Tratamiento de Señales

Version 2022-2
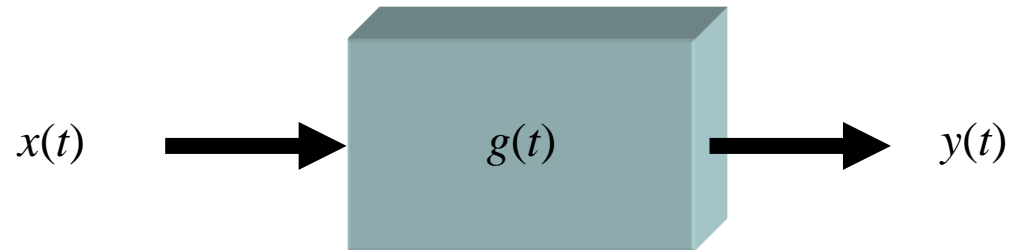
Convolución 1D

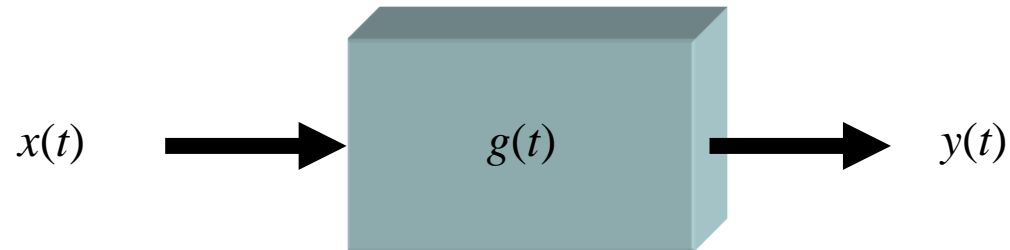[Capítulo 4]

Dr. José Ramón Iglesias

DSP-ASIC BUILDER GROUP
Director Semillero TRIAC
Ingenieria Electronica
Universidad Popular del Cesar
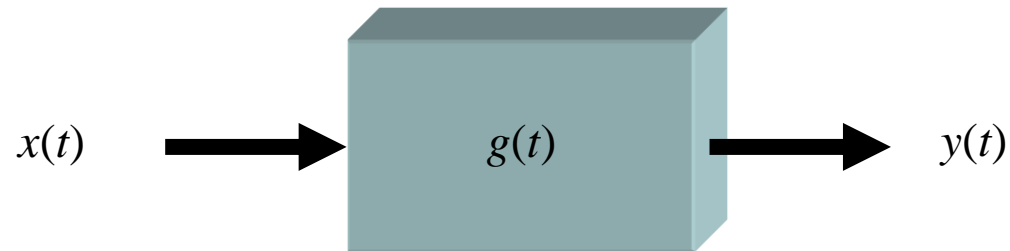
[Convolución 1D]

$x(t)$ → $g(t)$ → $y(t)$

[Convolución 1D]

$$y(t) = \int_{-\infty}^{+\infty} g(t-\tau)x(\tau)d\tau$$

[Convolución 1D]
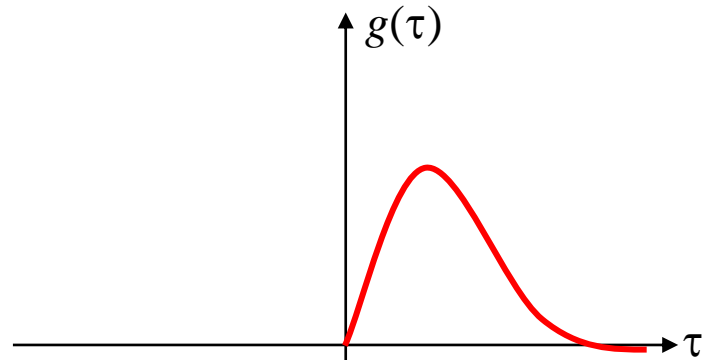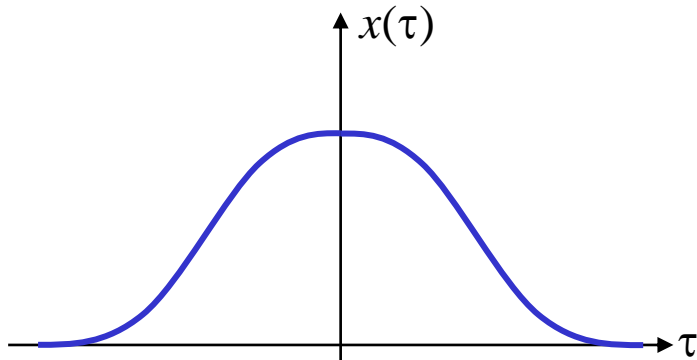

