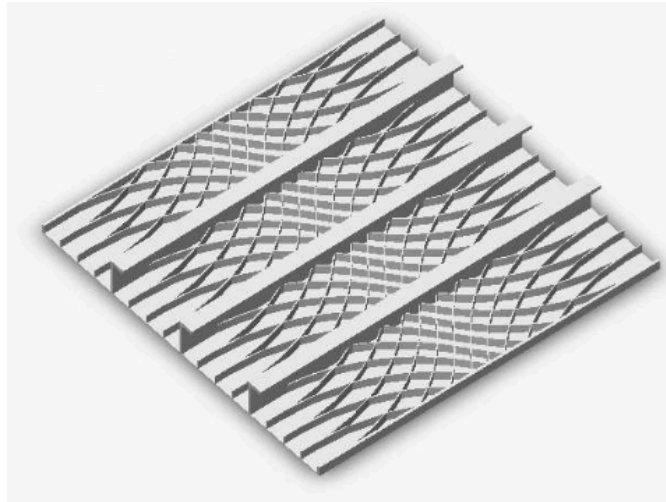




Professor Adrian Murphy



Orthogonally stiffened panel with variable stiffness sub-stiffened skin

From: Mustafa Özakça, Adrian Murphy, Sjoerd van der Veen, "Buckling And Post-Buckling Of Sub-Stiffened Or Locally Tailored Aluminium Panels", ICAS 2006, 25th International Congress Of The Aeronautical Sciences

See:
<https://scholar.google.com/citations?user=hM9X3aQAAAAJ&hl=ja>
[http://pure.qub.ac.uk/portal/en/persons/adrian-murphy\(2957bd69-51e3-479c-9329-327823dba2c8\).html](http://pure.qub.ac.uk/portal/en/persons/adrian-murphy(2957bd69-51e3-479c-9329-327823dba2c8).html)
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Biography:

Dr Adrian Murphy is a Senior Lecturer and Director of Research for the 'Aerospace and Manufacturing' research cluster at Queen's University Belfast. He has published over one hundred journal and conference articles, including a significant number on design and analysis methods for aircraft structures. He has supervised and co-supervised eight PhD projects to completion and managed EU and industrially funded projects [AIRBUS, Bombardier Aerospace, Constellium (previously ALCAN)], developing significant experimental validation of his work. A winner of the Thomas Hawksley medal in 2006 and the Kenneth Harris James Prize (2006) and SAGE Best Paper Award 2012 (Journal of Materials: Design and Applications), he has a reputation for excellence in research with impact to industry. He sits on the Royal Aeronautical Society Structures and Materials Specialist committee, the NAFEMS Multi-Physics Working Group, the ESDU Aerospace Structures Committee, and the IMechE Aerospace Materials & Structures Technical Activity Committee. Adrian joined the staff of Queen's in 2002; he has a Masters degree in Aerospace Vehicle Design from Cranfield University and an Aeronautical Engineering Bachelors degree and PhD from Queen's University Belfast.

Research Interests:

- . Structural analysis and optimization methods for thin-walled structures with new and novel materials and manufacturing processes
- . Structural Testing & Virtual Testing
- . Cost modeling for composite structures & complex assemblies

Selected Publications:

- A. Murphy, M. Price, P. Wang. The integration of strength and process modeling of friction-stir-welded fuselage panels. American Institute of Aeronautics and Astronautics, AIAA 2005-2026:1-15, 2005.
- C. Lynch, A. Murphy, M. Price, A. Gibson, "The computational post buckling analysis of fuselage stiffened panels loaded in compression", Thin-Walled Structures Vol. 43, No. 9, pp 1445-1464, September 2005
- Sjoerd van der Veen, Adrian Murphy, Rinze Benedictus. Post-buckling failure of welded aluminium panels. (Publisher/date not given)
- Mustafa Özakça, Adrian Murphy, Sjoerd van der Veen, "Buckling And Post-Buckling Of Sub-Stiffened Or Locally Tailored Aluminium Panels", ICAS 2006, 25th International Congress Of The Aeronautical Sciences
- A. Murphy, W. McCune, D. Quinn, M. Price. The characterization of friction stir welding process effects on stiffened panel buckling performance. Thin-Walled Structures, 45:339-351, 2007.
- D. Quinn, A. Murphy, W. McEwan and F. Lemaitre, "Stiffened panel stability behaviour and performance gains with plate prismatic sub-stiffening", Thin-Walled Structures, Vol. 47, No. 12, December 2009, pp. 1457-1468, doi:10.1016/j.tws.2009.07.004
- D. Quinn, A. Murphy, W. McEwan and F. Lemaitre, "Non-prismatic sub-stiffening for stiffened panel plates—Stability behaviour and performance gains", Thin-Walled Structures, Vol. 48, No. 6, June 2010, pp. 401-413, doi:10.1016/j.tws.2010.01.010
- D. Quinn, A. Murphy and C. Glazebrook, "Aerospace stiffened panel initial sizing with novel skin sub-stiffening features", International Journal of Structural Stability and Dynamics, Vol. 12, No. 5, October 2012, DOI: 10.1142/S0219455412500605
- Talha Ekmekyapar, A. Murphy, D. Quinn and Mustafa Ozakca, "Impact of finite element idealization on the prediction of welded fuselage stiffened panel buckling", Proceedings of the Institution of Mechanical Engineers, Part G, Journal of Aerospace Engineering, Vol. 230, No. 2, June 2015, DOI: 10.1177/0954410015591044
- G. Houston, D. Quinn, A. Murphy and F. Bron, "Wing Panel Design with Novel Skin-Buckling Containment Features", Journal of Aircraft, Vol. 53, No. 2 (2016), pp. 416-426. <http://dx.doi.org/10.2514/1.C033540>