



SDI Review Form 1.6

Journal Name:	British Journal of Mathematics & Computer Science
Manuscript Number:	2014_BJMCS_10887
Title of the Manuscript:	On the Weyl approach to tensor representations of exceptional Lie groups: The case of G_2 and F_4
Type of the 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)
Compulsory REVISION comments	The article is well written and uses the literature mentioned. All the literature is relevant and current. The technical level of the article is very good. The method described by the authors is novel and may be useful in representation theory. I think that this work may be of interest to physicists. I think this method can be generalized to cover groups of E-series.	While the case of G_2 fits rather well into the scheme of Weyl, the obstructions for F_4 and the E-series are probably due to the fact that these algebras are not so idoneously embedded into classical algebras, meaning that the adjoint representation of the superalgebra splits as the adjoint representation of the subalgebra plus the fundamental representation of minimal dimension. This fact requires modification of the strategy, which is currently being analyzed by means of additional techniques. We hope to find a satisfactory mechanism soon. The physical applications have actually been the motivation to derive the representations in a more direct way, instead of the formal weight theory, which as such has no direct implementation for specific physical problems (as embeddings usually are the singular, not the regular ones).



SDI Review Form 1.6

<u>Minor</u> REVISION comments	No propositions or theorems or lemmas along the article.	
<u>Optional/General</u> comments		