

Explanations of the parameters in Cdc42ODEApp, the program to integrate the model equations proposed in “Oscillatory dynamics of Cdc42 GTPase in the spatial control of polarized cell growth” by Das, M., T. Drake, D. Wiley, P. Buchwald, D. Vavylonis, and F. Verde.

Cdc42ODEApp	Model
l0 (/min)	$\lambda_0^+$ , the rate constant for regular association.
ln (/min)	$\lambda_n^+$ , the rate constant for autocatalytic association.
n	$n$ , the non-linearity of the autocatalytic term.
kminus (/min)	$k^-$ , the rate constant for dissociation from the tips.
Ctotbar	$\bar{C}_{tot} \equiv C_{tot} / C_{sat}$ , as defined in the supplementary text.
dCtotbar dt (/min)	$d\bar{C}_{tot} / dt$ , as defined in the supplementary text.
tau (min)	$\tau$ , the time-delay constant.
epsilon	$\epsilon$ , the relative strength of the delayed negative feedback.
hill coefficient	$h$ , the non-linearity of the delayed negative feedback.
noise (/min)	$\gamma$ , the noise amplitude.
initial tip1, initial tip2	Fraction of total Cdc42 at cell tip when $t = 0$ .
tip1 tau ago, tip2 tau ago	Fraction of total Cdc42 at cell tip when $t = -\tau$ . Necessary because the delay differential equation requires initial condition to be specified on $[-\tau, 0]$ . The two points are connected linearly.
dt	Integration time step.
record every...	Number of integration time steps between recorded data points.
multiplier for tip2 off rate	Multiplies kminus, allowing for asymmetrical rate equations. As used in Figure S4 of the paper.
multiplier for tip2 on rate	Multiplies l0 and ln, allowing for asymmetrical rate equations. As used in Figure S4 of the paper.
measurement noise level	Amplitude of noise in output, as described in supplementary material.

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