

**Comment 12:** What is the meaning of the superscript  $\epsilon^+$  in the second line of equation (43)? Please explain.

**Response:** We clarified: “The notation  $[\cdot]_{\hat{\lambda}_i}^{\epsilon^+}$  represents the projection operator that ensures  $\hat{\lambda}_i \geq \epsilon > 0$ , providing regularization for inactive constraints.”

**Comment 13:** The results obtained from Ref. [22] in the simulation are much smaller, so why are the results of the proposed algorithm in this paper considered to be more effective?

**Response:** Our approach provides exact convergence to robust optimal solutions through continuous-time dynamics, whereas traditional methods require explicit robust counterpart reformulation. The simulation examples demonstrate cases where RC methods fail entirely (Example B) or become computationally prohibitive.

**Comment 14:** The justification for Proposition 6 in Appendix B requires further clarification to enhance understanding.

**Response:** We added a remark before Proposition 6:

“The following proposition establishes existence despite discontinuities from projections, uniqueness via the Lipschitz property, continuous dependence on initial conditions, and thus the validity of Lyapunov analysis for Theorem 4.”

**Comment 15:** The expression  $\lim_{k \rightarrow \infty} = y$  in Proposition 6 seems incorrect. It should likely be  $\lim_{k \rightarrow \infty} y_k = y$ .

**Response:** Corrected the typographical error in Proposition 6.

**Comment 16:** There are several language issues, such as the reversed quotation marks in the last paragraph of the first column on page 5. Please carefully proofread the manuscript.

**Response:** All quotation marks have been corrected throughout, and the manuscript has been carefully proofread.

**Comment 17:** The introduction is lengthy and lacks a coherent structure. Please revise it to emphasize the advantages of the proposed method, particularly its ability to operate without prior problem modeling.

**Response:** The Introduction has been revised to emphasize key advantages:

“A distinctive feature of our dynamical system is its amenability to model-free implementation when deployed in physical systems where agents can sense local gradients but do not possess global knowledge of objective or constraint functions.”

**Comment 18:** The techniques from Ref. [22] used in the simulation appear outdated and may not reflect the current advancements in the field. To strengthen the comparative analysis, it is recommended to include state-of-the-art algorithms in the evaluation.

**Response:** We compare with Ref [22] because it represents the classical robust counterpart (RC) approach—the standard method for obtaining exact robust solutions. The comparison demonstrates that: (i) our method achieves the same optimal solutions as RC methods for tractable problems, (ii) our method succeeds where RC methods fail (Example B with no closed-form RC), and (iii) our method enables distributed implementation (Example C).