

**Exponential dynamical Luenberger observers for
nonautonomous parabolic-like equations**

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The estimation of the full state of a nonautonomous semilinear parabolic equation is achieved by a Luenberger type dynamical observer. The estimation is derived from an output given by a finite number of average measurements of the state on small regions. The state estimate given by the observer converges exponentially to the real state, as time increases. The result is semiglobal in the sense that the error dynamics can be made stable for an arbitrary given initial condition, provided a large enough number of measurements, depending on the norm of the initial condition, is taken. The output injection operator is explicit and involves a suitable oblique projection. The results of numerical simulations are presented showing the exponential stability of the error dynamics.