

Listă de lucrări

Lucian Constantin

2025

Articole de jurnal

- [1] Huaiyuan Gu, Fintan Healy, Lucian Constantin, Djamel Rezgui, Mark Lowenberg, Jonathan E. Cooper, Thomas Wilson, and Andrea Castrichini. Aeroelastic scaling of a high-aspect-ratio wing incorporating a semi-aeroelastic hinge. *AIAA Journal*, 62(8):2996–3008, 2024. DOI: 10.2514/1.J063646, WOS: 001203588200001.
- [2] Lucian Constantin, Brano Titurus, Thomas C.S. Rendall, Joe J. De Courcy, and Jonathan E. Cooper. Experimental analysis of liquid vertical slosh damping at vacuum and atmospheric pressures. *Journal of Sound and Vibration*, 574:118228, 2024. DOI: 10.1016/j.jsv.2023.118228, WOS: 001165462500001.
- [3] Joe J. De Courcy, Thomas C.S. Rendall, Lucian Constantin, Brano Titurus, and Jonathan E. Cooper. Incompressible δ -SPH via artificial compressibility. *Computer Methods in Applied Mechanics and Engineering*, 420:116700, 2024. DOI: 10.1016/j.cma.2023.116700, WOS: 001142655300001.
- [4] Lucian Constantin, Joe J. De Courcy, Brano Titurus, Thomas C.S. Rendall, and Jonathan E. Cooper. Fuel sloshing-induced effects on the dynamic response of a scaled research wing demonstrator. *Aerospace Science and Technology*, 140:108450, 2023. DOI: 10.1016/j.ast.2023.108450, WOS: 001036092900001.
- [5] Lucian Constantin, J. De Courcy, B. Titurus, T.C.S. Rendall, and J.E. Cooper. Nonlinear damping effects in vertically vibrating systems with violently sloshing liquid. *Journal of Sound and Vibration*, page 117405, 2022. DOI: 10.1016/j.jsv.2022.117405, WOS: 000891932800002.
- [6] Lucian Constantin, Joe J. De Courcy, Branislav Titurus, Thomas C. S. Rendall, Jonathan E. Cooper, and Francesco Gambioli. Effect of fuel sloshing on the damping of a scaled wing model: Experimental testing and numerical simulations. *Applied Sciences*, 12(15), 2022. DOI: 10.3390/app12157860, WOS: 000839262700001.

- [7] Lucian Constantin, J.J. De Courcy, B. Titurus, T.C.S. Rendall, and J.E. Cooper. Sloshing induced damping across Froude numbers in a harmonically vertically excited system. *Journal of Sound and Vibration*, 510:116302, 2021. DOI: 10.1016/j.jsv.2021.116302, WOS: 000694705100009.
- [8] Lucian Constantin, J. De Courcy, B. Titurus, T.C.S. Rendall, and J.E. Cooper. Analysis of damping from vertical sloshing in a SDOF system. *Mechanical Systems and Signal Processing*, 152:107452, 2021. DOI: 10.1016/j.ymssp.2020.107452, WOS: 000634845700004.

Articole de conferință

- [9] Huaiyuan Gu, Fintan Healy, Lucian Constantin, Djamel Rezgui, Mark Lowenberg, and Jonathan E. Cooper. Aeroelastic scaling of a high aspect ratio wing incorporating a semi-aeroelastic hinge. In *AIAA SCITECH 2024 FORUM*, 1801 ALEXANDER BELL DR, STE 500, RESTON, VA 20191-4344 USA, 2024. AIAA, AMER INST AERONAUTICS & ASTRONAUTICS. DOI: 10.2514/6.2024-0618, WOS: 001375901802017.
- [10] Irma Isnardi, John E. Mottershead, Lucian Constantin, Jonathan E. Cooper, Edoardo Menga, Francesco Gambioli, and Sebastiano Fichera. Application of the sensitivity updating methodology on a scaled research wing demonstrator. In *AIAA SCITECH 2024 Forum*. DOI: 10.2514/6.2024-2443, WOS: 001375995200019.
- [11] Joe De Courcy, Thomas C S Rendall, Branislav Titurus, Lucian Constantin, and Jonathan E Cooper. Artificial compressibility sph for fluid-structure-interaction problems. In *2023 International SPHERIC Workshop*, June 2023.
- [12] Lucian Constantin, Joe De Courcy, Branislav Titurus, Thomas C S Rendall, and Jonathan E Cooper. Nonlinear identification of transient tank vertical sloshing motions. In *Proceedings of ISMA2022 International Conference on Noise and Vibration Engineering*, September 2022.
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- [14] M. J. Gonzalez, Lucian Constantin, M. Pizzoli, L. Gonzalez, B. Titurus, J. E. Cooper, and G. Coppotelli. Overview of single degree of freedom experiments of vertical sloshing flows inside scaled tanks. In *International Forum on Aeroelasticity and Structural Dynamics IFASD, Madrid, Spain*, 2022.

