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**[cfm2019] Demande de modifications pour la soumission
sciencesconf.org:cfm2019:253291**

De : cfm2019 <cfm2019@sciencesconf.org>

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Objet : [cfm2019] Demande de modifications pour la soumission
sciencesconf.org:cfm2019:253291**À :** Zouaoui Marouene <marouene.zouaoui@utt.fr>[CFM 2019 : Congrès Français de Mécanique 2019](#)

26-30 août 2019 Brest (France)

Bonjour Marouene Zouaoui,

Votre soumission ne peut pas être acceptée en l'état pour la conférence "Congrès Français de Mécanique 2019"

Merci de bien vouloir apporter les corrections suivantes à votre soumission en vous connectant au serveur <https://cfm2019.sciencesconf.org>

Dear Sir,

We are deeply sorry for the delay, please find the reviewer remarks below:

General comments

First I would like to point out that the comprehension of the paper is very difficult due to poor english writing. I will give some corrections at the end of the review but I strongly recommend a more thorough correction by a native english speaker to accept this paper.

The title insists on « Fracture MEchanics » and the 2 CT and BEAM specimen are indded dedicated to fracture toughness analysis. However this is not really addressed in the paper. This is a preliminary work to make sure the elastic anisotropic behavior is modeled correctly in Abaqus. The title should therefore be more accurate about what is presented in the paper.

Finite element modeling and anisotropy implementation in 3D printed structures using an optimized method

The evaluation of fracture toughness using CT specimen usually requires the initiation of a sharp crack usually based on fatigue loading. How do the authors plan to initiate this sharp crack ?

For 3D printed specimen, the initiation of a sharp crack is very difficult and will probably produce delamination between the filaments. Such configuration influences directly fracture toughness of the specimen. Authors did not initiate a sharp crack

There is no French Abstract ?

Corrections

Please correct the punctuation:

No space before and 1 space after a "." Or a ","

No space before and one space after a ";" or a ":"

Page 1

"this work studies"

"in Abaqus"

OK

Page 2

"This is where"

Ahn et al.

"aims at enhancing mechanical properties"

"respected during the generation"

"This work aims at introducing"

"The key idea starts by finding"

OK

"optimized respond": respond must be corrected

"more likely to occur"

"Figure 1 shows"

Page 3

"ABS layers were printed at a temperature"

"Three orientations"

OK

"similarity of building" ????

Page 4

Poisson ratio and not "Poison"

Shear planes and not "shear's plane"

OK

Page 5

Words are missing at the last sentence of section 2.3

The sentence "Then was applied on the mobile pin for the mechanical tests." Must be corrected

OK

"goes through capturing" must be corrected

Page 6

Configuration instead of "schema"

"closest to the Gauss points" (in case 1)

No capital letters after ":"

"consist in selecting"

OK

"will be considered"

"corresponds to the filament"

Page 7

"orthotropy"

Poisson instead of poison

"based on the mechanical tests"

"air gap reduces"

Page 8

Fig.6 not clear.

What does SMAM means?

Why are the blue and orange curves flat at the very beginning

Significant instead of "pronounced"

OK

Page 9

The flat part is due to the contact (sliding) between the pin and the hole of the specimen

"The First reason to which authors relate is the similarity in the Young's modulus in the different directions" must be corrected
"gives preliminary"
"defines directly" OK
"material's strength"

Again, these corrections are not exhaustive and I strongly advised the authors to correct the overall english of the paper.

Regarding the publication in « Mécanique et Industrie », I think the part of this study dedicated to fracture toughness should be carried out before publication in this journal.

Reviewer n°2:

Paper is difficult to read and understand. There is a lack of analyse of the different tests on notched specimens. The current quality of the paper does not allow it to be accepted in the journal "Mechanics&Industry) but is accepted for the congress review.

Please reupload on the website your corrected article before June 15th.

Best regards.

Cordialement,
L'équipe cfm2019

<https://cfm2019.sciencesconf.org>
