Fig S5. Dynamical states of the SOM-VIP motif with recurrence.
Left: Bifurcation diagram reveals distinct operation modes: all interneurons are active (divided into amplification and attenuation regime), winner-take-all (WTA) regime leading to a switch, and two pathological states (WTA in each population separately and total WTA). Regime boundaries (black lines) are obtained from a mathematical analysis (see Appendix). Right: Example firing rate traces for all SOM (blue) and VIP (green) neurons for four network settings (see markers) taken from the bifurcation diagram. \( N_{\text{SOM}} = N_{\text{VIP}} = 5 \). SOM and VIP neurons were stimulated with an input consisting of i) a constant component of 25/s and ii) individual noise drawn at each time \( t \) from a Gaussian distribution with zero mean and SD of 1/s.