This result and (14) then imply

$$\sigma^2 = \frac{1}{4}\int_0^\infty [M(\omega)M(-\omega) + M(\omega)\{M(\omega)\}_C + \{M(-\omega)\}_C M(-\omega) + \{M(-\omega)M(\omega)\}_C] w_x(f)\, df, \qquad (15)$$

which immediately reduces to (4).

If in place of equation (7) we start with

$$\psi_z(t;\tau) = \mathcal{E} z(t)z(t+\tau)$$

and employ the Wiener-Khintchine relations[1] to write

$$w_z(t;f) = 2\int_{-\infty}^{\infty} \psi_z(t;\tau)e^{-i\omega\tau}\, d\tau$$

as the time dependent spectral density, then using the above techniques we can show that

$$w_z(t;f) = \frac{1}{4} H(j\omega)\Big\{\sum_{m=1}^{N} a_m[\{M(\omega-\omega_m)\}_C + M(-\omega+\omega_m)]e^{i(\omega_m t+\phi_m)} w_x(f-f_m) + \sum_{m=1}^{N} a_m[\{M(\omega+\omega_m)\}_C + M(-\omega-\omega_m)]e^{-i(\omega_m t+\phi_m)} w_x(f+f_m)\Big\}. \qquad (16)$$

It is easily seen, then, that

$$\sigma^2 = \frac{1}{2}\int_{-\infty}^{\infty} w_z(t;f)\, df$$

where σ^2 is given by (4).

[1] D. G. Lampard, *Generalization of the Wiener-Khintchine theorem to nonstationary processes*, J. Appl. Phys. 25, 802-803(1954)

Correction to the paper

DUALITY IN NONLINEAR PROGRAMMING

Quarterly of Applied Mathematics, XX, 300–302 (1962)

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There is an incorrect statement of a previous result. In particular the last sentence of the Converse Duality Theorem should read:

"If $\varphi(x)$ is quadratic and if $g(x)$ is linear, then a weaker converse theorem is also true if $\varphi(x)$ is merely convex and twice continuously differentiable."