}{\lambda} - \frac{t1}{T}\right)\right]\right]$$

$$u4(x) := \left[A\cdot\cos\left[2\cdot\pi\cdot\left(\frac{x}{\lambda} - \frac{t1}{T}\right)\right] + A\cdot\cos\left[2\cdot\pi\cdot\left(\frac{x-\delta 4}{\lambda} - \frac{t1}{T}\right)\right]\right]$$

$$u5(x) := \left[A\cdot\cos\left[2\cdot\pi\cdot\left(\frac{x}{\lambda} - \frac{t1}{T}\right)\right] + A\cdot\cos\left[2\cdot\pi\cdot\left(\frac{x-\delta 5}{\lambda} - t1\right)\right]\right]$$

$$u6(x) := \left[A\cdot\cos\left[2\cdot\pi\cdot\left(\frac{x}{\lambda} - \frac{t1}{T}\right)\right] + A\cdot\cos\left[2\cdot\pi\cdot\left(\frac{x-\delta 6}{\lambda} - \frac{t1}{T}\right)\right]\right]$$



$\delta 1 \equiv 1$

$t1 \equiv .1$

$T \equiv 1$