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- [16] Lucian Constantin, Joe J. De Courcy, Branislav Titurus, Thomas Rendall, and Jonathan E. Cooper. Design and GVT of a dynamically scaled wing structure for fuel sloshing investigations. In *AIAA Scitech 2022 Forum*, 2022. DOI: 10.2514/6.2022-2133, WOS: 001409651300018.
- [17] Lucian Constantin, J J De Courcy, B Titurus, T C S Rendall, and J E Cooper. Statistical analysis of sloshing-induced dissipative energy across a range of froude numbers. *IOP Conference Series: Materials Science and Engineering*, 1226(1):012040, feb 2022. DOI: 10.1088/1757-899x/1226/1/012040.
- [18] Joe De Courcy, Lucian Constantin, Branislav Titurus, Thomas C S Rendall, and Jonathan E Cooper. Sloshing induced damping in vertically vibrating systems. In *IOP Conference Series*, volume 1024 of *IOP Conference Series: Materials Science and Engineering*. IOP Publishing, January 2021. DOI: 10.1088/1757-899X/1024/1/012084.
- [19] Joe J. De Courcy, Lucian Constantin, Branislav Titurus, T. Rendall, and Jonathan E. Cooper. Gust loads alleviation using sloshing fuel. In *AIAA Scitech 2021 Forum*, 2021. DOI: 10.2514/6.2021-1152, WOS: 001409500402025.
- [20] Lucian Constantin, Joe De Courcy, Branislav Titurus, Thomas C S Rendall, and Jonathan E Cooper. Sloshing fluid-structure interaction and induced damping effects: modelling and experimental analysis. In *Proceedings of ISMA2020 International Conference on Noise and Vibration Engineering*, pages 859–872, September 2020. WOS: 000652006001016.
- [21] Mihai Mihaila-Andres, Paul-Virgil Rosu, Ciprian Larco, Maria Demsa, Lucian Constantin, and Radu Pahonie. Preliminary design of aeroelastically tailored wing box structures with bend-twist coupling. *WSEAS Transactions on Applied and Theoretical Mechanics*, 14:1 – 7, 2019. DOI: 10.1051/itmconf/20192402010, WOS: 000473095100025.
- [22] Lucian Constantin, Ciprian-Marius Larco, Maria Demsa, and Paul-Virgil Rosu. Development of a genetic algorithm for aerodynamic shape optimization. In *International Conference of Aerospace Sciences “AEROSPATIAL 2018”*, 25 – 26 October 2018.
- [23] Benoit G. Marinus, Halimi Akila, Lucian Constantin, and Silviu Cracana. Effect of rotation on the 3d boundary layer around a propeller blade. In *23rd AIAA/CEAS Aeroacoustics Conference*. DOI: 10.2514/6.2017-3866.

Cărți și îndrumare de laborator

- [24] Lucian Constantin, Maria Casapu, and Paul-Virgil Roșu. *Vibrații mecanice cu aplicații în aeroelasticitate*. Academia Tehnică Militară 'Ferdinand I', București, 2025. ISBN 978-973-640-357-6.
- [25] Maria Casapu, Lucian Constantin, Ioana-Carmen Bogliș, and Mihai Mihăilă-Andres. *Fenomene fundamentale ale mecanicii fluidelor în instalații hidraulice : îndrumar de laborator*. Academia Tehnică Militară 'Ferdinand I', București, 2024. ISBN 978-973-640-345-3.
- [26] Daniel Măriuța, Lucian Constantin, and Paul-Virgil Roșu. *Fenomene fundamentale ale mecanicii fluidelor în instalații hidraulice : îndrumar de laborator*. Sitech, Craiova, 2022. ISBN 978-606-11-8332-6.

Lucrări de disertație

- [27] Lucian Constantin. *Experimental and numerical investigations in wing loads alleviation using fuel sloshing*. PhD thesis, University of Bristol, 2023. Link: <https://hdl.handle.net/1983/480d8b29-117d-43b8-9569-a506c25ac457>.
- [28] Lucian Constantin. Dezvoltarea unui algoritm de optimizare cu aplicații în ingineria aerospațială. Master's thesis, Academia Tehnică Militară, 2019.