with $_j(t) = x_j$ and will show $\lim_t |\,_1(t) - \,_2(t)| = 0$. At $O(\ )$, we find Eq. (2) with a corresponding linear operator $Lu = cu' - u + w * [f'(U) \cdot u]$. Solvability is enforced by ensuring the right-hand side of Eq. (2) is orthogonal to the null space V of the adjoint $L^* p = -cp' - p + f'(U) \cdot w(-\ ) * p(\ )$, yielding the Langevin equation, Eq. (4). The Lyapunov exponent associated with the stability of the absorbing state $_1(t) = \,_2(t)$ is then approximated by Eq. (14).

To compare our analytical results for traveling waves with numerical simulations, we compute from Eq. (14) when $f(u) = H(u - \ )$, $w(x) = \cos(x - \ )$, and $C(x) = \cos(x)$. Stable traveling waves have a profile $U(\ ) = \cos\ [\sin\ - \sin(\ + a)]$, width $a = \ - \sin^{-1}[\ \sec\ ]$ defined by thresholds $U(\,_1) = U(\,_2) =$ where $_1 = \ - a$ and $_2 = -\ $, and speed $c = \tan\ $ [28]. The null vector can also be computed explicitly:

$$V(\ ) = \sum_{k=1}^{2} (-1)^k \; H(\ -\ _k) + \frac{\coth(\ /c\ ) - 1}{2} \; e^{(\ _k - \ )/c}.$$

Fourier coefficients of $W(\ ,t\ )$ in Eq. (6) are thus given $b_{\pm 1} = (1\ \ c)/$

so $\langle W(\ ,\ )\rangle = 0$; $\langle W(\ ,\ ) W(\ ,\ )\rangle = 2C(\ -\ )(\ -\ )$, $(\ = 1,2,c)$ with $C(\ ) = \sum_{=0}^{\infty} a \cos(\ )$. The degree of correlation between layers is controlled by the parameter .

Our analysis proceeds by considering stationary bumps in a network with even symmetric connectivity [( ) = (−)]. As in the main text, we characterize stochastic bump motion by applying the ansatz $(\ ,\ ) = U(\ - \Delta(\ )) + \varepsilon\Phi(\ - \Delta(\ ),\ ) + O(\varepsilon^2)$, and $\Delta(0) =$. Plugging this ansatz into Eq. (A1), expanding to $O(\varepsilon)$, and applying a solvability condition, we find that each Δ $(\ = 1,2)$ obeys the Langevin equation

$$\Delta = \varepsilon \frac{\ V(\ )\ (\ - \Delta)\ }{V(\ )}$$

(7)Tj/F39.9626Tm0Tc(c)Tj/F11Tf9.9626009.9626171.474581.4301Tm(()Tj/F41Tf.33330TD(x)Tj/F53j6.4D6((6/F4()Tj/F41

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