

Dr. Brendan Whittingham

Research Fellow



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Current Research

Working on projects sponsored by the CRC for Advanced Composite Structures (www.crc-accs.com.au). Development of an in-situ health monitoring system for detecting delamination in thick glass-fibre reinforced polymer composite ship structures and carbon fibre composite aerospace structures. Research into the implementation of commercially available Structural Health Monitoring systems into aircraft that are currently in-service. Methods for improving scarf repairs on composite aircraft components.

Research Interests

Advanced Composite Structures, Low Velocity Impact of Composite materials, In-situ Structural Health Monitoring, Vibration and Acoustic Analysis, Composite Repair Technologies, Finite Element Analysis, Environmental Engineering, Biomechanics.

Selected Publications

1. Whittingham, B., Marshall, I. H., Mitrevski, T. and Jones, R., 2004. "The response of composite structures with pre-stress subject to low velocity impact damage." *Composite Structures* 66: 685-689.
2. Mitrevski, T., Marshall, I. H., Thomson, R., Jones, R., Whittingham, B., 2005. "The effect of impactor shape on the impact response of composite laminates." *Composite Structures* 67: 139-148.
3. Whittingham, B., Chiu, W. K., Herszberg, I., Jones, M. and Li, H. C. H., 2005. "Disbond Detection in Composite Adhesively Bonded T-Joints Using Vibration Signatures." *Proceeding of the 45th Israel Annual Conference on Aerospace Sciences*, 23-24 February, 2005.
4. Whittingham, B., Chiu, W. K., Herszberg, I., and Li, H. C. H., Disbond detection in adhesively bonded composite structures using vibration signatures, *Composite Structures*, In Press, 2006.
5. Ding, Y., Chiu, W. K., Liu, X. L. and Whittingham, B., 2001. "Modelling of thermal response of oil-heated tools due to different flow rates for the manufacture of composite structures." *Composite Structures* 54: 477-488.
6. Jones, R., Whittingham, B. Marshall, I. H., 2002. "Bonded repairs to rib stiffened wing skins." *Composite Structures* 57: 453-458.
7. Whittingham, B., Li, H. C. H., Herszberg, I., Chiu, W. K., "CRC-ACS TM 05045 Delamination detect in glass-reinforced polymer beams using piezoelectric transducers." 2005.
8. Whittingham, B. Field, B., "CRC-ACS TM 06008 Scarf Repair of Composite Airframes." 2006.
9. Zhou, Z., Whittingham, B., Li, H. C. H., Bannister, M. Herszberg, I., "CRC-ACS TM 05093 Structural health monitoring systems selected for the TATEM program." 2006.
10. Whittingham, B. Field, B., "CRC-ACS TM 06008 Scarf Repair of Composite Airframes." 2006.