Interactive comment on “Gradually-varied open-channel flow profiles normalized by critical depth and analytically solved by using Gaussian hypergeometric functions” by C. D. Jan and C. L. Chen

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Title: Gradually-varied open-channel flow profiles normalized by critical depth and analytically solved by using Gaussian hypergeometric functions
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My comments are as follows:
1. Notations: The authors have used the notation h for depth of flow, whereas the standard notation for flow depth is y. Thus, the notations h, hc and hn should be changed to y, yc and yn respectively.
2. All the analysis is based on approximations involving hydraulic exponents M and N, which is a crude approximation that does not hold good for practical sections like trapezium and circle. Furthermore, computation of flow profiles using hypergeometric function requires more programming effort and execution time. On the other hand, without any assumption of hydraulic exponents the flow profiles can be easily computed using a fourth order Runge-Kutta method. This will require much less programming effort and computer time. Thus, the authors’ work is merely an academic exercise having no utility. Thus, the manuscript is not recommended for publication.

Rating: Poor
Recommendation: Decline

Scientific Significance: Does the manuscript represent a substantial contribution to scientific progress within the scope of Hydrology and Earth System Sciences (substantial new concepts, ideas, methods, or data)? No.
Scientific Quality: Are the scientific approach and applied methods valid? Are the results discussed in an appropriate and balanced way (consideration of related work, including appropriate references)? No.
Presentation Quality: Are the scientific results and conclusions presented in a clear, concise, and well-structured way (number and quality of figures/tables, appropriate use of English language)? No.

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