

## Review Form 1.7

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|--------------------------|---|
| Journal Name:            | <a href="#">Journal of Advances in Mathematics and Computer Science</a>                           |
| Manuscript Number:       | Ms_JAMCS_103471   |
| Title of the Manuscript: | Linear Stability Analysis of a Delay Differential Integral Equation Motivated by Genetic Networks |
| Type of the Article      | Original Research Article   |

### General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<https://www.journaljamcs.com/index.php/JAMCS/editorial-policy> )

### PART 1: Review Comments

|  | Reviewer's comment  | Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here) |
|--|---|---|
| <p><b>Compulsory</b> REVISION comments</p> <p>1. Is the manuscript important for scientific community?<br/>(Please write few sentences on this manuscript)</p> <p>2. Is the title of the article suitable?<br/>(If not please suggest an alternative title)</p> <p>3. Is the abstract of the article comprehensive?</p> <p>4. Are subsections and structure of the manuscript appropriate?</p> <p>5. Do you think the manuscript is scientifically correct?</p> <p>6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</p> <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p> | <p>1. The study focuses on a genetic network, which represents the interactions between genes within a biological system. The work involves the study of a genetic network with time delay, represented by a set of continuous mathematical equations. The stable equilibria of the system are analyzed, and a critical time delay is identified, beyond which the system exhibits limit cycle oscillations through a Hopf bifurcation. The researchers validate their results by comparing the continuous model with a discretized version of the system as it becomes more complex.</p> <p>2. Yes.</p> <p>3. Yes.</p> <p>4. Yes.</p> <p>5. Yes.</p> <p>7. Before Section 2.1, the article "Dynamical effects of nonlocal interactions in discrete-time growth-dispersal models with logistic-type nonlinearities, Ecological Complexity, 2017" on ecology and population dynamics can be added. Also, the article "Verdugo, A. Linear Analysis of an Integro-Differential Delay Equation Model, 2018" can be added.</p> |   |
| <p><b>Minor</b> REVISION comments</p> <p>1. Is language/English quality of the article suitable for scholarly communications?</p>  | <p>1. Yes.</p>  |   |
| <p><b>Optional/General</b> comments</p>  | <p>Follow journal instructions</p>  |   |

### PART 2:

|   | Reviewer's comment   | Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here) |
|---|--|---|
| <p>Are there ethical issues in this manuscript?</p> | <p>(If yes, Kindly please write down the ethical issues here in details)</p> |   |

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### Reviewer Details:

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|----------------------------------|----------------------------------|
| Name:                            | <b>Musa Emre Kavgaci</b>         |
| Department, University & Country | <b>Ankara University, Turkey</b> |