**Advanced Interferometric Gravitational-wave Detectors Volume II: Advanced LIGO, Advanced Virgo and beyond.**

**Detector Subsystems: chapter 16**

**PART 1 - Introduction**

Basic facts about seismic noise, impact on GW detectors

Mirror isolation requirements: pushing the seismic wall down to a few Hz

Mirror control requirements: maintaining the interferometer on its operation point

**PART 2 - The Virgo/AdV approach**

Superattenuator design overview

* the pre-isolator
* the filters
* the steering filter
* the payload

Isolation performance

Hierarchical control

**PART 3 - The aLIGO approach**

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**PART 4 - What next? Enhancing the performance of the existing isolators**

The importance of tilt control

Requirements for a tiltmeter

Advanced control techniques