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| Journal Name: | [**Journal of Advances in Mathematics and Computer Science**](https://journaljamcs.com/index.php/JAMCS) |
| Manuscript Number: | **Ms\_JAMCS\_136849** |
| Title of the Manuscript: | **Polynomial Solutions of Heun’s Differential Equations in Nonstandard Analysis** |
| Type of the Article | **Original Research Article** |

PART 1: Comments

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|  | **Reviewer’s comment**  **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | **Author’s Feedback** (It is mandatory that authors should write his/her feedback here) |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | **This manuscript provides a valuable contribution to the theory of special functions and differential equations by constructing polynomial solutions to the homogeneous Heun’s differential equation through the framework of nonstandard analysis. The paper builds on earlier works and offers systematic derivations of recurrence relations for the coefficients of these polynomial solutions. The results enrich theoretical understanding and may be useful in applied contexts such as quantum mechanics and**  **mathematical physics where Heun-type equations naturally arise.** |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **Yes, the title is appropriate and clearly reflects the main focus of the article.** |  |
| **Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.** | **Yes** |  |
| **Is the manuscript scientifically, correct? Please write here.** | Yes |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | **The references are mostly recent and relevant to the topic. They include foundational and contemporary works, especially prior studies by the author. There is no urgent need for more references, but including a few citations related to practical applications of Heun functions in physics or engineering could broaden the manuscript’s appeal.** |  |
| **Is the language/English quality of the article suitable for scholarly communications?** | Yes |  |
| **Optional/General** comments |  |  |

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| **PART 2:** | | |
|  | **Reviewer’s comment** | **Author’s Feedback** (It is mandatory that authors should write his/her feedback here) |
| **Are there ethical issues in this manuscript?** | *(If yes, Kindly please write down the ethical issues here in details)* |  |

**Reviewer Details:**

**George Albert Toma, Higher Institute for Applied Sciences and Technology, Syrian Arab Republic**