SDI Review Form 1.6

Journal Name:	**British Journal of Mathematics & Computer Science**
Manuscript Number:	**2014_BJMCS_12415**
Title of the Manuscript:	**Bayesian Optimal Filtering in State Space Models: Empirical Example from Econometric Analysis of Economic Time Series Data**
Type of the 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.
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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)*
Compulsory REVISION comments		
Minor REVISION comments	The expression "state space model" seems to be established for a long time. However, in the general theory of modeling, there is absolutely no surprise that a system can be in some state. Set of all states generates the state space. Can you describe the state space of your system? For me, there is a number describing a state and a number of the observation. Both state variables are derived recurrently from their recurrent equations. Try to have a look on so called DEVS formalism. Language: use a spell checker. **Conclusion:** This paper applies the wide-spread Kalman filter on time series. The idea is not original. The text is far from to be rigorous. There is a big disbalance between the evident authors' knowledge and the resulting form of expressing themselves. The paper must be restructured.	

Optional/General comments	I like the paper since the paper is well based on a huge amount of literature and the authors seem to understand their topic well. The paper does not highlight its main contribution, which is - as I suppose - in application of the Kalman filter in processing of econometric data. Be more explicit in highlighting your contribution! As the ground of the paper is good, I recommend the authors to structure their text in more formal manners: proper formal definitions, proper description of the data processing itself and mainly - rewrite your demo into a standard case study. The paper completely lacks a description of a motivation. The introduction should give a motivation for processing the econometric data, using the Kalman's method and mainly: you must say what you expect to be the result. There must be some sort of a definition saying: the series is filtered (somehow) well if ... Section 3.3 is not sufficient. Section 3.4: this is supposed to be the core of the paper, that is the place where I would expect the proposed method to be defined and commented step by step. Do you really think	

	that a reader will be able to re-implement your method? I guess not. Section 4 (the demo): this part demonstrates the weaknesses of the paper in the most visible way. I disagree with the claim that "it can be seen in fig 2 that our model performs well ...". When you do not define how the "good result" looks like, then you cannot evaluate a result to be good. The blue line should be a forecast? Sure? I made some market forecasting models (based on different techniques) and the word "forecast" means a prediction of something future. Is the forecast a prediction of the next year from the current state (in recursive meaning), so that the well working forecasting just follows the historical time series? Would you give a forecast for some few coming years? **I recommend to accept this paper after major revision.**	

Reviewer Details:

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