

Rapid Prototyping of Model Based Control Algorithms for Diesel-Engines with Turbocharger

Matthias Weber, Rolf Isermann

Institute of Automatic Control, Darmstadt University of Technology, Darmstadt, Germany

A Control Prototyping system for the design of electronic control unit (ECU) functions for truck Diesel engines is presented. By this way the different steps of the control development can be optimized. As an application example, the design of a control algorithm for the charging pressure of a variable geometry turbocharger is described. The modelling process for the required dynamic nonlinear turbocharger model with variable turbine geometry (VTG) and the resulting control performance is shown in detail.

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