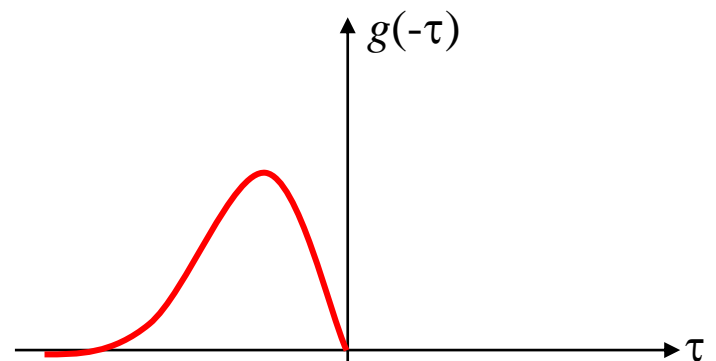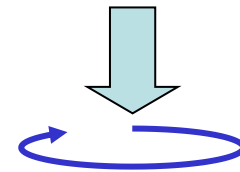$$y(t) = \int_{-\infty}^{+\infty} g(t-\tau)x(\tau)d\tau$$

$$y(t) = x(t) * g(t)$$

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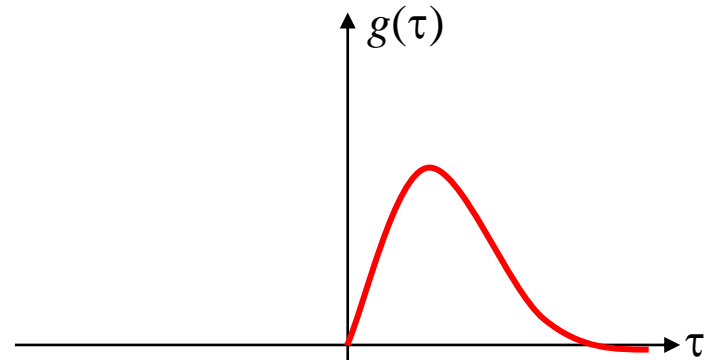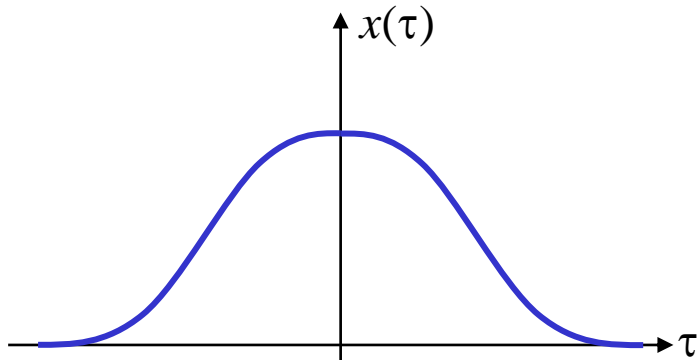$$y(t) = \int\limits_{-\infty}^{+\infty} g(t-\tau)x(\tau)d\tau$$

