Multi-fidelity modelling and optimisation for long-term capacity planning: ten month PhD review (amendments)

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1 Introduction

Somewhere (maybe here) sell the novel aspsects of the current research in sections 3-5

2 Literature Review

- mention that SO methods may still be helpufl when actual solution spce not so large (signposts for dm's)
- include discussion of recent JOS paper on long-term bed modelling for critical care hosptial units
- include more references in Section 2.2.1 (Overview of SO methods)
- maybe include GMIA extensions rapid GMIA and multi-fidelity GMIA (previously discussed in Section 6).

3 Models of multi fidelity

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4 Deterministic optimisation with low-fidelity model

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5 Discussion of uncertainty

discuss problem of SO in queueing settings: bad solutions have high stochastic uncertainty and therefore take a lot of simulation effort to eliminate.

6 Potential research contributions

To outline potential next steps after MFSO: input uncertainty and the dynamic nature of the problem (given stochastic uncert may not be so relevant)