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Optimal control for seismic isolation platforms

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In gravitational detectors, the presence of numerous subsystems, each governed by distinct control loops with numerous parameters, presents a complex optimization challenge. This poster addresses the optimization problem by employing H-infinity (H-inf) and H-2 control techniques to enhance the performance of these subsystems. Our goal is to optimize a cost function that reflects an overall macroscopic figure of merit which is more physically motivated compared to optimization of each subsystem.

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