Model-Predictive Control for Dielectric Elastomer Wave Harvesters in Presence of Waves from Brownian Motion Noise.

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1. INTRODUCTION

2. MODEL AND PROBLEM STATEMENT

3. METHODS

3.1 Model-predictive Control

Model-predictive Control (MPC) arose from optimal control as one answer on how to "close the loop" **?**. In optimal control, a system's behaviour is predicted into the future, while optimising the inputs to the system, such that a cost function is minimised. The working principle of MPC is repeatedly solving an Optimal Control Problem (OCP), only applying the first of the calculated inputs and measuring the system's state.

3.2 Fractional Brownian Motion Noise

4. NUMERICAL RESULTS

4.1 Fractional Brownian Motion Noise

4.2 Multi-objective Optimal Control

4.3 Model-predictive Control

5. CONCLUSION