

MASTER THESIS

# Basis pursuit II

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## 0.1 4.3 Robustness

- Taking into account the noise in the measurements.

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**Definition 0.1 (Robust null space property).**

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**Theorem 0.2.** *Folgen für  $(P_{1,\eta})$ , wenn  $A$  die robust null space property erfüllt.*

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**Theorem 0.3 (Equivalent characterization of robust null space property).**

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**Definition 0.4 ( $\ell^q$ -robust null space property).**

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**Theorem 0.5 (Robustness of the quadratically constrained basis pursuit algorithm).**

- Two remarks

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**Theorem 0.6.** *Generalization of the previous theorem, using the proof of the previous theorem.*

## 0.2 4.4 Recovery of individual vectors