# Article information:

An enhanced explicit&ndash;implicit time-marching formulation based on fully-adaptive time-integration parameters | Compendex
[https://www.engineeringvillage.com/app/doc/?docid=cpx\_M5b332a91849c00712fM5c1c1017816355=25=6=7068043969ac4680be8f93dc7e27ab9f=287249=resultslist=searchresults=Quick](https://www.engineeringvillage.com/app/doc/?docid=cpx_M5b332a91849c00712fM5c1c1017816355&pageSize=25&index=6&searchId=7068043969ac4680be8f93dc7e27ab9f&resultsCount=287249&usageZone=resultslist&usageOrigin=searchresults&searchType=Quick)

# Article summary:

1. A new explicit-implicit time-marching formulation is proposed that adapts to the model's attributes and its computational response.

2. Three simple one-step recursive relations are considered in this novel mixed-domain solution process, which consider three time integration parameters that are locally and adaptively computed.

3. Numerical results are presented at the end of the article, which demonstrate the excellent performance and effectiveness of the proposed technique for combining optimal features of both explicit and implicit formulations (e.g., reducing solver workload, ensuring stability).

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy as it provides a detailed description of a new explicit-implicit time-marching formulation based on fully adaptive time integration parameters for use in mechanics and engineering applications. The authors provide evidence for their claims by presenting numerical results at the end of the article that demonstrate the excellent performance and effectiveness of their proposed technique. Furthermore, they acknowledge financial support from various sources such as CNPq (National Council for Scientific and Technological Development), FAPEMIG (Minas Gerais State Constitution Rights Protection Foundation), CAPES (Coordination for Improvement of Higher Education Personnel), and FAPERJ (Rio de Janeiro State Research Support Foundation).

However, there are some potential biases in the article that should be noted. For example, while the authors present numerical results to support their claims, they do not provide any experimental data or real-world examples to further validate their findings. Additionally, there is no discussion about possible risks associated with using this technique or any unexplored counterarguments that could be made against it. Finally, while they acknowledge financial support from various sources, there is no mention of any potential conflicts of interest that may have influenced their research or conclusions.

# Topics for further research:

* Explicit-Implicit Time-Marching Formulation
* Adaptive Time Integration Parameters
* Mechanics and Engineering Applications
* Experimental Data Validation
* Risks of Using Technique
* Conflicts of Interest in Research

# Report location:

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