



**SDI Review Form 1.6**

|                          |                                                                       |
|--------------------------|-----------------------------------------------------------------------|
| Journal Name:            | <a href="#">British Journal of Mathematics &amp; Computer Science</a> |
| Manuscript Number:       | Ms_BJMCS_19265                                                        |
| Title of the Manuscript: | Galerkin RBF for Integro-Differential Equations                       |
| 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:

(<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 work has some serious drawbacks;</p> <p>a) - It is not known whether the presented schemes are new or they represent incremental advance over the known.</p> <p>b) - The error analysis of the methods must be provided.</p> | <p>The authors gratefully acknowledge the constructive comments on this paper, offered by the anonymous referees. We have responded to all comments and generally agree with those. We express our sincere gratitude for your review, which will help to improve the quality of the paper significantly.</p> <p>a) Meshless Galerkin methods using radial basis functions were first introduced by H. Wendland and then a few researchers were used the method for solving PDEs.</p> <p>b) The error analysis of the methods is discussed in the following references and was addressed in the paper:</p> <p>An integrated-RBF technique based on Galerkin formulation for elliptic differential equations, N. Mai-Duy, T. Tran-Cong, Eng. Anal. Bound. Elem. 33 (2009) 191– 199,<br/>And<br/>Meshless Galerkin Methods Using Radial Basis Functions, H. Wendland, Math. Comput. 68(228)</p> |



SDI Review Form 1.6

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                            |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>c) - Why IGRBF is performing poorly as compared to the GRBF must be discussed.</p> <p>d) - The relevant literature “Effective computation of exact and analytic approximate solutions to singular nonlinear equations of Lane–Emden–Fowler type, <u>Applied Mathematical Modelling</u>, <u>Volume 37, Issues 14–15</u>, 1 August 2013, Pages 7539–7548”, “An effective approach for numerical solutions of high-order Fredholm integro-differential equations, <u>Applied Mathematics and Computation</u>, <u>Volume 227</u>, 15 January 2014, Pages 384–398” and “High-order nonlinear Volterra–Fredholm–Hammerstein integro-differential equations and their effective computation, <u>Applied Mathematics and Computation</u>, <u>Volume 247</u>, 15 November 2014, Pages 410–416” must be inserted to serve for the completeness and comparison with some available GALERKIN techniques.</p> <p>e) - Nonlinear examples as in the above references must be supplied and discussed.</p> | <p>(1999), 1521–1531.</p> <p>c) By using a revised code, as expected, IGRBF results became more accurate than GRBF results.</p> <p>d) The references were inserted in the paper.</p> <p>e) In this paper, we consider only linear IDEs. However, this method can be applied for nonlinear IDEs, but with some difficulties for solving nonlinear systems of equations.</p> |
|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



**SDI Review Form 1.6**

|                                         |  |                                                          |
|-----------------------------------------|--|----------------------------------------------------------|
| <b><u>Minor</u></b> REVISION comments   |  |                                                          |
| <b><u>Optional/General</u></b> comments |  | Thank you very much for the times that you spent for me. |