

Acknowledgments

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1 Acknowledgments

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Code Availability: All simulation code, controller implementations, and benchmarking scripts are publicly available at <https://github.com/theSadeQ/dip-smc-pso.git> under MIT License.

Data Availability: Complete experimental data, PSO optimization results, and statistical analysis outputs are included in the repository's benchmarks/ directory with SHA256 checksums for reproducibility verification.

Reproducibility: This work adheres to FAIR principles (Findable, Accessible, Interoperable, Reusable). All simulations use deterministic seeding (seed=42) and pinned dependency versions (requirements.txt). Reproduction instructions are provided in README.md.

Note: This PDF contains the complete text of all 10 enhanced sections (6,932 lines, 48,820 words). Tables and complex formatting are simplified for compilation. The complete Markdown version contains all detailed tables and data.