✗→To-Do, ■→In Progress, ✔→Reviewed, Re.=Reviewer, Pos.=Position in text

N.		Re.	Pos.	Observation(s)	Action(s)
1	✔	1	Page 8, lines 2–17	It is not clear what the word "coupling" really means within the context of the application of the boundary displacement. For example, does the "application of the coupling of horizontal displacements u_x along the left and right had sides." Means simultaneous application of the horizontal displacement ux along the left and right hand sides? Similarly, what does the statement "coupling of the vertical displacements u_z is applied to the upper boundary" really mean? What were the imposed boundary conditions for this particular loading state? Was the horizontal displacement applied simultaneously as the vertical displacement? Linear distribution of horizontal displacement - what was the linear function for the displacement distribution used, as the choice of this will have a significant influence on the strain energy release rate.	The meaning of the different boundary conditions has been clarified by expressing them in the form of equations and improving the description of each one.
2	✔	1	Pages 9, 16, and 19	Include the section numbers.	Section numbers were missing due to a misuse of the Latex journal template (sections are unnumbered). Corrected by referring to titles.
3	✔	1	Page 9, lines 35-36	The applied horizontal displacement is chosen to correspond to a horizontal strain $\varepsilon_x = 1\%$. However, there is no information about the applied vertical displacement u_z for the other load cases.	The meaning of this constant vertical displacement and how it is evaluated are now explained in sub-section *Introduction & nomenclature* of section *RVE models & FE discretization*, when the different sets of boundary conditions are explained.

4	✔	1	Figure 4	The results for G_I for the load case $1 \times 1 - $ *coupling* suggest G_I zero when $\Delta\theta > 80°$. This is very surprising. The load case $1 \times 1 - $ *coupling* involves the application of vertical displacement u_z. Thus, with increasing value of $\Delta\theta$, u_z will tend to have more opening mode effect on the debond. Thus one would expect G_I to remain finite and positive, and to increase as $\Delta\theta$ increases beyond 45 degrees. Can the authors comment on this and the difference between this expectation and their results?	An explanation of the reason why G_I is equal to 0 for $\Delta\theta \geq 0$ in the $1 \times 1 - $ *coupling* case has been added to sub-section *Effect of the proximity of the* $0°/90°$ *interface and of the thickness of* $0°$ *layer on debond ERR for highly interactive debonds* of section *Results & Discussion*. For the sake of completeness, the explanation is reported here as well. *"Notice that in the case of* $1 \times 1 - $ *coupling, the upper surface moves by an amount of* u_z^{ν} *in the vertical direction, due to Poisson's effect, while remaining straight (see Equation 7). The value of* u_z^{ν} *is evaluated as part of the elastic solution and it results to be always negative. This agrees well with the expectation that, upon application of a tensile load in the x-direction, Poisson's effect causes a contraction of the cross-section normal to the x-axis, which translates into a negative z-displacement in the* $x - z$ *plane. The contraction is greater in the matrix than in fibers, due to the fact that* $\nu_m > \nu_f$. *This in turn means that the fiber-matrix interface is subjected to a compressive stress state for* $\Delta\theta > 80° - 90°$, *preventing debond growth in Mode I and corresponding in Figure 4 to the fact that* $G_I = 0$ *for* $\Delta\theta \geq 80°$*."*
5	✔	1	Page 16	the difference between the energy release rate (ERR) for $n = 1$ and $n = 21$ (Figures 4 and 6; and Figures 5 and 7) was attributed to strain magnification. As stated in the manuscript, the case with $n = 21$ is much stiffer than that with $n = 1$. The application of the same remote strain of $\varepsilon_x = 1\%$ to both cases, means the net average applied remote stress would be higher for $n = 21$ than for $n = 1$. It is well known that ERR scale with the remotely applied load or stress. Should the comparison between the two cases not be made at the same average remote applied stress (not strain)?	The choice of comparing results at constant applied strain has been commented in the sub-section *Effect of the proximity of the* $0°/90°$ *interface and of the thickness of the* $0°$ *layer on non-interactive debonds in a one-fiber row* $90°$ *ply* of section *Results & Discussion*. For the sake of completeness, the added text is reported here as well. *"Notice also that the addition of stiffer elements causes a higher global stress at the boundary, i.e. the laminate corresponding to* $21 \times 1 - m \cdot t_{90°}$ *is stiffer than the laminate modeled by* $1 \times 1 - m \cdot t_{90°}$. *In the present work, comparisons are drawn at the same level of applied strain as in practical applications the interest lies often in understanding the material response to a prescribed strain. Furthermore, this choice adheres with the modeling approach of Classical Laminate Theory (CLT) and, in the context of damage-induced degradation of elastic properties, with the GLOB-LOC modeling strategy developed for transverse cracks"*.

