The error has been discovered in the following works:

[1] Y. Sun and B. Cyr, "Information Aging Through Queues: A Mutual Information Perspective," 2018 IEEE 19th International Workshop on Signal Processing Advances in Wireless Communications (SPAWC), Kalamata, 2018, pp. 1-5.

[2] Y. Sun and B. Cyr, "Sampling for data freshness optimization: Non-linear age functions," in Journal of Communications and Networks, vol. 21, no. 3, pp. 204-219, June 2019.

The error occurred when calculating β in the simulation of the optimal sampling policy, where $E[D_{i+1} - D_i]$ was being computed incorrectly. This affected the following figures:

In [1]:
- **Figure 2**: β was incorrectly calculated. The figure will be replaced with a new figure with new transmission times.
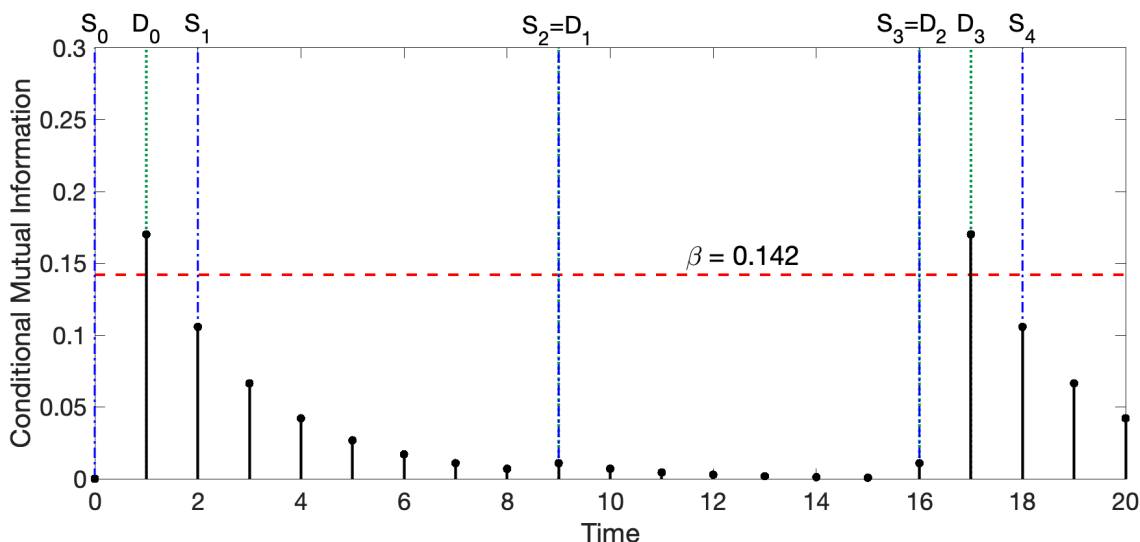

Fig. 2. A sample-path illustration of the optimal sampling policy (14) and (15), where the service time Y_i is equal to either 1 or 7 with equal probability. On this sample-path, the service times are $Y_0 = 1$, $Y_1 = 7$, $Y_2 = 7$, $Y_3 = 1$, and $Y_4 = 7$.

In [2]:

- Above (57), the parameter c is not necessarily a positive number; instead, c can take any real value.
- **Figure 5**: β was incorrectly calculated. The updated figure and caption are shown below.
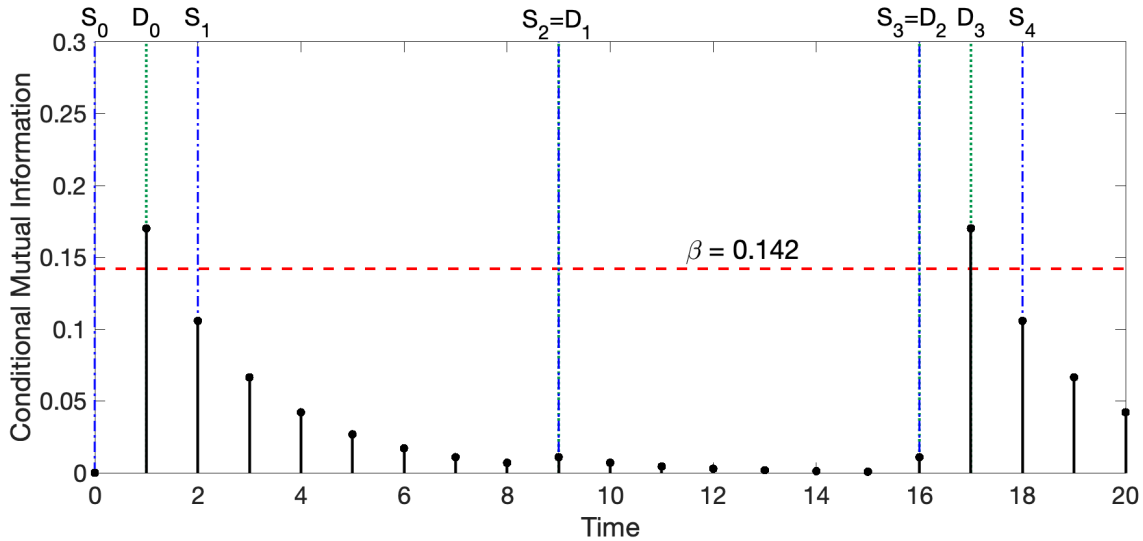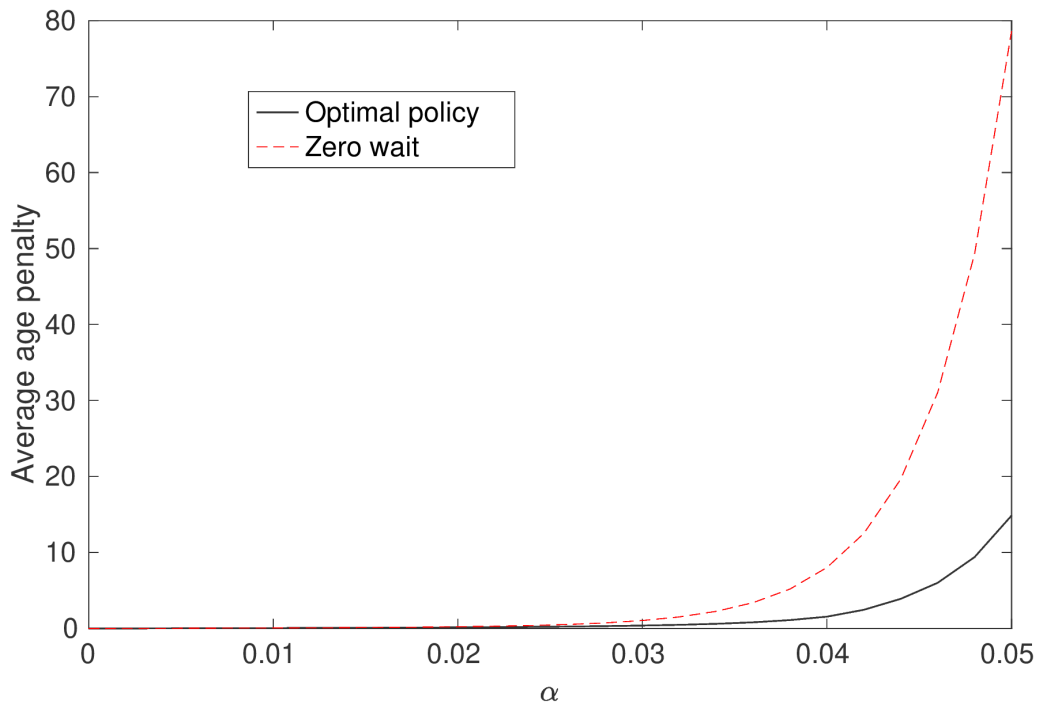

