



Dr. Carol A. Featherston

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BEng DPhil CEng FIMechE FRAeS
School of Engineering
Institute of Mechanical and Manufacturing Engineering
Cardiff University, UK

Reader

Aerospace Research Theme Leader
Director Postgraduate Research

Teaching Discipline: Mechanical, Manufacturing and Medical Engineering

Experience:

Industrial experience includes work in the Aeronautical, Process Plant Maintenance and Pressure Vessel Design Engineering industries.

Research interests include: buckling, postbuckling and instability (using experimental, FEA , and theoretical analysis techniques) and multi-level optimisation.

Professional Activities and Recognition:

- Invited Seminar: Tsinghua, China (2009).

- Invited Seminar: MSU, USA (2007).
- Editorial Board: STRAIN, Journal of BSSM.
- Session organiser and Chair: 13th ICEM, Greece (2007); 7th WCCM USA (2006).
- Scientific Boards: 13th ICEM, Greece (2007); BSSM International Conference on Advances in Experimental Mechanics, UK (2006).

Publications in Journals (2001 – 2012):

Damghani M, Kennedy D, Featherston C A, Critical buckling of delaminated composite plates using exact stiffness analysis, *Computers and Structures* , 89 (13-14) (2011) 1286-1294 ISBN/ISSN: 0045-7949
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May M, Pullin R, Eaton M, Featherston C A, Hallett S R, An advanced model for initiation and propagation of damage under fatigue loading - Part II: Matrix cracking validation cases, *Composite Structures* , 93 (II (9)) (2011) 2350-2357

Eaton M, Pullin R, Featherston C A, Holford K M., Acoustic Emission Source Characterisation in Large Scale Composite Structures, *Applied Mechanics and Materials* , 70 (2011) 381-386

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Featherston C A, Eaton M, Evans S, Holford K M, Pullin R, Cole M, Mechanical Impulse Effects Resulting from Lightning Attachment to Lightweight Aircraft Structures, *Applied Mechanics and Materials* , 24 - 25 (2010)

Featherston C A, Mortimer J, Eaton M, Burguete R, Johns R, The Dynamic Buckling of Stiffened panels - a Study using High Speed Digital Image Correlation, *Applied Mechanics and Materials* , 24 - 25 (2010)

Kennedy D, Featherston C A, Exact strip analysis and optimum design of aerospace structures, *The Aeronautical Journal* , 114 (1158) (2010) 505-512 ISBN/ISSN: 0001-9240

Eaton M, Pullin R, Holford K, Evans SL, Featherston CA, Rose A, Use of macro fibre composite transducers as acoustic emission sensors, *Remote Sensing* 2009 , 1 (2) (2009) 68-79 10.3390/rs1020068

Featherston CA, Holford KM, Waring G, Thermoelectric Energy Harvesting for Wireless Sensor Systems in Aircraft, *Key Engineering Materials*. , 413-414 (2009) 487-494 ISSN 0-87849-324-7
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Kim H A, Featherston C A, Ussel J, Williams P A, Butler R, Introducing a discrete modelling technique for buckling of continuous panels under combined loading, *Structural and Multidisciplinary Optimization* , 36 (1) (2008) 3-13

Featherston C A, Watson A, Multilevel Optimisation of Ply Lay-up in Composite Plates and Panels under Complex Load and Boundary Conditions, *Structural and Multidisciplinary Optimization* , 36 (1) (2008) 15-27

Eaton M, Holford KM, Featherston CA, Pullin R, Damage in carbon fibre composites: the discrimination of acoustic emission signals using frequency, *Journal of Acoustic Emission* , 25 (2007) 140-148 ISSN 0730-0050

Kennedy D, Fischer M, Featherston CA, Recent developments in exact strip analysis and optimum design of aerospace structures, *Proceedings of the Institution of Mechanical Engineers Part C: Journal of Mechanical Engineering Science* , 221 (2007) 399-413 ISSN 0954-4062

Bradshaw TP, Eaton M, Pullin R, Evans SL, Featherston CA, Determination of damage levels of composite plates after low velocity impacts using acoustic emission., *Advanced Materials Research* , 13-14 (2006) 253-258

Featherston C A, Watson A, Buckling of optimised curved composite plates under shear and in-plane bending, *Composites Science and Technology* , 66 (2006) 2878-2894 ISSN: 0266-3538
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Brandon J A, Featherston C A, Bifurcation behaviour in an experimental vibration-buckling test, *Strain* , 41 (3) (2005) 105-108 ISSN: 0039-2103

Evans S L, Featherston C A, Griffiths D R, Development of a low cost, durable, mixed waste plastic pallet, *CIWM Scientific and Technical Review* , 6(1) (2005) 4-13

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Featherston C A, Experimental buckling of a simple aerofoil under combined shear and in plane bending, *Proceedings of IMechE, Part C, Journal of Mechanical Engineering Science* , 218 (C) (2003) 1-18 ISSN 0954-4062 10.1243/095440604322886919

Featherston C A, Imperfection sensitivity of curved panels under combined shear and compression, *International Journal of Non-Linear Mechanics* , 38 (2) (2003) 225-238 ISSN: 0020-7462

Watson A, Kennedy D, Williams F W, Featherston C A, Buckling and vibration of stiffened panels or single plates with clamped ends, *Advances in Structural Engineering* , 6 (2003) 135-144 ISSN 1369-4332

Featherston C A, Lester W D, The use of automated projection interferometry to monitor the buckling behaviour of a simple aerofoil, *Experimental Mechanics* , 42 (3) (2002) 253-260 ISSN: 0014-4851

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McCartan S, Jones T B, Featherston C A, Brandon JA , Thermal sensitivity of strain failure mode in forming Linit diagram and development of thermal line analysis, *Ironmaking and Steelmaking* , 28 (1) (2001) 58-65 ISSN 0301-9233

Badham J A, Featherston C A, Brandon J A , An experimental study of the use of vibration testing to predict buckling failure, *Key Engineering Materials* , 204-205 (2001) 57-64 ISSN 1013-9826

Song C, Brandon J A, Featherston C A, Distributed-element Preisach model for hysteresis of shape memory alloys, *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science* , 215 (C) (2001) 673-682 ISSN 0954-4062