



SDI Review Form 1.6

Journal Name:	<a href="#">Journal of Advances in Mathematics and Computer Science</a>
Manuscript Number:	<b>Ms_JAMCS_48492</b>
Title of the Manuscript:	<b>Methods of bilateral approximations for nonlinear eigenvalue problems</b>
Type of the Article	<b>Original Research Article</b>

**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:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



**SDI Review Form 1.6**

**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)
<b>Compulsory</b> REVISION comments	<p>The article is not suitable for publication in this present form. The authors should address below issues exactly for further consideration</p> <ol style="list-style-type: none"> <li>1. The English language of manuscript needs major revision.</li> <li>2. In results and discussion, the authors should discuss on their results deeply.</li> <li>3. The authors should show the comparison between their results and previous works.</li> <li>4. The literature is poor needs to be updated with the following articles:</li> </ol> <p>Daniel, Y. S., Aziz, Z. A., Ismail, Z., &amp; Salah, F. (2017). Effects of thermal radiation, viscous and Joule heating on electrical MHD nanofluid with double stratification. <i>Chinese Journal of Physics</i>, 55(3), 630-651.</p> <p>Daniel, Y. S., &amp; Daniel, S. K. (2015). Effects of buoyancy and thermal radiation on MHD flow over a stretching porous sheet using homotopy analysis method. <i>Alexandria Engineering Journal</i>, 54(3), 705-712.</p> <p>Daniel, Y. S. (2016). Laminar convective boundary layer slip flow over a flat plate using homotopy analysis method. <i>Journal of The Institution of Engineers (India): Series E</i>, 97(2), 115-121.</p> <p>Daniel, Y. S., Aziz, Z. A., Ismail, Z., &amp; Salah, F. (2017). Entropy analysis in electrical magnetohydrodynamic (MHD) flow of nanofluid with effects of thermal radiation, viscous dissipation, and chemical reaction. <i>Theoretical and Applied Mechanics Letters</i>, 7(4), 235-242.</p> <p>Daniel, Y. S. (2015). Steady MHD laminar flows and heat transfer adjacent to porous stretching sheets using HAM. <i>American journal of heat and mass transfer</i>, 2(3), 146-159.</p> <p>Daniel, Y. S., Aziz, Z. A., Ismail, Z., &amp; Salah, F. (2018). Effects of slip and convective conditions on MHD flow of nanofluid over a porous nonlinear stretching/shrinking sheet. <i>Australian Journal of Mechanical Engineering</i>, 16(3), 213-229.</p> <p>Daniel, Y. S., Aziz, Z. A., Ismail, Z., &amp; Salah, F. (2017). Numerical study of Entropy analysis for electrical unsteady natural magnetohydrodynamic flow of nanofluid and heat transfer. <i>Chinese Journal of Physics</i>, 55(5), 1821-1848.</p> <p>Daniel, Y. S., Aziz, Z. A., Ismail, Z., &amp; Salah, F. (2018). Impact of thermal radiation on electrical MHD flow of nanofluid over nonlinear stretching sheet with variable thickness. <i>Alexandria engineering journal</i>, 57(3), 2187-2197.</p> <p>Daniel, Y. S. (2017). MHD laminar flows and heat transfer adjacent to permeable stretching, F. (2018). Thermal stratification effects on MHD radiative flow of nanofluid over sheets with partial slip condition. <i>Journal of Advanced Mechanical Engineering</i>, 4(1), 1-15.</p> <p>Daniel, Y. S., Aziz, Z. A., Ismail, Z., &amp; Salah nonlinear stretching sheet with variable</p>	<p>In this paper, we consider an abstract self-adjointed non-linear eigenvalue problem with respect to the spectral parameter and does not address the specific physical or engineering models that lead to it. I emphasize: it is consider the nonlinear problem with respect to the spectral parameter , for solving which the methods and algorithms that allow to calculate the upper and lower bounds of eigenvalues are proposed and substantiated. It allows at each step of the iterative process to obtain an a posteriori estimate of the accuracy of the calculations. The author does not know the methods that give bilateral estimates of the eigenvalues of such problems. In the introduction it is noted that known methods for linear spectral problems, as a rule, can not be applied (generalize) to nonlinear problems. So:</p> <ol style="list-style-type: none"> <li>1. To compare the proposed algorithms in an article with nothing.</li> <li>2. To compare them with methods based on the apparatus of interval analysis, I consider it incorrect.</li> </ol> <p>As an example, the application of algorithms to a particular physical problem that arises in the theory of the radiating systems synthesis is considered, namely: to non-linear with respect to the spectral parameter eigenvalue problem. Apart from the fact that this is a particular physical problem, it is also chosen for the example because for the function <math>F=1</math> it is known for its first eigenvalue, which is equal to <math>\pi</math> . From the table it is visible how the algorithms approximate this eigenvalue from two sides, without further explanation.</p> <p>What are the advantages of applying the proposed algorithms to linear problems, there are given in the conclusions.</p> <p>Taking into account the above, I included some of the wishes by the reviewer, in particular:</p> <ol style="list-style-type: none"> <li>1. The introduction supplemented with reference to additional literature.</li> <li>2. The conclusions supplemented by remark.</li> <li>3. It was supplemented the list of literature by some papers that were proposed by the reviewer.</li> </ol>



