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*Identification of Parameters in Systems Biology.* Preliminary report.

We analyze class of inverse problems in systems biology on the identification of parameters for the system of nonlinear ODEs with the given solution in particular time interval. We apply numerical method suggested in *U.G.Abdulla, Journal of Optimization Theory and Applications, 85, 3(1995), 509-526*, which combines quasilinearization, sensitivity analysis and Tikhonov regularization. Numerical simulations with and without noise are performed in Lotka-Volterra model, Lorenz system in chaotic regime, bistable switch model, gene regulation and repressilator models from synthetic biology, and a canonical genetic regulatory network model. Numerical results demonstrate quadratic convergence. We pursue Tikhonov regularization with optimal choice of the regularization parameter, which significantly increases the convergence range of the initial guess, and computational time. (Received July 31, 2017)