Fig. 5. A sample-path illustration of the optimal sampling policy (45) and (46), where $\beta = 0.142$, Y_i is either 1 or 7 with equal probability, S_i and D_i are sampling time and delivery time of the i-th sample. On this sample-path, the service times are $Y_0 = 1$, $Y_1 = 7$, $Y_2 = 7$, $Y_3 = 1$, and $Y_4 = 7$.

- **Figure 8:** The average penalty was calculated incorrectly. The new figure 8 is shown below:

FFig. 8. Average age penaltyof an exponential penalty function $p_{exp}(\Delta t) = e^{\alpha \Delta t} - 1$ versus the coefficient α, where the service times Y_i follow a discretized log-normal distribution

- **Figure 9:** The average penalty was calculated incorrectly. The new figure 8 is shown below:
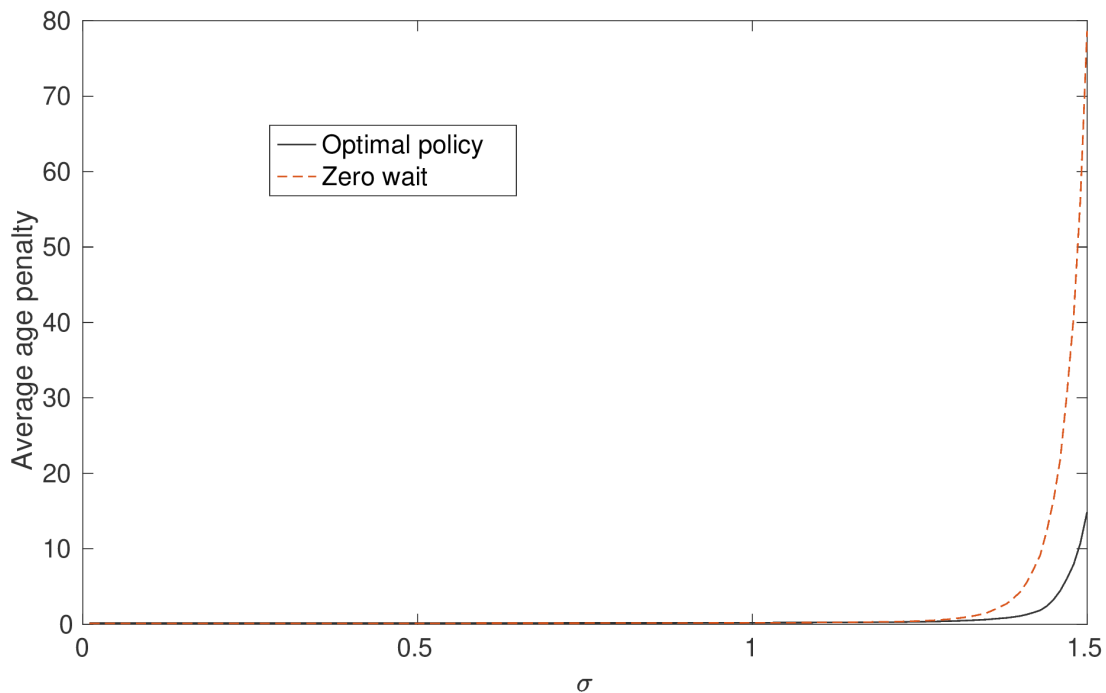

Fig. 9. Average age penalty of an exponential penalty function $p_{exp}(\Delta t) = e^{\alpha \Delta t} - 1$ versus the coefficient σ of discretized log-normal service time distribution.