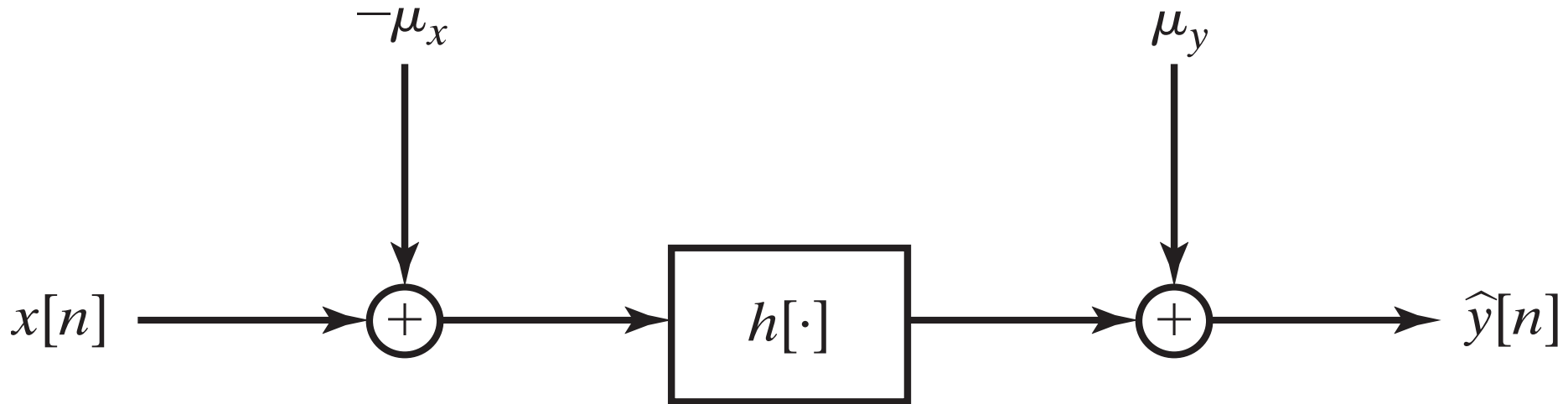


Wiener filtering illustrations

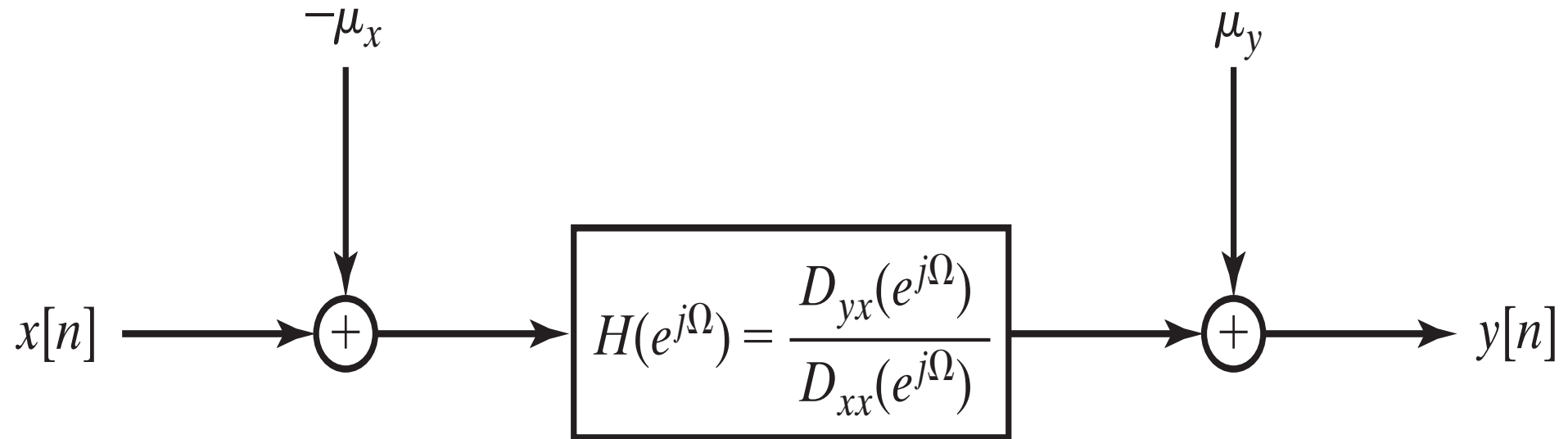
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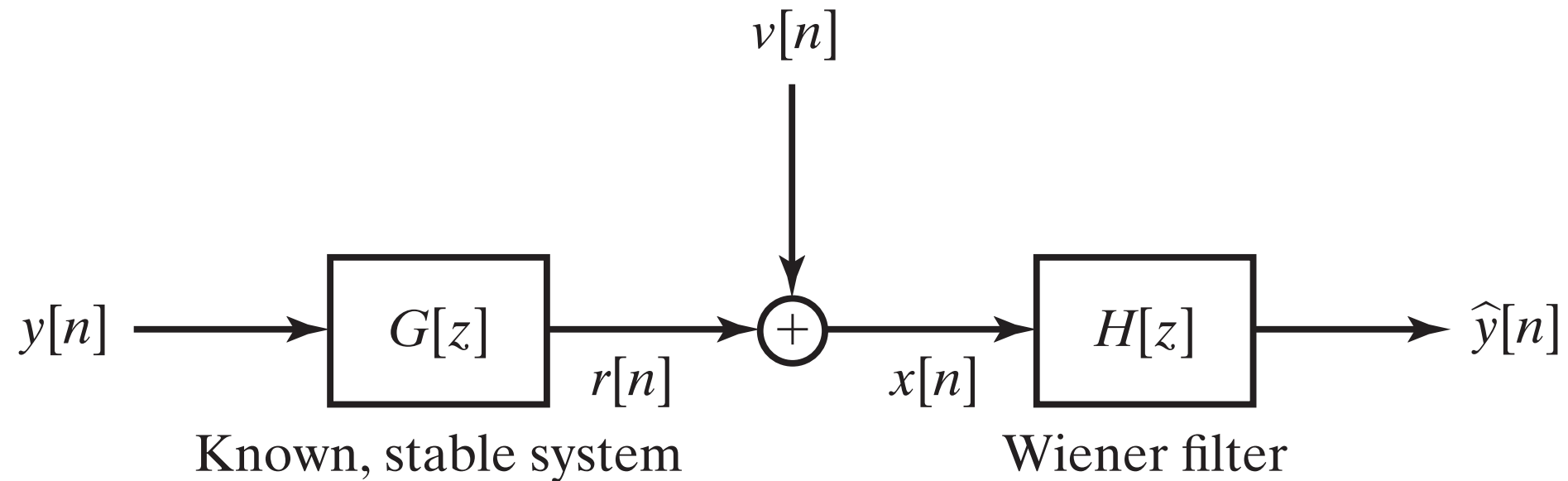
Unconstrained Wiener filter structure



Unconstrained Wiener filter solution



E.g.: Wiener “deconvolution” of a noisy blurred signal



E.g.: Wiener deconvolution
of a noisy blurred **image****

Two-dimensional convolution + noise:

$$x[k, l] = \sum_i \sum_j g[i, j] y[k - i, l - j] + v[k, l]$$

**From 2007 Mathworks blog post by
Prof. Stan Reeves, ECE Dept., Auburn University

Wiener deconvolution of a noisy blurred **image**

Mathworks blog posts by:

Prof. Stan Reeves, ECE Dept., Auburn University

Reeves, Stan. "[Digital image processing using MATLAB: reading image files](#)". *MathWorks*. Sept. 27, 2011.

Reeves, Stan. "[Image deblurring – Wiener filter](#)." *MathWorks*. Nov. 2, 2007.

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