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Subtitle

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Example Slide

- This is how the itemized list appears
- Fonts, colors, and layout follow Waseda style
- Suitable for research presentations and thesis defense

SPO+ Loss

$$\mathcal{L}_{\mathrm{SPO+}}(\hat{c}, c) = \max_{w \in \mathcal{S}} \left\{ (2\hat{c} - c)^T w \right\} - \hat{c}^T z^*(c)$$

- $\hat{c}$: predicted cost vector
- c: true cost vector
- $z^*(c)$: optimal decision under true cost
- $\mathcal{S}$: feasible set

Pseudocode Example

Algorithm 1 SPO+ Loss

Require: Predicted cost vector $\hat{c}$, true cost vector c
 1: Solve $w^*(c) \leftarrow \arg\max_{w \in \mathcal{S}} c^\top w$
 2: Solve $w^*(\hat{c}) \leftarrow \arg\max_{w \in \mathcal{S}} (2c - \hat{c})^\top w$
 3: **return** $L(\hat{c}, c) = (2c - \hat{c})^\top w^*(\hat{c}) - c^\top w^*(c)$

References

📄 Elmachtoub, A. N. and Grigas, P.
Smart "Predict, then Optimize". Management Science, 2022.

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Thank you for your attention!