**SDI Review Form 1.6**

	<p>thickness. <i>Journal of Computational Design and Engineering</i>, 5(2), 232-242.</p> <p>Daniel, Y. S. (2016). Steady MHD boundary-layer slip flow and heat transfer of nanofluid over a convectively heated of a non-linear permeable sheet. <i>Journal of Advanced Mechanical Engineering</i>, 3(1), 1-14.</p> <p>Daniel, Y. S., Aziz, Z. A., Ismail, Z., &amp; Salah, F. (2017). Double stratification effects on unsteady electrical MHD mixed convection flow of nanofluid with viscous dissipation and Joule heating. <i>Journal of applied research and technology</i>, 15(5), 464-476.</p> <p>Daniel, Y. S. (2015). Presence of heat generation/absorption on boundary layer slip flow of nanofluid over a porous stretching sheet. <i>American Journal of Heat and Mass Transfer</i>, 2(1), 15-30.</p> <p>Daniel, Y. S., Aziz, Z. A., Ismail, Z., &amp; Salah, F. (2017). Thermal radiation on unsteady electrical MHD flow of nanofluid over stretching sheet with chemical reaction. <i>Journal of King Saud University-Science</i>.</p> <p>Daniel, Y. S., Aziz, Z. A., Ismail, Z., &amp; Salah, F. (2018). Hydromagnetic slip flow of nanofluid with thermal stratification and convective heating. <i>Australian Journal of Mechanical Engineering</i>, 1-9.</p> <p>Daniel, Y. S., Aziz, Z. A., Ismail, Z., &amp; Salah, F. (2018). Slip Effects on Electrical Unsteady MHD Natural Convection Flow of Nanofluid over a Permeable Shrinking Sheet with Thermal Radiation. <i>Engineering Letters</i>, 26(1).</p> <p>Daniel, Y. S., Aziz, Z. A., Ismail, Z., &amp; Salah, F. (2017). Entropy Analysis of Unsteady Magnetohydrodynamic Nanofluid over Stretching Sheet with Electric Field. <i>International Journal for Multiscale Computational Engineering</i>, 15(6).</p> <p>Daniel, Y. S., Zainal, A. A., Ismail, Z., &amp; Salah, F. (2018). Electrical Unsteady MHD Natural Convection Flow of Nanofluid with Thermal Stratification and Heat Generation/Absorption. <i>Matematika</i>, 34(2), 393-417.</p> <p>DANIEL, Y. S. (2015). Boundary layer stagnation point flow of a nanofluid over a permeable surface with velocity, thermal and solutal slip boundary conditions. <i>Journal of Applied Physical Science International</i>, 237-252.</p>	
<b>Minor</b> REVISION comments		
<b>Optional/General</b> comments		

**PART 2:**

	<b>Reviewer's comment</b>	<b>Author's comment</b> (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)
<b>Are there ethical issues in this manuscript?</b>	<u>(If yes, Kindly please write down the ethical issues here in details)</u>	