

# Real Time Control of a Quadcopter

Simon Kick, Philipp Fröhlich, Benedikt König, Annika Stegie

Technische Universität München

11 July 2015

# Test Plot 1

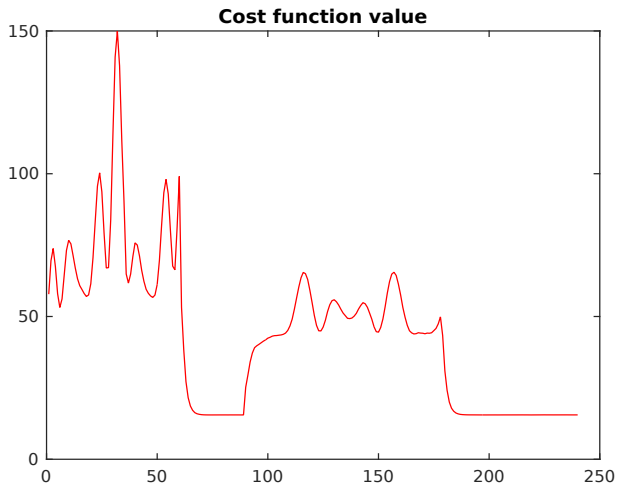


Figure: unser erster toller Plot

# Test Plot 1

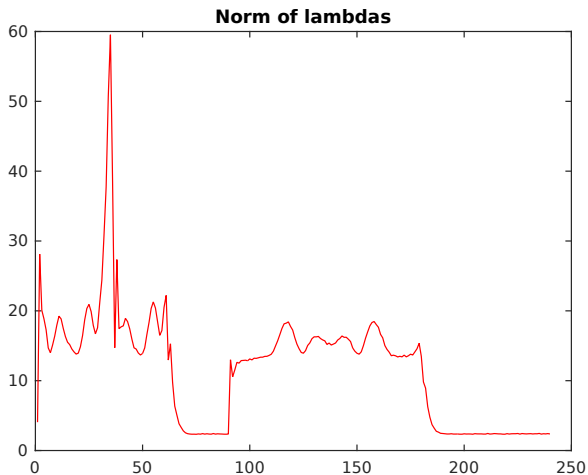


Figure: unser erster toller Plot

# Test Plot 1

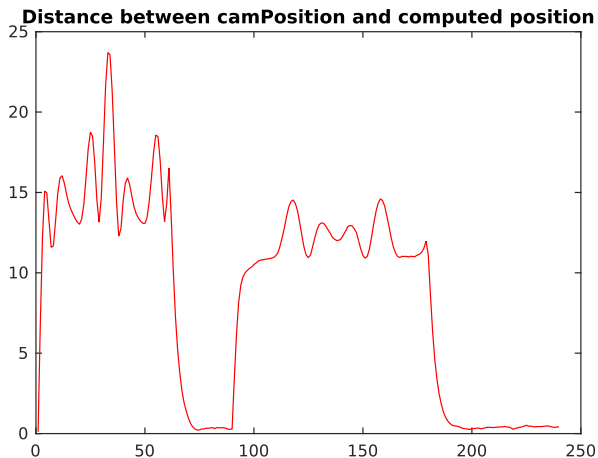


Figure: unser erster toller Plot

# Test Plot 1

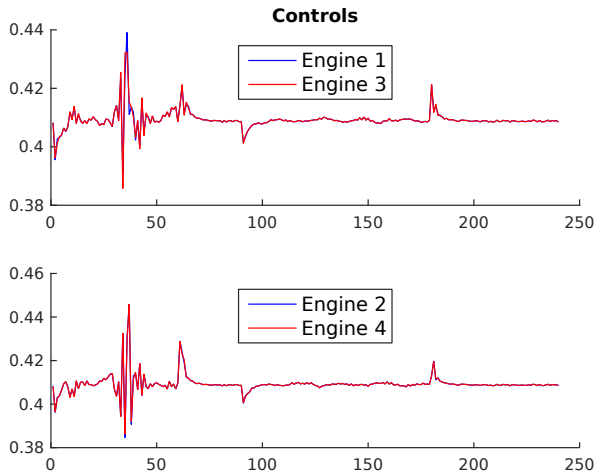


Figure: unser erster toller Plot

# References I



Stephen Boyd.

Solving the lqr problem by block elimination.

Lecture notes, 2009.



James Diebel.

Representing attitude: Euler angles, unit quaternions, and rotation vectors.

10 2006.



Moritz Diehl, Hans Georg Bock, and Johannes P. Schlöder.

A real-time iteration scheme for nonlinear optimization in optimal feedback control.

*SIAM J. Control Optim.*, 2005.

# References II



Moritz Diehl, Bock H. Georg, Johannes P. Schlöder, Rolf Findeisen, Zoltan Nagy, and Frank Allgöwer.

Real-time optimization and nonlinear model predictive control of processes governed by differential-algebraic equations.

*Journal of Process Control*, 2002.



Moritz Mathias Diehl.

*Real-Time Optimization for Large Scale Nonlinear Processes.*

PhD thesis, Ruprecht-Karls-Universität Heidelberg, 2001.



Luis Rodolfo Garcia Carrillo, Alejandro Enrique Dzul Lopez, Rogelio Lozano, and Claude Pégard.

*Quad Rotorcraft Control.*

Springer-Verlag London, 2013.