



SDI Review Form 1.6

Journal Name:	Current Journal of Applied Science and Technology
Manuscript Number:	Ms_CJAST_45332
Title of the Manuscript:	Aeroelastic analysis of an atypical geometry building by solving fluid-structure interaction problem through load transmission method
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:

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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	1. In [16], aeroelastic analyses were reported for the tall building CAARC. What would be the main improvements of this work compared to [16] (for example, faster computation, higher accuracy, simpler, etc)? Would the method proposed in [16] work for this atypical building model? Why is the method "suitable for structures under wind pressures that are not considered in the codes"? 2. LES is used for the turbulent simulation. It is not clear how the unresolved scales are modelled. Also, it is claimed that the method is applicable to any building's geometry. What does it mean? Is the work in [16] restricted to some structures only? 3. A more careful literature reviewed is needed. For example, recent developments of FSI need to be updated (lines 39-46). The references seem to be old. Many methods have been developed for turbulence simulations with advantages and disadvantages. Why LES is chosen? Direction time integration methods for structural dynamics need to be reviewed (for example, Hughes TJR 1987, Dokainish MA 1989, Subbaraj K 1989, Katsikadelis, J. 2014, etc). 4. Line 275-277: "For the CAARC model, 100s of analysis were performed, while, for the atypical geometry building, five seconds of analysis were performed". What is the reason behind? Is the flow fully developed in such the short time? 5. Line 376-377. "The methodology does not demand a great computational power, instead, the aeroelastic analysis does not require long computer time to finish once the pressures have been properly assigned". It is more interesting to report explicitly.	
Minor REVISION comments	1. The boundary conditions are not specified for numerical models. 2. Inconsistent notations: u and p are already used in Eqs. (1, 2) to indicate the velocity and pressure. In Eq. (3), u is used to indicate the displacement vector. What is p(t)? Also, the time derivatives are denoted differently between Eq. (2) and Eq. (3). 3. What is the time discretization for the Navier-Stokes? Reynolds number and the density are not specified. 4. Section 2.2 (Lines 84-113) does not have an optimal structure. There is no section 2.2.2, why is section 2.2.1 needed? It is the same for 2.2.1.1. 5. Misprints can be found at many places Abstract: ... and lead~~s~~ to... Line 21: ... depends main~~ly~~ on Line 48: ... can be summar~~ies~~... Line 193: ... wind~~d~~ velocities Line 199: ... by the following equation, Line 200: ~~no equation is given~~. 6. Line 84: "Numerical model" is switched suddenly to "An analytical model" (Line 86) 7. Section 3.1. It is recommended to have plots side-by-side when two methods are compared. 8. Line 130-132: References to the two fluid solvers are needed. The same for Sap2000 (line 145). 9. Line 183-189: What are the reasons behind the parameters? Can one choose larger or smaller virtual wind tunnel? 10. Line 280. Fig. 7. It can be interesting to see the velocity with turbulence as well. 11. The load transmission/transfer method needs to be better emphasized.	
Optional/General comments	The proposed method solves fluid model and the structure model separately by using the load transfer/transmission method. A scheme or a graphical abstract can describe the process better.	

PART 2:



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	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)
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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