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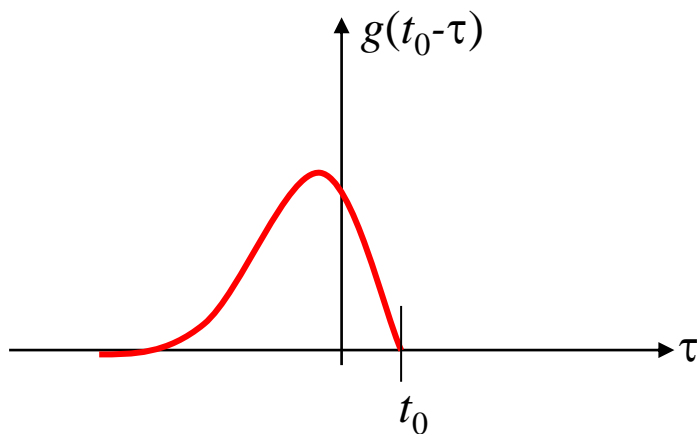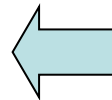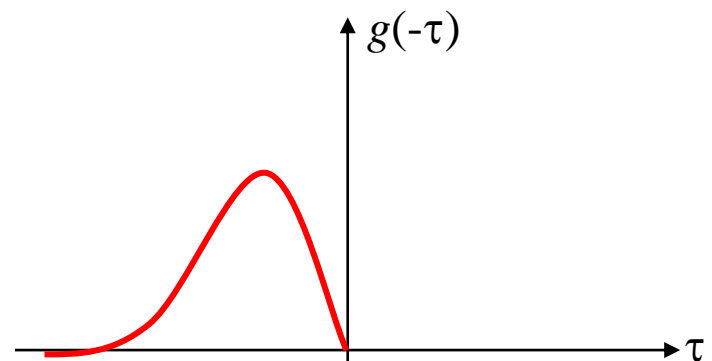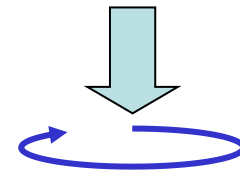
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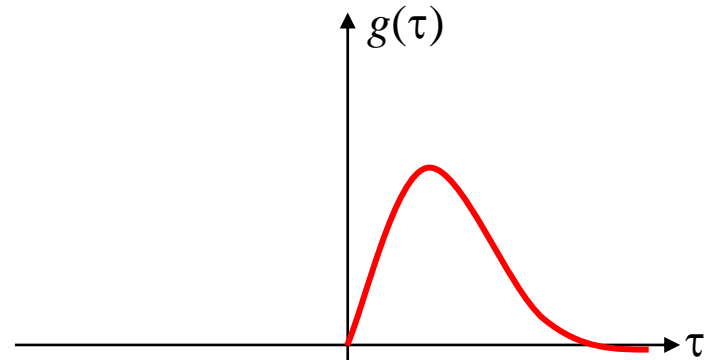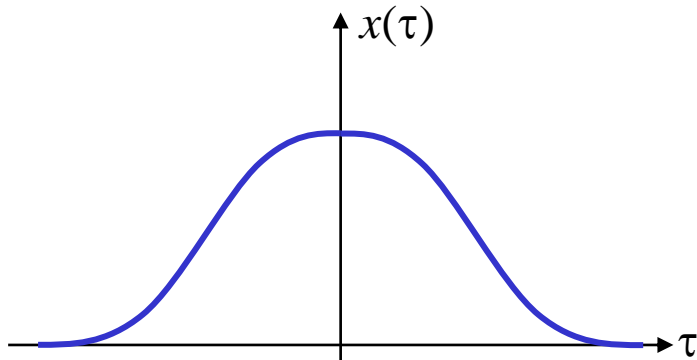$$y(t) = \int\limits_{-\infty}^{+\infty} g(t-\tau)x(\tau)\,d\tau$$