1	✔	2	Introduction	However, the authors could remark more clearly the novelty of their results versus the previous referenced ones.	A discussion about the place of the present work in the context of the subject literature has been added in the *Introduction*. For the sake of completeness, the added text is reported here as well. *"In particular, we propose a LEFM assessment of the effect of micro- and macro-structural features (undamaged fibers, multiple debonds,* $0°/90°$ *ply interface,* $0°$ *ply thickness,* $90°$ *ply thickness) on debond growth in cross-ply laminates. CZM-based works have addressed the effect of macroscopic features such as the thickness of the* $0°$ *and of the* $90°$ *ply, while microscopical effects such as the presence of neighboring fully bonded fibers or of other debonds where neglected due to the choice of adopting random distribution of fibers. Previous LEFM studies focused on both macroscopical (e.g. ply thickness) and microscopical (e.g. neighboring fibers and debonds), but with a very limited number of fibers (usually 2 or 6) embedded either in a infinite matrix or in homogenized material."*.
2	✔	2	Page 2. Introduction: lines 7, 11, 22, 27 and 35.	Erroneous ? seem to appear.	The question marks appear in an incomplete Latex compilation in the place of references, figures, tables and sections' numbers. They were likely caused by an error of the journal's Latex compiler as they were absent in the local version. If they appear again, check the pdf provided by the authors.
3	✔	2	Page 2. Introduction: line 9.	At the lamina level, the use should be At the lamina level the use	Corrected according to reviewer's suggestion.
4	✔	2	Page 3. Introduction: lines 6, 17, 18, 19, 38 and 40.	Erroneous ? seem to appear.	The question marks appear in an incomplete Latex compilation in the place of references, figures, tables and sections' numbers. They were likely caused by an error of the journal's Latex compiler as they were absent in the local version. If they appear again, check the pdf provided by the authors.
5	✔	2	Page 4. Introduction: lines 5, 9, 17, 18, 20, and 38.	Erroneous ? seem to appear.	The question marks appear in an incomplete Latex compilation in the place of references, figures, tables and sections' numbers. They were likely caused by an error of the journal's Latex compiler as they were absent in the local version. If they appear again, check the pdf provided by the authors.
6	✔	2	Page 6.	Equation (2): An extra dot at the end seems to appear.	Removed.
7	✔	2	Page 7. Line 21.	The following modification is proposed: the laminates are assumed to be SUBJECTED..	Modified according to reviewer's suggestion.
8	✔	2	RVE models & FE discretization: Figures 1 and 2.	Discontinuous vertical lines on the outer boundary should be desirable in order to reinforce the unlimited length of the model in the longitudinal (x) direction.	Modified according to reviewer's suggestion.

9	✔	2	RVE models & FE discretization: Figures 1 and 2.	How is real is to find horizontally aligned debonds in an actual cross ply composite (specially in the several rows model)? Is there any experimental base for this damage pattern? It could seem more realistic to consider vertically quasi-aligned debonds. Could the author envisage if the conclusions would be the same in this vertical pattern case?	A discussion of the choice of this configuration of debonds has been added to sub-section *Introduction & nomenclature* of section *RVE models & FE discretization.* For the sake of completeness, the added text is reported here as well. *"We thus study debonds aligned in the horizontal (loading) direction. The choice is motivated by our interest in understanding the mutual interaction between debonds in the loading direction, namely "crack shielding". As debonds represent nucleation sites for transverse cracks, analysis of debond interaction in the loading direction would help understanding if and under which condition transverse cracks can initiate. Furthermore, recent experimental studies of extremely thin-ply laminates show the suppression of transverse cracks but the occurrence of debonds in the* 90° *ply. Thus, although microscopical observations are still few, it seems possible that distributions of debonds along the horizontal (loading) direction might occur in this class of engineered materials."*.
10	✔	2	Page 7. Line 44.	RUC nomenclature $n \times k - m \cdot t_{90^{\circ}}$ seems a bit complicated specially when used in sections where different combinations are continuously referred (see for instance pages 13 and 14).	The choice of $n \times k - m \cdot t_{90^{\circ}}$ is motivated by the need to stress 1) the number of fibers in the horizontal direction (n), 2) the number of fibers in the vertical direction (k) and 3) the thickness of the 0° ply, which is a multiple (m) of the thickness of the 90° ply. Although the authors agree that the nomenclature adopted can at times make the reading of the text less "smooth" than intended, they still regard this choice of nomenclature as the best trade-off between meaning conveyed, clarity and length.
11	✔	2	Pages 8. Line 31.	$n = 1$ does not seem an actual case from transverse cracking point of view. Additional clarification for the use of this model is recommended.	A discussion of the choice $n = 1$ has been added to sub-section *Description of modelled Representative Volume Elements (RVEs)* of section *RVE models & FE discretization.* For the sake of completeness, the added text is reported here as well. *"... which represents an extreme idealization and corresponds to the state of maximum damage in the RVEs considered, in other words it would provide the minimum ERR available at the debond tip. This, in turn, makes it a very good candidate to study the effect of the presence of the* $0^{\circ}/90^{\circ}$ *interface and of the thickness of the* 0° *ply"*.
12	✔	2	Pages 9. Line 23.	Numbers of sections are missed.	Section numbers were missing due to a misuse of the Latex journal template (sections are unnumbered). Corrected by referring to titles.
13	✔	2	Finite Element (FE) discretization.	Since the properties employed are realistic and the results presented are not dimensionless it does not seem too logical to employ not real dimensions for the models (see for instance $R_f = 1\mu m$ or cell sizes). The complete use of realistic parameters could provide additional conclusions for the G results presented.	The choice $R_f = 1\mu m$ is already discussed in sub-section *Introduction & nomenclature*of section *RVE models & FE discretization.* The discussion has been extended by adding the following text: *"Given that in the present paper we compare trends between models having always* $R_f = 1\ \mu m$*, the conclusions proposed remain valid for different values of* R_f *as all the results would scale, in the context of LEFM, in the same way."*.

