



ABSTRACT OF THE DISCLOSURE (FIG. 1)

"REFERENCE MODEL TRACKING CONTROL SYSTEM AND METHOD"

A control system makes the state variable of a controlled object track that of a reference model.

5 A disturbance observer estimates disturbance added to the control input, and the internal state variable of the object at a predetermined sampling cycle, based on the control input and observed output of the object. The observer outputs the estimated disturbance and internal state variable as disturbance and
10 state variable estimates. A reference model tracking controller generates a control input of the object at the next sampling cycle, based on a linear control input, disturbance estimate and nonlinear control
15 input. The linear control input is generated by a linear controller to converge an error in the state variable estimate and observed output of the object with respect to the reference state variable. The nonlinear control input is an error in the disturbance
20 estimate with respect to disturbance actually added to the control input.

