



SDI Review Form 1.6

PART 1:

Journal Name:	British Journal of Applied Science & Technology
Manuscript Number:	2013_BJAST_4698
Title of the Manuscript:	ENTROPY IN THE ANALYSIS OF GAIT COMPLEXITY: A STATE OF THE ART
Type of the Article	Review

General guideline for Peer Review process is available in this link:

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

- This form has total 7 parts. Kindly note that you should use all the parts of this review form.



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1 **PART 2:** Review Comments

2	3 Reviewer's comment	4 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)
5 Compulsory REVISION comments	The author presents an interesting concept of using “entropy” to analyze COP data. This is an area with good theory bases and with potential applications. However, the authors should address the following questions prior to publish the paper: 1. What is the added knowledge in the field? There are many research papers dealing with using entropy-based methods to analyze COP data. What is new in this paper? 2. What is the physical meaning of entropy or MSE to the COP data? Will the MSE replace many traditional COP measurements such as 95% moving area? Or will it increases understanding of human balance? 3. What are the problems with approx. entropy? As mentioned in the paper, sample entropy is used to calculate MSE because of some problems with approx. entropy. This point needs to be further explained. Richman, J.; Moorman, J. Physiological time series analysis using approximate entropy and	1. This paper doesn't analyze COP data. Exactly we analyzed stride interval time series from human gait. We wanted to show that the MSE is the most appropriate nonlinear tool to analyze the complexity of human walking 2. Entropy quantifies the regularity of a system (line 53), but we don't analyze COP data.. 3. This point has been changed in the text. 4. We think that these references are very interesting but we don't analyze COP data.



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	sample entropy. <i>Am. J. Physiol.</i> 2000, 278, H2039–H2049. 4. The references on recent application are not thorough enough. The following recent references are some of the missing but important ones: Wei, Q., Liu, D. H., Wang, K. H., Liu, Q., Abbod, M. F., Jiang, B. C., Chen, K. P., Wu, C., Shieh, J. S. 2012, “Multivariate Multiscale Entropy Applied to Center of Pressure Signals Analysis: an effect of Vibration Stimulation of Shoes”, <u>Entropy</u>,	
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	14(1), pp. 2157-2172. (SCI) (doi:10.3390/e14112157) Ahmed, M.U.; Mandic, D.P. Multivariate multiscale entropy analysis. <i>IEEE Signal Proc. Let.</i> 2012, <i>19</i>, 91-94. Jiang, B. C., Yang, W. H., Shieh, J. S., Fan, J.S.Z. and Peng, C.K. (2013), "Entropy-based Method for COP Data Analysis," <u>Theoretical Issues of Ergonomics Science</u>, 17, pp. 227-246. (doi:10.1080/1463922X.2011.617109)	
6 7	<u>Minor</u> REVISION comments	None
8 9	<u>Optional/General</u> comments	None