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*S. Cheng*[1,2] *J.C. Ji*[1] *J. Zhou*[2]
[1] ....
[2] ....
* E-mail: ....

**Abstract:** The abstract text goes here.

## 1 Insert A head here

This demo file is intended to serve as a "starter file" for IMAIAI journal papers produced under LaTeX using imaiai.cls v1.5e.

### *1.1 Insert B head here*

Subsection text here.

*1.1.1 Insert C head here:* Subsubsection text here.

## 2 Equations

Sample equations.

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

$$\begin{aligned}\frac{dU}{dt} &= \alpha U(t)(\gamma - U(t)) - \frac{U(t-\tau)W(t)}{1+U(t-\tau)},\\ \frac{dW}{dt} &= -W(t) + \beta\frac{U(t-\tau)W(t)}{1+U(t-\tau)}.\end{aligned} \tag{2}$$

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

## 3 Enunciations

**Theorem 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*

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

## 4 Figures & Tables

The output for figure is:

An example of a double column floating figure using two subfigures. (The subfig.sty package must be loaded for this to work.) The subfigure `\label` commands are set within each subfloat command, the `\label` for the overall figure must come after `\caption`. `\hfil` must be used as a separator to get equal spacing. The subfigure.sty package works much the same way, except `\subfigure` is used instead of `\subfloat`.

**Fig. 1**: Insert figure caption here

The output for table is:

**Table 1** An Example of a Table

| | |
|---|---|
| One | Two |
| Three | Four |

## 5 Conclusion

The conclusion text goes here.

## Acknowledgment

Insert the Acknowledgment text here.

## 6 References

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