Description	Option/Parameter	Acceptable Values	Values Utilized	
			Synthetic Data Tests	Gap Gene Inference
Determining regulatory parameters				
Spline smoothing parameter for determining velocities	`splinesmoothing`	$[0, 1]$	1	0.01
Velocity threshold for determining on/off state	`slopethresh` (v_g^c)	≥ 0	0.01	1
Expression threshold for determining on/off state	`exprthresh` (x_g^c)	> 0	0.2	100
Determining kinetic parameters				
Method for determining the kinetic parameters	`Rld_method`	`'slope'` `'kink'` `'conc'`	`'slope'`	`'kink'`
Determining kinetic parameters by "slope" method				
Margin to exclude unreliable velocity estimates near maxima and minima of the time series	`Rld_tsafety`	≥ 0	3	NA
Determining kinetic parameters by "kink" method				
Spline smoothing parameter for identifying spatial expression domains and border positions	`spatialsmoothing`	$[0, 1]$	NA	0.5
Expression threshold above which points are included in fitting the kink equations, expressed as fraction of maximum domain expression	`minborder_expr_ratio`	$(0, 1)$	NA	0.01

Table S1: User-defined options and parameters utilized in FIGR code. The spline smoothing parameter is passed to the spline-fitting `csaps` function of MATLAB. It takes values between 0 and 1, where 1 implies no smoothing while 0 results in a straight-line fit.