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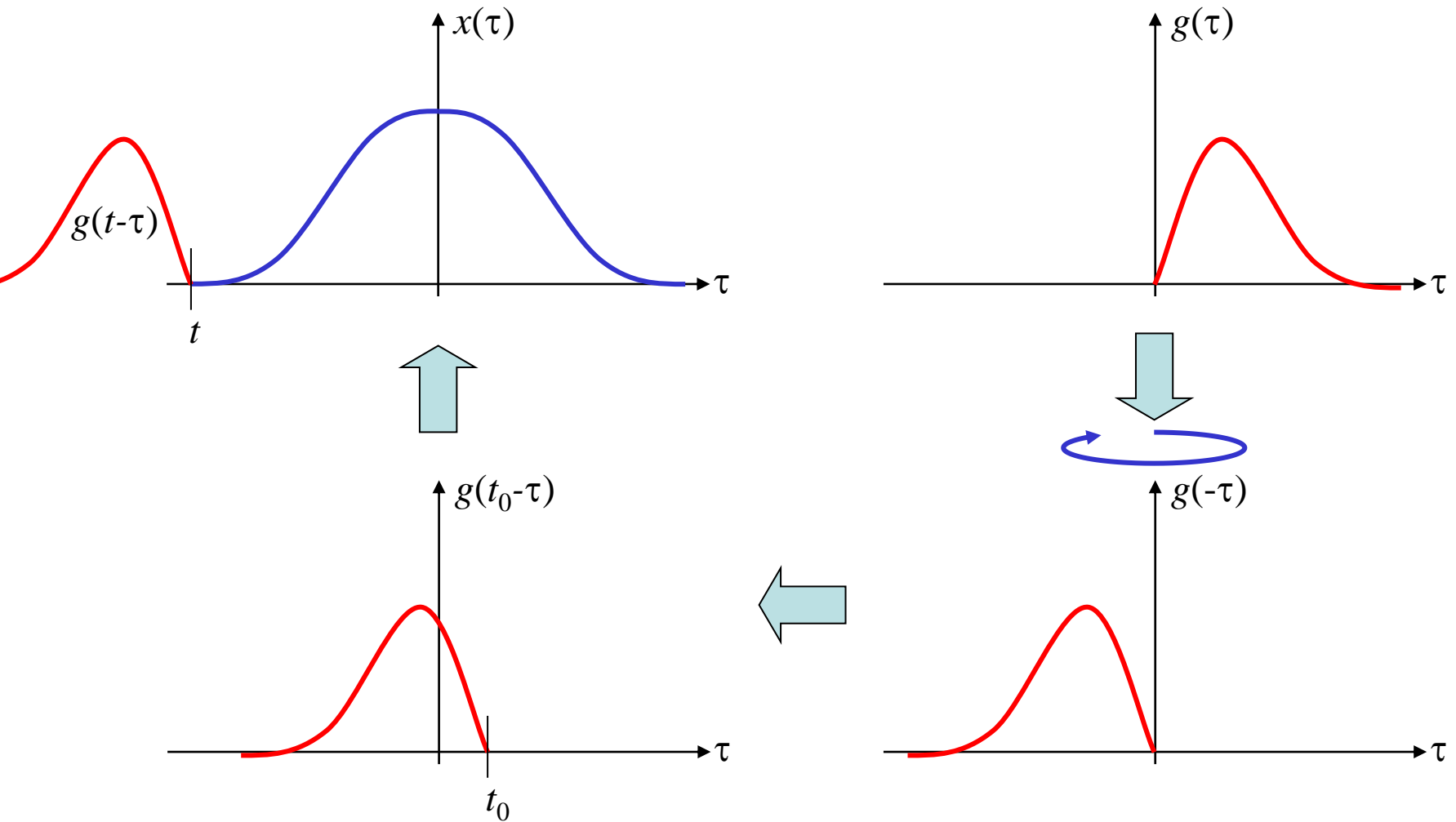
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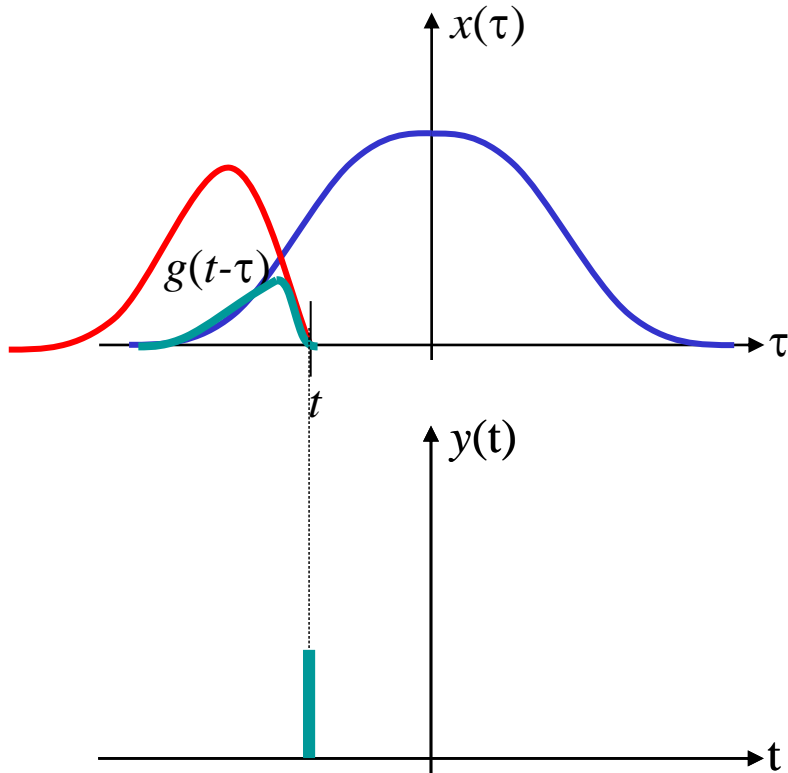