

## Review Form 1.7

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|--------------------------|--|
| Journal Name:            | <a href="#">Asian Journal of Probability and Statistics</a>                                |
| Manuscript Number:       | Ms_AJPAS_118568  |
| Title of the Manuscript: | CONTINUOUS ERLANG MIXTURES AND THEIR RELATION TO EXPONENTIAL MIXTURES AND POISSON MIXTURES |
| 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.journalajpas.com/index.php/AJPAS/editorial-policy> )

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### 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. <b>Is the manuscript important for scientific community?</b><br/>(Please write few sentences on this manuscript)</p> <p>2. <b>Is the title of the article suitable?</b><br/>(If not please suggest an alternative title)</p> <p>3. <b>Is the abstract of the article comprehensive?</b></p> <p>4. <b>Are subsections and structure of the manuscript appropriate?</b></p> <p>5. <b>Do you think the manuscript is scientifically correct?</b></p> <p>6. <b>Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</b></p> <p><u>(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)</u></p> | <p>1. <b>Yes.</b><br/>This study provides a novel method for obtaining Erlang mixtures from a mixed Poisson process. The study solved the basic differential equations of the Poisson process to obtain the Poisson distribution. The waiting time distribution in a Poisson process is illustrated as an Erlang distribution. The study also presented the Erlang mixture as the first passage time distribution in the mixed Poisson process, and it was expressed using both the direct method and the method of moments. Moreover, these two ways of inferring a mathematical identity have been equated. Exponential mixture and Poisson mixture are explained as special cases of Erlang mixture. A practical example is given, using type II gamma distribution mixtures. Properties of the mixtures, such as raw momentum and probability generating function, are analysed.</p> <p>2. <b>Yes.</b></p> <p>3. <b>Yes.</b></p> <p>4. <b>Yes.</b></p> <p>5. <b>Yes.</b></p> <p>6. <b>The references are old and need to be updated to keep up with developments on the same topic.</b></p> |   |
| <p><b>Minor</b> REVISION comments</p> <p>1. <b>Is language/English quality of the article suitable for scholarly communications?</b></p>   | Yes   |   |
| <p><b>Optional/General</b> comments</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) |
|--|--|---|
| Are there ethical issues in this manuscript? | <i>(If yes, Kindly please write down the ethical issues here in details)</i> |   |

### Reviewer Details:

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|----------------------------------|--------------------|
| Name:                            | Mohamed. S. Hamed  |
| Department, University & Country | Gulf Colleges, KSA |