OPEN BIOLOGY

royalsocietypublishing.org/journal/rsob

Research





Article submitted to journal

Subject Areas:

xxxxx, xxxxx, xxxx

Keywords:

XXXX, XXXX, XXXX

Author for correspondence:

Insert corresponding author name

e-mail: xxx@xxxx.xx.xx

Insert the article title here

X. X. First author¹, X. Second author² and X. Third author³ X. X. Fourth author⁴, X. Fifth author⁵ and X. Sixth author⁶ X. X. Seventh author⁷, X. Eighth author⁸ and X. Ninth author⁹ X. X. Tenth author¹⁰, X. Eleventh author¹¹ and X. twelfth author¹² X. X. Thirteenth author¹³, X. Fourteenth author¹⁴ and X. Fifteenth author¹⁵

Para 1 The abstract text goes here. The abstract text goes here.

Para 2 The abstract text goes here. The abstract text goes here.

© The Authors. Published by the Royal Society under the terms of the Creative Commons Attribution License http://creativecommons.org/licenses/by/4.0/, which permits unrestricted use, provided the original author and source are credited.

¹First author address

²Second author address

³Third author address

⁴Fourth author address

⁵Fifth author address

⁶Sixth author address

⁷Seventh author address

⁸Eighth author address

⁹Ninth author address

 $^{^{10}\}mbox{Tenth}$ author address

¹¹Eleventh author address

¹²Twelfth author address

¹³Thirteenth author address

¹⁴Fourteenth author address

¹⁵Fifteenth author address

The abstract text goes here. The abstract text goes here.

Para 3 The abstract text goes here. The abstract text goes here.

Para 4 The abstract text goes here. The abstract text goes here.

1. Insert A head here

This demo file is intended to serve as a "starter file" for rsproca journal papers produced under LATEX using rsproca_new.cls v1.0.

(a) Insert B head here

Subsection text here.

(i) Insert C head here

Subsubsection text here.

2. Equations

Sample equations.

$$\frac{\partial u(t,x)}{\partial t} = Au(t,x) \left(1 - \frac{u(t,x)}{K} \right) - B \frac{u(t-\tau,x)w(t,x)}{1 + Eu(t-\tau,x)},
\frac{\partial w(t,x)}{\partial t} = \delta \frac{\partial^2 w(t,x)}{\partial x^2} - Cw(t,x) + D \frac{u(t-\tau,x)w(t,x)}{1 + Eu(t-\tau,x)},$$
(2.1)

$$\frac{dU}{dt} = \alpha U(t)(\gamma - U(t)) - \frac{U(t - \tau)W(t)}{1 + U(t - \tau)},$$

$$\frac{dW}{dt} = -W(t) + \beta \frac{U(t - \tau)W(t)}{1 + U(t - \tau)}.$$
(2.2)

$$\frac{\partial(F_1, F_2)}{\partial(c, \omega)}_{(c_0, \omega_0)} = \begin{vmatrix} \frac{\partial F_1}{\partial c} & \frac{\partial F_1}{\partial \omega} \\ \frac{\partial F_2}{\partial c} & \frac{\partial F_2}{\partial \omega} \end{vmatrix}_{(c_0, \omega_0)}$$

$$= -4c_0q\omega_0 - 4c_0\omega_0p^2 = -4c_0\omega_0(q + p^2) > 0. \tag{2.3}$$

3. Enunciations

Theorem 3.1. Assume that $\alpha > 0, \gamma > 1, \beta > \frac{\gamma + 1}{\gamma - 1}$. Then there exists a small $\tau_1 > 0$, such that for $\tau \in [0, \tau_1)$, if c crosses $c(\tau)$ from the direction of to a small amplitude periodic traveling wave solution of (2.1),

and the period of $(\check{u}^p(s), \check{w}^p(s))$ is

$$\check{T}(c) = c \cdot \left[\frac{2\pi}{\omega(\tau)} + O(c - c(\tau)) \right].$$

Condition 3.1. From (0.8) and (2.10), it holds $\frac{d\omega}{d\tau} < 0$, $\frac{dc}{d\tau} < 0$ for $\tau \in [0, \tau_1)$. This fact yields that the system (2.1) with delay $\tau > 0$ has the periodic traveling waves for smaller wave speed c than that the system (2.1) with $\tau = 0$ does. That is, the delay perturbation stimulates an early occurrence of the traveling waves.

4. Figures & Tables

The output for figure is:

Figure 1. Insert figure caption here

The output for table is:

Table 1. An Example of a Table

date	Dutch policy	date	European policy
1988	Memorandum Prevention	1985	European Directive (85/339)
1991–1997	Packaging Covenant I		
1994	Law Environmental Management	1994	European Directive (94/62)
1997	Agreement Packaging and Packaging Waste		

5. Conclusion

The conclusion text goes here.

Acknowledgements. Insert acknowledgment text here.

Please follow the coding for references as shown below.

References

- 1. Allwood JM, Cullen JM. 2011 Sustainable materials: with both eyes open. Cambridge, UK: UIT Cambridge. See http://www.withbotheyesopen.com.
- 2. MacKay DJC. 2008 *Sustainable energy: without the hot air*. Cambridge, UK: UIT Cambridge. See http://www.withouthotair.com.
- 3. Gallman PG. 2011 *Green alternatives and national energy strategy: the facts behind the headlines*. Baltimore, MD: Johns Hopkins University Press.
- 4. MacKay DJC. 2013. Solar energy in the context of energy use, energy transportation, and energy storage. *Proc. R. Soc. A* **371**.

If maintaining .bib file for references, then please use "RS.bst" to generate the references. Example:

```
\bibliographystyle{RS}
\bibliography{sample}
```