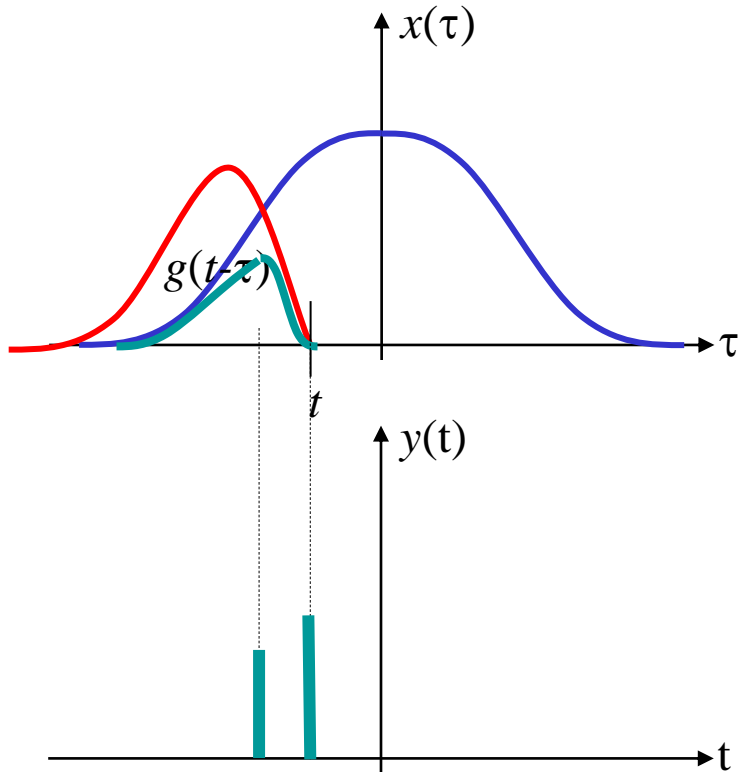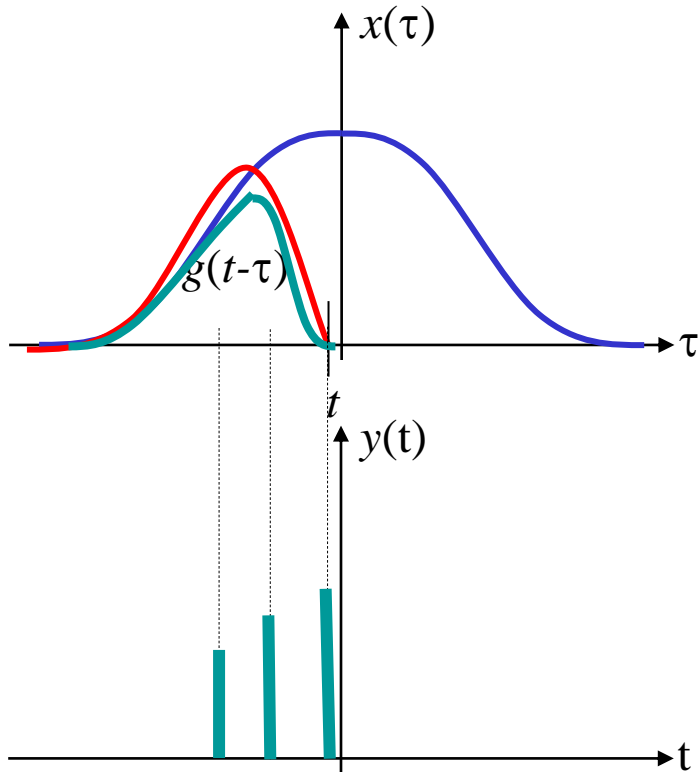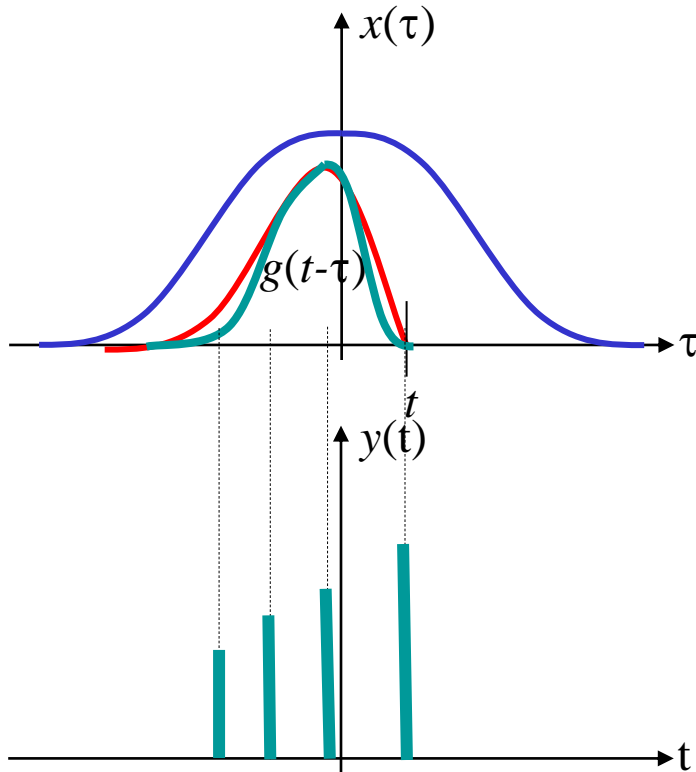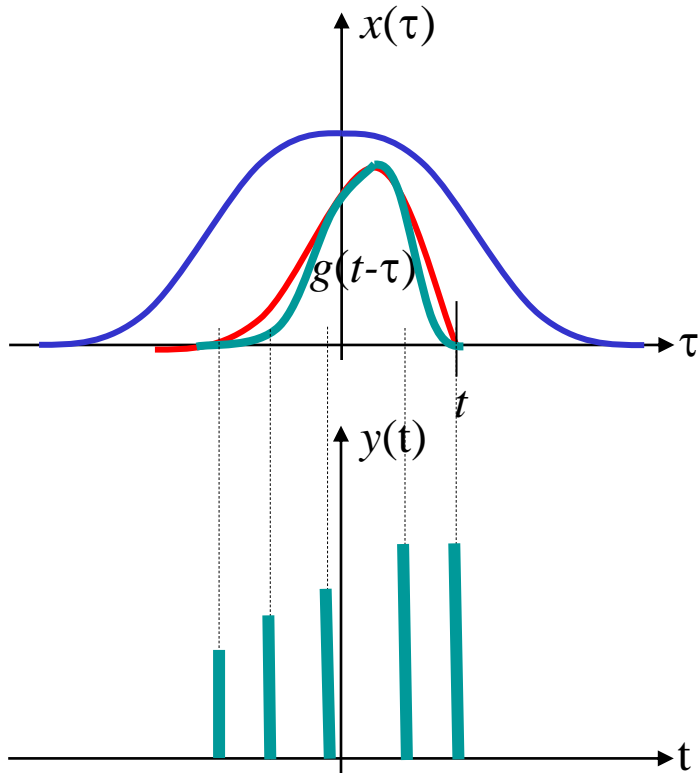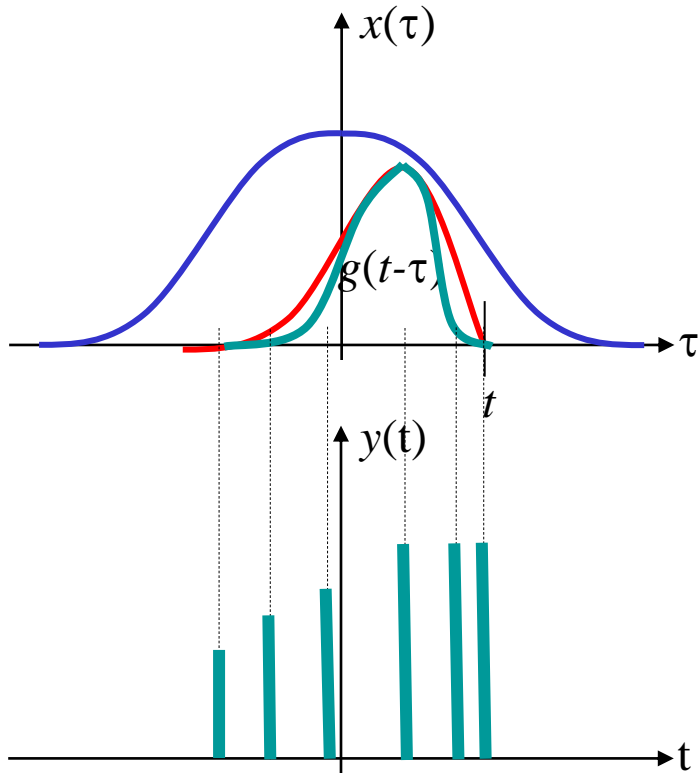