



SDI FINAL EVALUATION FORM 1.1

PART 1:

Journal Name:	British Journal of Mathematics & Computer Science
Manuscript Number:	2015_BJMCS_16147
Title of the Manuscript:	Stability analysis of glucose insulin dynamic system using matrix Lambert W function
Type of Article:	Original Research Article

PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
The paper still needs revision; I don't see a satisfactory treatment of the points I raised previously. 1. Abstract: replace "define a matrix version of the Lambert W function" with "use the Lambert W matrix function" and use the proper citation. You are not definite a Lambert W matrix function; it's already defined by previous work (see " The solution of $S \exp(S) = A$ is not always the Lambert W function of A " or http://eprints.ma.man.ac.uk/2196/01/paper.pdf and the references therein). 2. First sentence of Introduction: "For ordinary dynamic systems ... other robust techniques have been used in ... biology." Used for what?! 3. The authors still don't cite previous work on matrix Lambert W function; Please, do so. 4. Eq (3.7) is define for H in what? a scalar real? complex? a matrix? Originally, it is define for complex valued z; I dont know why authors call it H. Also it's _not_ a matrix. I put this already in my previous review; I don't really see this issue addressed in this revision either. The authors need to be clear on matrix versus scalar W function and its properties. 5. Below it says that it's a "unique definition in (3.7)". Again, "The solution of $S \exp(S) = A$ is not always the Lambert W function of A " shows that this is _not_ unique. Please address. 6. Last paragraph on p5: a lot of 'assumptions' and 'examples'. Is this a theorem, a conjecture (proven?), or just a hypothesis for a mathematical paper this seems very hand wavy. Please be more precise about your points here; if these are theorems/proofs, then please cite prior work and use more precise language	Thank you for your valuable comments. We accept that we forgot to include your points that previously mentioned. 1. We just wanted to define the matrix version of our model, not to define a general form of the matrix version of the Lambert W function. So we replace that as suggested by the evaluator. 2. We mentioned many methods that are used in various aspects in various fields. For example, Kalman filter is widely applied concept in time series analysis used in fields such as signal processing. These methods are not commonly used like finding the approximate solution and analyze the system. But we clearly gave the references therein to understand. 3. We already gave some references. After the evaluator suggestions we included the recent reference. 4. $H_k = Z_k J_k Z_k^{-1}$. Hence Eq. (3.7) is defined for H in Matrix form. Corless et al., used this definition for complex valued function. Sun Yi et al., used this definition for matrix. We followed the matrix version. We wrongly referred the first one. We accept what the evaluator said about the issues. 5. We agreed and also referred. 6. This is a conjecture already proven in Sun Yi et al., (2009). Now, we included these references to understand the concept of this paper in straight.