TECHNISCHE UNIVERSITÄT DRESDEN

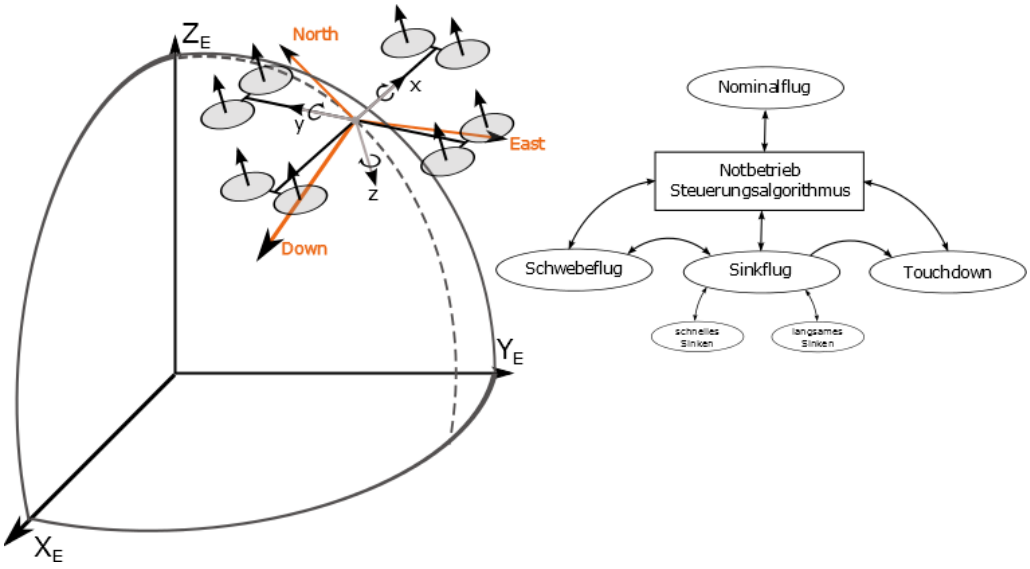
Fakultät Elektrotechnik und Informationstechnik

Institut für Automatisierungstechnik

Automatic Emergency Landing Control for an Octocopter

Abstract

Main task of the present work is the development and implementation of an emergency algorithm for an unmanned aerial vehicle (UAV) with 8 rotors (Octocopter). The emergency service protects the Octocopter from crashing on the ground, if system critical events like low battery charging or missing connection to ground station occur. Likewise an user can manually activate the emergency service. Therefor two modes are autonomous controlled and realised - hovering and landing. To stabilize the position while performing the modes a velocity control is designed which controls translational moving in NED-coordinates. Final test verify the emergency algorithm under different conditions.



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