The 2013 Multi-objective Physical Travelling Salesman Problem Competition

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***Abstract*— Numerous competitions have emerged in recent years... and this is another one.**

I. Introduction

Research in games and competitions. Literature review [1], [2].

II. The Multi-objective Travelling Salesman Problem

Description of the game: physics, constraints. Description of maps: dimensions, specifications.

III. The MO-PTSP Competition

Infrastructure of the competition, rules, how entries are ranked. Evaluation, submission, programming specification, API. Sample controllers: random, greedy, macro-action random search controller. Include some measurements.

IV. The winning entry

Description: York.

V. Results of the competition

Describe results in detail.

VI. Conclusions

All was very fun.

References

[1] D. Perez, P. Rohlfshagen, and S. Lucas, "The Physical Travelling Salesman Problem: WCCI 2012 Competition," in *Proceedings of the IEEE Congress on Evolutionary Computation*, 2012.

[2] C. Browne, E. Powley, D. Whitehouse, S. Lucas, P. Cowling, P. Rohlfshagen, S. Tavener, D. Perez, S. Samothrakis, and S. Colton, "A Survey of Monte Carlo Tree Search Methods," *IEEE Transactions on Computational Intelligence and AI in Games*, vol. 4:1, pp. 1–43, 2012.

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This work was supported by EPSRC grant EP/H048588/1.