### MASTER THESIS

# Basis pursuit II

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#### 0.1 4.3 Robustness

- Taking into account the noise in the measurements.
- Definition 0.1 (Robust null space property).
  - **Theorem 0.2.** Folgen für  $(P_{1,\eta})$ , wenn A die robust null space property erfüllt.
- Theorem 0.3 (Equivalent characterization of robust null space property).
- Definition 0.4 ( $\ell^q$ -robust null space property).
- Theorem 0.5 (Robustness of the quadratically constrained basis pursuit algorithm).
- Two remarks
- **Theorem 0.6.** Generalization of the previous theorem, using the proof of the previous theorem.

### 0.2 4.4 Recovery of individual vectors