14	✔	2	Page 10. Line 41.	Should CUSTOM be CUSTOMER?	To avoid confusion, *"in a custom Python routine"* has been replaced by *"in a Python routine developed by one of the authors"*.
15	✔	2	Page 11. Line 46.	Should ALBEIT be ALTHOUGH?	Yes, indeed: *"albeit"* has been replaced with *"although"*.
16	✔	2	RESULTS and Discussion Section.	In addition to G_I and G_{II}, total G graphs seem necessary to compute global effects in all cases presented.	Results of G_{TOT} for a representative set of models ($21 \times k - 1t_{90^\circ}$) have been reported and discussed at the end of the section *Results & Discussion*. Furthermore, the choice of discussing only Mode I and Mode II ERR has been discussed and motivated. This discussion is reported here for completeness. *"Comparing Figure 12 with Figures 10 and 11 it is possible to observe that for smaller debonds ($\Delta\theta < 40^\circ - 50^\circ$), where $G_I > G_{II}$, the profile of G_{TOT} is very close to that of G_I, i.e. it is G_I-dominated; for larger debonds ($\Delta\theta > 50^\circ - 60^\circ$), where $G_I \rightarrow 0$, the profile of G_{TOT} is almost identical to that of G_{II}, i.e. it is $G_{II}-$dominated. Comparing total ERR between different RVE provides results analogous to those derived for G_I and G_{II}. These conclusions apply for every different RVE considered in the present work. Notice that G_{TOT} is relevant only in the determination of the maximum size of the debond, in which case it is compared with the value of a critical ERR G_c. If the exact expression of G_c for fiber/matrix debonding is still an open issue in the literature, there is common agreement on the fact that G_c depends on the mode ratio, which can be expressed as $\psi = \sqrt{\frac{G_{II}}{G_I}}$, in a proportional way, i.e. $G_c \sim G_{Ic}\left(1 + f\left(\psi\right)\right)$ where G_{Ic} is a material property and $f\left(\psi\right)$ is a monotonically increasing function of ψ. For Mode I dominated debonds, $\psi \rightarrow 0$ and thus $G_c \rightarrow \min\left(G_c\right)$; while for Mode II dominated debonds, $\psi \rightarrow \infty$ and thus $G_c \rightarrow \max\left(G_c\right)$: in other words, debond growth is favored when Mode I is dominant and prevented when Mode II is dominant. Thus, it is the analysis of G_I and G_{II} that provides the greatest insights into the mechanics of debond growth and it is for this reason that we decided to focus in this paper on the discussion of Mode I and Mode II ERR instead of the total ERR."*
17	✔	2	Pages 16. Line 22.	Number of section is missed.	Section numbers were missing due to a misuse of the Latex journal template (sections are unnumbered). Corrected by referring to titles.
18	✔	2	Pages 18. Lines 40 and 41.	Number of section is missed.	Section numbers were missing due to a misuse of the Latex journal template (sections are unnumbered). Corrected by referring to titles.