

Torque ripple reduction methods

Motor design

Control algorithm

Stator-based

Tooth shifting

Tooth notching

Tooth pairing

Dummy slots

Skewing

Rotor-based

Pole shifting

Pole pairing

Pole width optimization

Skewing

Magnet segmentation

Pole shaping

Lookup-table

Current table

Cogging fingerprint

Observer

Luenberger

Disturbance

Iterative learning

ILC / RC

Q-learning

Neural network