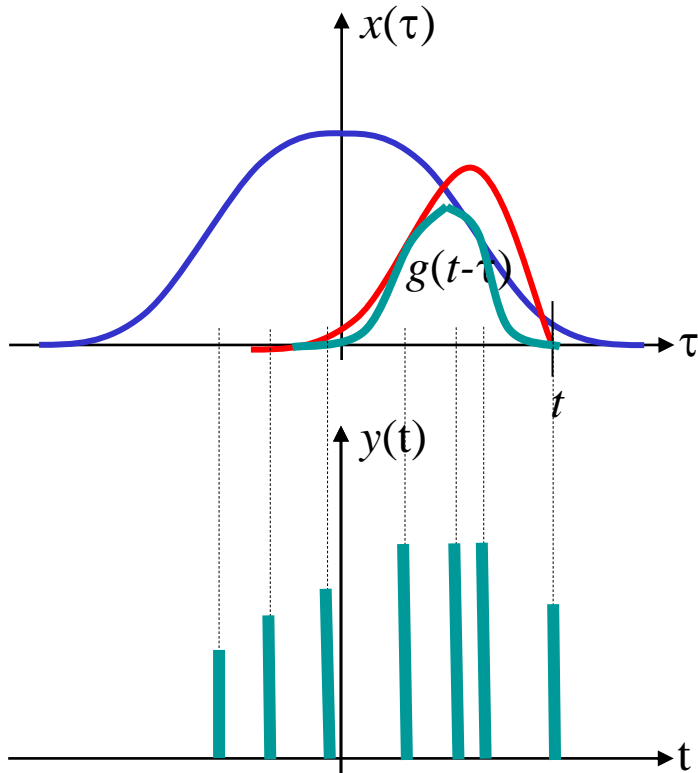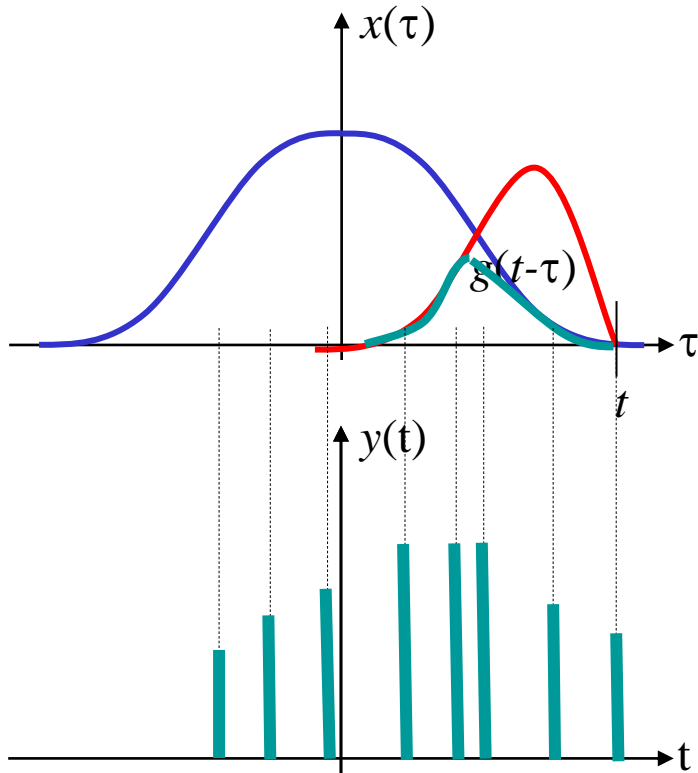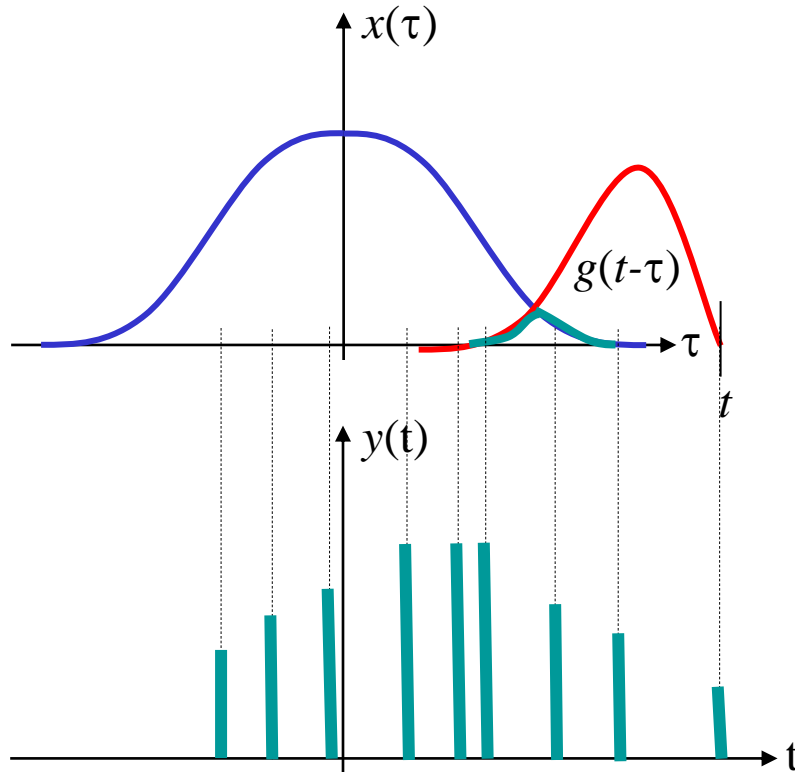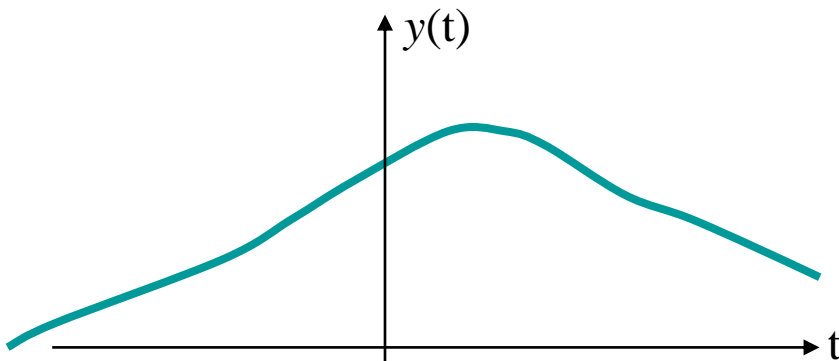