The correct form of equation 4 is:

$$\begin{aligned} P_e(u, t+\Delta t_i) =& G_e(t+\Delta t, t) P_e(u,t) \\ &+ 2\left\{\delta \Delta t_i\right\} P_e(v,t) P_e(w,t) \\ &+ \left\{\sigma \Delta t_i\right\} \bar{P}(v,t) P_e(w,t) \\ &+ \left\{\sigma \Delta t_i\right\} P_e(v,t) \bar{P}(w,t) \\ &+ \left\{\sigma \Delta t_i\right\} \bar{P}(u,t) E_e(t). \end{aligned}$$

The correct form of equation A.2 is:

$$\begin{aligned} \frac{\mathrm{d}}{\mathrm{d}t}\bar{E} =& + \left\{\frac{N}{N-n}\sigma + \lambda\right\}(1-\bar{E}) \\ &- \left\{(\sigma + \delta + \frac{N-n_i}{N-1}\tau)(1-\bar{E})\right\}\bar{E} \\ &- \left\{\sum_{f\in\mathcal{E}_i(S)} \frac{\tau}{N-1}(1-E_f)\right\}\bar{E} \\ \bar{E}(0) =& 1. \end{aligned}$$

The correct form of equation A.4 is:

$$\begin{aligned} \frac{\mathrm{d}}{\mathrm{d}t}\bar{G} =& - \left\{\frac{N}{N-n}\sigma + \lambda\right\}\bar{G} \\ &- \left\{(\sigma + \delta + \frac{N-n_i}{N-1}\tau)(1-2\bar{E})\right\}\bar{G} \\ &- \left\{\sum_{f\in\mathcal{E}_i(S)} \frac{\tau}{N-1}(1-E_f)\right\}\bar{G} \\ \bar{G}(t,t) =& 1. \end{aligned}$$