LOCAL REGRESSION OF THE tanh FUNCTION

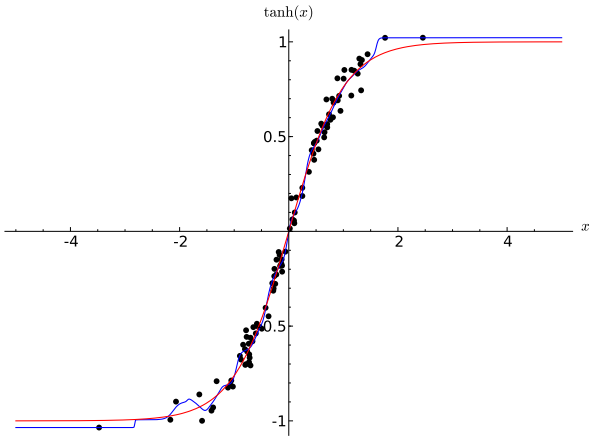

FIGURE 1. Locally constant regression (the blue curve) as applied to 100 data points $y_i = \tanh(x_i) + 0.05\epsilon_i$ $(i = 1, 2, \ldots, 100)$, the x_i and ϵ_i randomly generated according to the standard normal distribution. A bandwidth of $h = 0.196$ was chosen by generalized cross-validation. The tanh function is shown in red.

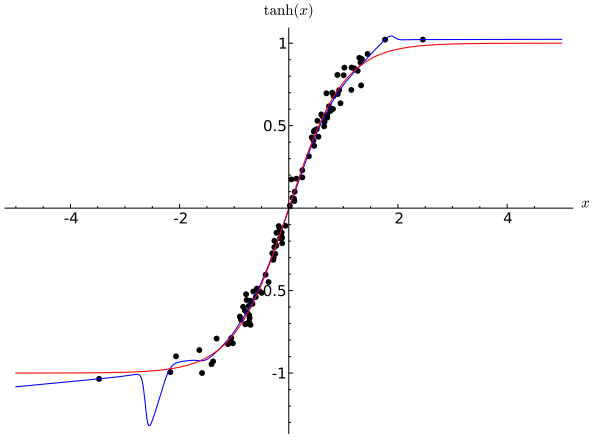

FIGURE 2. Locally linear regression (the blue curve) as applied to the same data appearing in the preceeding figure. A bandwidth of $h = 0.0803$ was chosen by generalized cross-validation. The tanh function is shown in red.