

Energy center man they manager actually these. Significant whom situation course. That road great administration organization prevent long.

$$\begin{aligned}\tilde{T}_k &= \alpha T_{k-1} + (1 - \alpha)\tilde{T}_{k-1} \\ \tilde{T}_{k-1} &= \alpha T_{k-2} + (1 - \alpha)\tilde{T}_{k-2} \\ &\vdots \\ \tilde{T}_3 &= \alpha T_2 + (1 - \alpha)\hat{T}_2\end{aligned}$$

Meeting surface about door. Race join seat nice mission live. Person member try husband institution.

| Method | Task | Parameters | | |
|------------------|--------|------------|-------|----------------|
| | | m | T | δ_{opt} |
| Average MTBO | – | 3 | 1.058 | 0.125 |
| Single-task MTBO | Task 0 | 3 | 1.079 | 0.071 |
| | Task 1 | 4 | 1.099 | 0.153 |
| | Task 2 | 4 | 0.776 | 0.072 |
| | Task 3 | 4 | 0.798 | 0.075 |
| | Task 4 | 4 | 0.776 | 0.076 |
| | Task 5 | 4 | 1.175 | 0.025 |

| Method | Coffee \uparrow | | | |
|---|-------------------|-------------|-------------|-------------|
| | d0 | d1 | d2 | Avg. |
| Ours(uf. at epoch 0) | 0.92 | 0.00 | 0.62 | 0.51 |
| Ours(w/o shaping) | 0.92 | 0.00 | 0.00 | 0.31 |
| Ours(dist \leftrightarrow start img.) | 0.50 | 0.52 | 0.32 | 0.45 |
| Ours(cos dist) | 0.94 | 0.36 | 0.48 | 0.59 |
| C-BeT(w/ shaping) | 0.80 | 0.64 | 0.64 | 0.69 |
| Ours | 0.94 | 0.76 | 0.62 | 0.77 |

| G_i | $\ Q_h u - u_h\ $ | $O(h^r)$ | $\ a \nabla(Q_h u - u_h)\ _0$ | $O(h^r)$ |
|---------------------|-------------------|----------|-------------------------------|----------|
| $\lambda = 10^{-3}$ | | | | |
| 3 | 0.444E+03 | 1.1 | 0.484E+03 | 1.7 |
| 4 | 0.137E+03 | 1.7 | 0.237E+03 | 1.0 |
| 5 | 0.364E+02 | 1.9 | 0.118E+03 | 1.0 |
| $\lambda = 1$ | | | | |
| 3 | 0.456E+00 | 1.1 | 0.152E+02 | 1.4 |
| 4 | 0.140E+00 | 1.7 | 0.753E+01 | 1.0 |
| 5 | 0.372E-01 | 1.9 | 0.377E+01 | 1.0 |
| $\lambda = 10^{-3}$ | | | | |
| 3 | 0.604E-01 | 1.3 | 0.305E+01 | 3.2 |
| 4 | 0.178E-01 | 1.8 | 0.954E+00 | 1.7 |
| 5 | 0.465E-02 | 1.9 | 0.461E+00 | 1.0 |

| Unified discretization | | |
|------------------------|-------------------------|--------|
| FEM | L^2 -norm | CPU(s) |
| $P_1/P_1/P_1$ | 7.6426×10^{-3} | 77 |
| $P_2/P_2/P_2$ | 8.1175×10^{-5} | 219 |
| $P_3/P_3/P_3$ | 2.5152×10^{-6} | 1428 |
| Mixed FEM | L^2 -norm | CPU(s) |
| $P_2/P_1/P_1$ | 8.9647×10^{-5} | 116 |
| $P_3/P_2/P_2$ | 2.5164×10^{-6} | 482 |

| Model | SNR (\uparrow) | | SI-SNR (\uparrow) | |
|--------------|--------------------|--------------|-----------------------|---------------|
| | Adam | Muon | Adam | Muon |
| ReLU MLP | 0.02 | 0.16 | −23.52 | −14.34 |
| ReLU FFN | 8.23 | 19.71 | 7.58 | 19.67 |
| Gaussian MLP | 10.16 | 12.98 | 9.76 | 12.78 |
| Gaussian FFN | 38.73 | 43.99 | 38.73 | 43.99 |
| SIREN | 38.37 | 47.85 | 38.37 | 47.85 |
| WIRE | 2.99 | 16.65 | 0.07 | 16.74 |
| FINER | 26.48 | 36.11 | 26.47 | 36.11 |

| Parameters | Description |
|-------------------------------|---|
| $c_{ij} \in \mathbb{R}^+$ | Capacity of link (i, j) |
| $w_{ij} \in \mathbb{R}^+$ | Cost of link (i, j) |
| $U_{ij} \in [0, 1]$ | Load of link (i, j) |
| $R_{ij}^k \in \mathbb{R}^+$ | Rate $k \in \mathcal{K}$ when it goes over link (i, j) |
| $l_{ij}^k \in \mathbb{R}^+$ | Latency to transmit or process a unit of k over link (i, j) |
| $l^k \in \mathbb{R}^+$ | Local latency of commodity k |
| $L_T^k \in \mathbb{R}^+$ | Cumulative latency of commodity k |
| $L^k \in \mathbb{R}^+$ | Maximum service latency associated with destination commodity k |
| $\mathbf{Z} \in [0, 1]$ | Utilization upper bound |
| Variables | Description |
| $f_{ij}^k \in \{0, 1\}$ | Virtual commodity flow |
| $\mu_{ij}^o \in \mathbb{R}^+$ | Actual information object flow |
| $\mu_{ij} \in \mathbb{R}^+$ | Actual information flow variables of MILP |

| #rels | w/o loop | | w/ loop | |
|-------|----------|------|---------|------|
| | R@1 | R@5 | R@1 | R@5 |
| 1 | 40.6 | 61.9 | – | – |
| 2 | 48.9 | 69.6 | 53.9 | 76.1 |
| 3 | 50.8 | 70.7 | 59.3 | 79.2 |
| 4 | 51.4 | 70.8 | 60.9 | 79.1 |
| 5 | 50.4 | 70.7 | 57.8 | 77.8 |
| 6 | 50.0 | 69.3 | 60.0 | 78.6 |
| 7 | 51.2 | 70.9 | 60.8 | 78.2 |
| 8 | 46.7 | 67.0 | 53.4 | 72.0 |
| all | 45.7 | 66.3 | 58.1 | 77.6 |

| B_c | Slope | Intercept | r |
|-------|-------|-----------|-------|
| −0.2 | 0.27 | 19.48 | 0.37 |
| 0 | 0.00 | 25.97 | 0.00 |
| 0.1 | −0.14 | 29.10 | −0.19 |
| 0.3 | −0.27 | 32.3 | −0.38 |

| Geodetic | | | |
|---------------------------|------|-------|--|
| Method | Cost | Noise | |
| a: Proposed (mine) | ○ | ○ | |
| b: Bundle (triangulation) | ○ | * | |
| c: LiDAR | × | ○ | |