# 正誤表

## 三井斌友・小藤俊幸・齊藤善弘著：微分方程式による計算科学入門

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- p.5

$$\boxed{\frac{\mathrm{d}v}{\mathrm{d}t} = v(t-\tau)\left[1 - v(t-\tau)^3/3\right] - i(t), \quad \frac{\mathrm{d}i}{\mathrm{d}t} = v(t)} \tag{1.9}$$

$\longrightarrow$

$$\boxed{\frac{\mathrm{d}v}{\mathrm{d}t} = v(t-\tau)\left[1 - v(t-\tau)^{\color{red}2}/3\right] - i(t), \quad \frac{\mathrm{d}i}{\mathrm{d}t} = v(t)} \tag{1.9}$$

- p.20

$$\sum_{j=1}^{i-1} a_{ij} = c_i \quad (i = 2,\ 3,\ \ldots\ ,\ s), \qquad \sum_{j=1}^{s} b_i = 1 \tag{1.41}$$

$\longrightarrow$

$$\sum_{j=1}^{i-1} a_{ij} = c_i \quad (i = 2,\ 3,\ \ldots\ ,\ s), \qquad \sum_{\color{red}i=1}^{s} b_i = 1 \tag{1.41}$$

- p.25

$$\begin{aligned} \alpha_k\,\widehat{x}_{n+k} + \sum_{j=0}^{k-1} \alpha_j\,x(t_{n+j}) &= \beta_k\,f(t_{n+k}, \widehat{x}_{n+k}) + \sum_{j=0}^{k-1} \beta_j\,f\big(t_{n+j}, x(t_{n+j})\big) \\ &= \beta_k\,f(t_{n+k}, \widehat{x}_{n+k}) + \sum_{j=0}^{k-1} \beta_j\,x'(t_{n+j}) \end{aligned}$$

$\longrightarrow$

$$\begin{aligned} \alpha_k\,\widehat{x}_{n+k} + \sum_{j=0}^{k-1} \alpha_j\,x(t_{n+j}) &= {\color{red}h}\beta_k\,f(t_{n+k}, \widehat{x}_{n+k}) + {\color{red}h}\sum_{j=0}^{k-1} \beta_j\,f\big(t_{n+j}, x(t_{n+j})\big) \\ &= {\color{red}h}\beta_k\,f(t_{n+k}, \widehat{x}_{n+k}) + {\color{red}h}\sum_{j=0}^{k-1} \beta_j\,x'(t_{n+j}) \end{aligned}$$

- p.25

$$\big(\alpha_k I_d - hF\big)\big(x(t_{n+k}) - \widehat{x}_{n+k}\big) = L(x, t_n, h) \tag{1.46}$$

$\longrightarrow$

$$\big(\alpha_k I_d - h\beta_k F\big)\big(x(t_{n+k}) - \widehat{x}_{n+k}\big) = L(x, t_n, h) \tag{1.46}$$

- p.55 **定理 2.3**　$F(\Omega_1) \subset \Omega_2$　$\longrightarrow$　$F_1(\Omega_1) \subset \Omega_2$
- p.70 **注 2.2**　(2.120)　$\longrightarrow$　(2.84)
- p.65 下より 7 行目　$f(p) \equiv 1$　$\longrightarrow$　$f(p) \equiv p$
- p.70

$$\ell_i(\sigma) = \prod_{j=1, \neq i}^{s} \frac{\sigma - c_i}{c_j - c_i}, \tag{2.91}$$

$\longrightarrow$

$$\ell_i(\sigma) = \prod_{j=1, \neq i}^{s} \frac{\sigma - c_i}{c_i - c_j}, \tag{2.91}$$

- p.99 二番目の数式組

$$\begin{cases} \dfrac{\mathrm{d}x_k}{\mathrm{d}t} = f\Big(t, x^k(t), x^{k-1}(t-\tau)\Big), & t \in I_k \\ x^k(t_0 + k\tau) = x^{k-1}(t_0 + k\tau) \end{cases}$$

$\longrightarrow$

$$\begin{cases} \dfrac{\mathrm{d}x^k}{\mathrm{d}t} = f\Big(t, x^k(t), x^{k-1}(t-\tau)\Big), & t \in I_k \\ x^k(t_0 + k\tau) = x^{k-1}(t_0 + k\tau) \end{cases}$$

- p.181

$$x_0 \exp\left((\lambda - \frac{1}{2}\mu^2)(t - t_0) + (W(t) - W(t_0))\right) \tag{4.95}$$

$\longrightarrow$

$$x_0 \exp\left((\lambda - \frac{1}{2}\mu^2)(t - t_0) + \mu(W(t) - W(t_0))\right) \tag{4.95}$$