『モデルベースモニタリングと統計的制御』正誤表

（2012 年 12 月 26 日）

(1)　p.29　式 (2.2)

誤
$$\frac{\sum_{t=1}^{N-l}(x(s+l)-m_x)\times(x(s)-m_x)}{N}$$

正
$$\frac{\sum_{s=1}^{N-l}(x(s+l)-m_x)\times(x(s)-m_x)}{N}$$

(2)　p.48　式 (3.7)

誤　$$R(f)=\int_{-\infty}^{\infty}x(t)\cos(2\pi ft)df,\quad Q(f)=\int_{-\infty}^{\infty}x(t)\sin(2\pi ft)df$$

正　$$R(f)=\int_{-\infty}^{\infty}x(t)\cos(2\pi ft)dt,\quad Q(f)=\int_{-\infty}^{\infty}x(t)\sin(2\pi ft)dt$$

(3)　p.54　式 (3.28)

誤　$$\mathfrak{F}[g(at)]=\frac{1}{|a|}G\left(\frac{g}{a}\right)$$

正　$$\mathfrak{F}[g(at)]=\frac{1}{|a|}G\left(\frac{f}{a}\right)$$

(4)　p.54　式 (3.29)

誤　$$\mathfrak{F}[G(-t)]=\mathfrak{F}(-g)$$

正　$$G(-f)=\mathfrak{F}[g(-t)]$$

(5)　p.55　式 (3.32)

誤
$$\begin{cases}\mathfrak{F}(\sin(2\pi ft_0))=-i/2\,(\delta(f-f_0)-\delta(f-f_0))\\ \mathfrak{F}(\cos(2\pi ft_0))=1/2\,(\delta(f-f_0)+\delta(f-f_0))\end{cases}$$

正
$$\begin{cases}\mathfrak{F}(\sin(2\pi ft_0))=-i/2\,(\delta(2\pi(f-f_0))-\delta(2\pi(f+f_0)))\\ \mathfrak{F}(\cos(2\pi ft_0))=1/2\,(\delta(2\pi(f-f_0))+\delta(2\pi(f+f_0)))\end{cases}$$

(6)　p.95　式 (5.39), (5.40)

誤
$$g(t) = \frac{1}{2\omega_n \sqrt{\varsigma^2 - 1}} e^{-\zeta\omega_n t} \left(e^{-\omega_n \sqrt{\zeta^2-1}\, t} - e^{\omega_n \sqrt{\zeta^2-1}\, t} \right)$$
$$= \frac{1}{\omega_n \sqrt{\varsigma^2 - 1}} \sinh\left(\omega_n \sqrt{\zeta^2 - 1}\, t \right), \quad \zeta > 1,\ t \geq 0$$
$$= \frac{1}{\omega_n \sqrt{1 - \varsigma^2}} \sin\left(\omega_n \sqrt{1 - \zeta^2}\, t \right), \quad \zeta < 1,\ t \geq 0$$

正
$$g(t) = \frac{1}{2\omega_n \sqrt{\varsigma^2 - 1}} e^{-\zeta\omega_n t} \left(e^{\omega_n \sqrt{\zeta^2-1}\, t} - e^{-\omega_n \sqrt{\zeta^2-1}\, t} \right)$$
$$= \frac{1}{\omega_n \sqrt{\varsigma^2 - 1}} e^{-\zeta\omega_n t} \sinh\left(\omega_n \sqrt{\zeta^2 - 1}\, t \right), \quad \zeta > 1,\ t \geq 0$$
$$= \frac{1}{\omega_n \sqrt{1 - \varsigma^2}} e^{-\zeta\omega_n t} \sin\left(\omega_n \sqrt{1 - \zeta^2}\, t \right), \quad \zeta < 1,\ t \geq 0$$

(7)　p.96　式 (5.41)

誤
$$\frac{d^2X(t)}{dt^2} + 2\varsigma\omega_n \frac{dX(t)}{dt} + \omega_n^2 = Z(t)$$

正
$$\frac{d^2X(t)}{dt^2} + 2\varsigma\omega_n \frac{dX(t)}{dt} + \omega_n^2 X(t) = Z(t)$$

(8)　p.103　式 (6.13)

誤
$$P_{yy}(f) = G(f)\, G(-f)\, P_{xx}(f) = \left| G_{yx}(f) \right|^2 P_{xx}(f)$$

正
$$P_{yy}(f) = G_{yx}(f)\, G_{yx}(-f)\, P_{xx}(f) = \left| G_{yx}(f) \right|^2 P_{xx}(f)$$