

[結論]

$$\begin{aligned} m \frac{d^2}{dt^2} \begin{bmatrix} x'^1(t) \\ x'^2(t) \\ x'^3(t) \end{bmatrix} &= [A(t)]^{-1} \begin{bmatrix} F^1(t) \\ F^2(t) \\ F^3(t) \end{bmatrix} \\ &\quad - m \frac{d^2}{dt^2} \begin{bmatrix} G^1(t) \\ G^2(t) \\ G^3(t) \end{bmatrix} \\ &\quad - m \Omega'(t) \times \left[\Omega'(t) \times \begin{bmatrix} x'^1(t) \\ x'^2(t) \\ x'^3(t) \end{bmatrix} \right] \\ &\quad - 2m \Omega'(t) \times \frac{d}{dt} \begin{bmatrix} x'^1(t) \\ x'^2(t) \\ x'^3(t) \end{bmatrix} \\ &\quad - m \frac{d\Omega'(t)}{dt} \times \begin{bmatrix} x'^1(t) \\ x'^2(t) \\ x'^3(t) \end{bmatrix} \end{aligned}$$