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Pulse Bifurcations in Stochastic Neural Fields*

Zachary P. Kilpatrick† and Grégory Faye‡

Abstract. [illegible]

[illegible]

[illegible] γ [illegible] θ, [illegible]
$\gamma \to \infty$, [illegible]

$$(\ldots) \geq \theta, \quad 0, \quad \theta \qquad (\,.\,)$$

[illegible] (.), [illegible] (.) [illegible]. [illegible] (.), [illegible] fi [illegible] ff [illegible] (.)

$$[\text{illegible}] \quad \beta [\text{illegible}] + \int_{-\pi}^{\pi} [\text{illegible}]$$

[illegible] (.) [illegible] (. .) [illegible]

$$[\text{illegible}] = \int_{-\pi}^{\pi} [\text{illegible}] + \alpha [\text{illegible}] \qquad (\,.\,)$$

[illegible]

[illegible]

$l = 0$

$$k = \frac{k}{\; + \beta} \int_{-\pi}^{\pi} \; \sum_{k}^{N}$$

Figure 1. (A) ... pitch. ... (SN). ... = 0.5 ... SN, ... (B) ... = 2 ... = 0.25

(.). ( ) $(0,$), fi

λ 0,

(.). , λ_- β / α

β α. , λ_- fi ,

β, (

( )). fi (.) (

[illegible]

$\delta \in \mathbb{R}$

α β, (1.2), 3.1,

$$0$$

$\pm\sqrt{\alpha(\quad -\alpha)}$. A

2.3. Perturbed amplitude equations at the drift bifurcation.

[illegible] Δ [illegible] (. 0), [illegible] Δ. [illegible] (.), [illegible] $(( ) \sim \overline{\mu} (\mu))$ [illegible]

$$( ) = (\beta / \alpha) ( ) + [illegible]$$

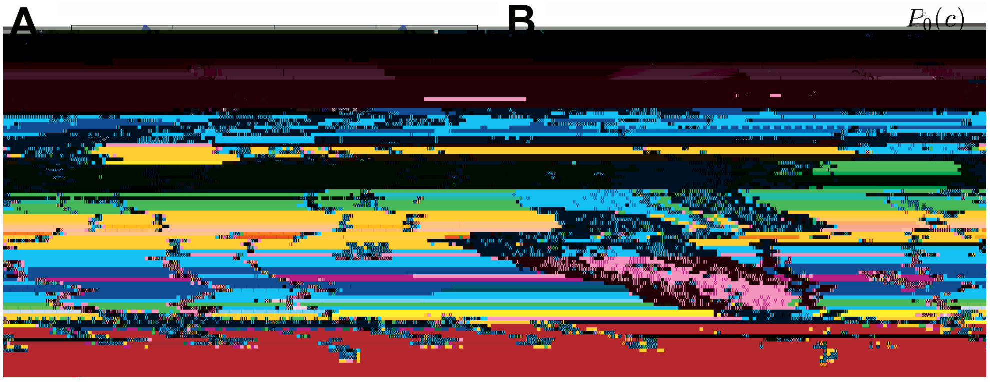

Figure 2. [illegible] $_0($ $)$ [illegible] (1.7). [illegible] (1.2), [illegible] (1.4), [illegible] $\mathbf{C}($ $)=$ $($ $)$. (A) C [illegible]

fl

fi (

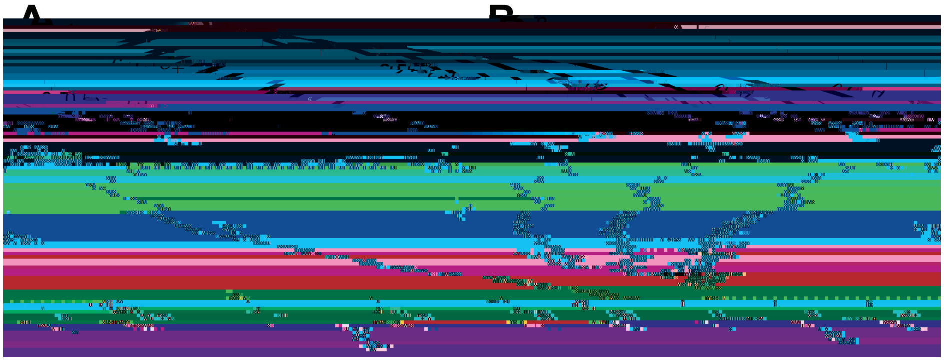

Figure 4. (A) [illegible] *pitch*. (B) [illegible] α.

[illegible] (.) [illegible] (. 0) [illegible] fi [illegible]

$$(.) \qquad \frac{}{+\alpha} \theta$$

[illegible] fi [illegible] (.)

$$(.) \qquad s = / \; - (\theta(+ \alpha) \qquad u = - (\theta(+ \alpha)$$

[illegible] fi [illegible] s

(.) (

ffi $\gamma_\pm$
ff ((ξ) (ξ)) (ξ),

γ $+\gamma_-$

[7] D. Blömker, M. Hairer, and G. A. Pavliotis, [illegible], Nonlinearity, 20 (2007), pp. 1721–1744.
[8] D. Blömker, S. Maier-Paape, and G. Schneider, [illegible], Discrete Contin. Dyn. Syst. Ser. B, 1 (2001), pp. 527–541.
[9] M. Bode,

[33] C. W. Gardiner, [illegible], 3

[59] M. Tsodyks, K. Pawelzik, and H. Markram, [illegible], N[illegible] C[illegible]., 10 (1998), [illegible]. 821 835.

[60] R. Veltz and O. Faugeras, [illegible], [illegible] A[illegible]. A[illegible]. Dy[illegible]. S[illegible]., 9 (2010), [illegible]. 954 998.

[61] X.-J. Wang, [illegible], [illegible]., 90 (2010), [illegible]. 1195 268.

[62] H. R. Wilson and J. D. Cowan, A [illegible], B[illegible]. Cy[illegible]., 13 (1973), [illegible]. 55 80.

[63] W. Xu, X. Huang, K. Takagaki, and J.-Y. Wu, C[illegible], N[illegible], 55 (2007), [illegible]. 119 129.

[64] K. Yoon, M. A. Buice, C. Barry, R. Hayman, N. Burgess, and I. R. Fiete, [illegible], N[illegible]. N[illegible]., 16 (2013), [illegible]. 1077 1084.

[65] L. C. York and M. C. W. van Rossum, [illegible], [illegible]. C[illegible]. N[illegible]., 27 (2009), [illegible]. 607 620.