

## Abstract

**Amerongen, J. van, H.C. Nieuwenhuis and A.J. Udink ten Cate**, *"Gradient based model reference adaptive autopilots for ships"*, Proceedings 6th IFAC World Congress, Boston/Cambridge, USA, 1975

A new method is not restricted to linear plants and models, but the plant and the model may belong to a certain class of nonlinear systems. When the state variable filter concept is applied, only the plant output response has to be measured. The state variable filters can be modified in order to reduce biasing due to measurement noise. The system is proven to be asymptotically stable by the second method of Lyapunov. Hybrid simulation results of the autopilot design are presented