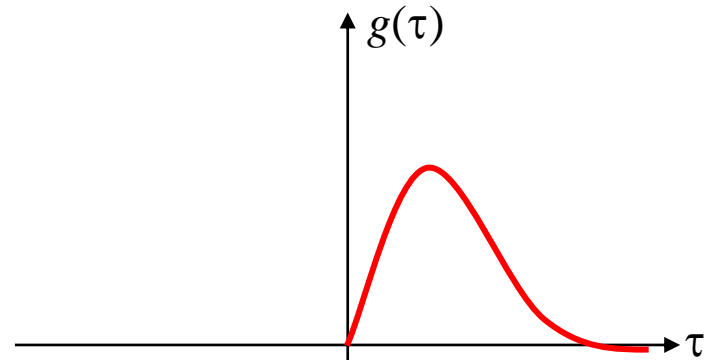$$y(t) = \int_{-\infty}^{+\infty} g(t-\tau)x(\tau)d\tau$$

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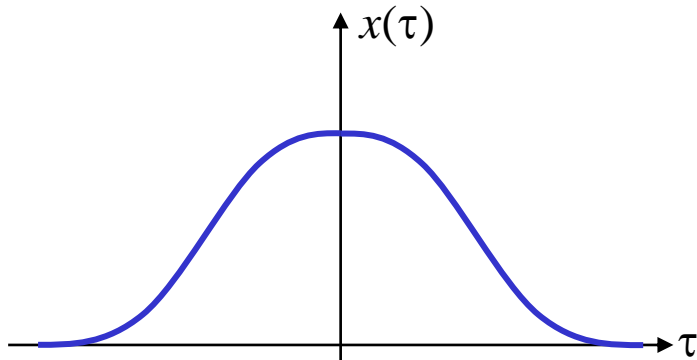
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Continua:
$$y(t) = \int_{-\infty}^{+\infty} g(t - \tau)x(\tau)d\tau$$

Discreta:
$$y(k) = \sum_{i=-\infty}^{+\infty} g(k - i)x(i)$$