



*Failure Analysis Associates**

Henry Li, Ph.D.
Senior Engineer

Professional Profile

Dr. Henry Li is a Senior Engineer in Exponent's Mechanical Engineering practice. Dr. Li specializes in aerospace and mechanical engineering, with particular interest in structural design and analysis, composite materials, structural health monitoring, and fiber optic sensors. His experience includes design and analysis of aerospace structures; impact and fatigue testing of composite and metallic structures; fracture mechanics; composite-bonded repair for highly stressed structures; design, development and evaluation of structural health monitoring systems; and static and dynamic finite element modeling.

Prior to joining Exponent, Dr. Li worked as a Research Fellow at the Cooperative Research Centre for Advance Composite Structures in Melbourne, Australia. He was involved in a large number of projects in the areas of health monitoring for composite structures, design and evaluation of composite bonded repairs, mechanical characterization of composite materials, and finite element modeling.

Academic Credentials and Professional Honors

Ph.D., Engineering, Royal Melbourne Institute of Technology, Australia, 2005

B.S., Aerospace Engineering, Royal Melbourne Institute of Technology (Honors 1st Class),
2001

B.A., Business Administration, Royal Melbourne Institute of Technology (with distinction),
2001

Languages

Chinese

Publications

Li HCH, Herszberg I, Mouritz AP, Dharmawan F. Fracture modelling of composite marine T-joint. ANZIAM 2007; 47:C682–C694.

Li HCH, Beck F, Dupouy O, Herszberg I, Stoddart PR, Davis CE, Mouritz AP. Strain-based health assessment of bonded composite repairs. J Compos Struct 2006; 76(3):234–242.

Whittingham B, Li HCH, Herszberg I, Chiu WK. Disbond detection in adhesively bonded composite structures using vibration signatures. J Compos Struct 2006; 75(1–4):351–363.

Li HCH, Callus PJ, Herszberg I. Through thickness reinforcement repair of delaminated carbon-epoxy panels. J Compos Struct 2006; 75(1–4):539–544.

Li HCH, Dharmawan F, Herszberg I, John S. Fracture behaviour of composite maritime T-joints. J Compos Struct 2006; 75(1–4):339–350.

Li HCH, Herszberg I, Davis CE, Mouritz AP, Galea SC. Health monitoring of marine composite structural joints using fibre optic sensors. J Compos Struct 2006; 75(1–4):321–327.

Li HCH, Herszberg I, Mouritz AP. Automated characterisation of structural disbonds by statistical examination of bondline strain distribution. Struct Health Monit 2006; 5(1):83–94.

Herszberg I, Li HCH, Dharmawan F, Mouritz AP, Nguyen M, Bayandor J. Damage assessment and monitoring of composite ship joints. J Compos Struct 2005; 67:205–216.

Dharmawan F, Thomson RS, Li HCH, Herszberg I, Gellert E. Geometry and damage effects in a composite marine T-joint. J Compos Struct 2004; 66:181–187.

Li HCH, Weis M, Herszberg I, Mouritz AP. Damage detection in a fibre reinforced composite beam using random decrement signatures. J Compos Struct 2004; 66:159–167.

Li HCH, Herszberg I, Mouritz AP, Davis CE, Galea SC. Sensitivity of embedded fibre optic Bragg grating sensors to disbonds in bonded composite ship joints. J Compos Struct 2004; 66:239–248.

Book Chapters

Mrad N, Li HCH. Optical fiber sensors. In: Smart Materials. Schwartz M (ed), CRC Press, Boca Raton, 2008. ISBN: 9781420043723.

Presentations

Li HCH, Herszberg I, Davis CE, Stoddart PR. Composite scarf repair monitoring using fibre bragg grating sensors. SPIE Annual Conference on Smart Structures and Materials and NDE for Health Monitoring and Diagnostics, San Diego, CA, 2007.

Li HCH, Dupouy O, Herszberg I, Stoddart PR, Davis CE, Mouritz AP. Health Monitoring of bonded composite repairs using fibre optic sensors. SPIE Annual Conference on Smart Structures and Materials and NDE for Health Monitoring and Diagnostics, San Diego, CA, 2006.

Li HCH, Herszberg I, Mouritz AP. Detection of structural damage by statistical examination of strain distribution. 11th Australian International Aerospace Congress, Melbourne, Australia, 2005.

Li HCH, Herszberg I, Mouritz AP. Strain distributions due to disbonds in composite ship joints. 4th Australasian Congress on Applied Mechanics, Melbourne, Australia, 2005.

Li HCH, Herszberg I, Davis CE, Mouritz AP. Disbond detection in bonded composite ship joints using embedded bragg grating sensors. 2nd Australasian Workshop on Structural Health Monitoring, Monash University, Melbourne, Australia, 2004.

Li HCH, Davis CE, Herszberg I, Mouritz AP, Galea SC. Application of fibre optic bragg grating sensors for the detection of disbonds in bonded composite ship joints. 2nd European Workshop on Structural Health Monitoring, Munich, Germany, 2004.

Li HCH, Weis M, Herszberg I, Mouritz AP. Damage detection in a fibre reinforced composite beam using random decrement signatures. 2nd European Workshop on Structural Health Monitoring, Munich, Germany, 2004.

Li HCH, Davis CE, Herszberg I, Mouritz AP, Galea SC, Thomson RS. Application of fibre optic strain sensors for the health monitoring of adhesively bonded composite ship joints. 4th International Workshop on Structural Health Monitoring, Stanford University, CA, 2003.

Prior Experience

Research Fellow, Royal Melbourne Institute of Technology / Cooperative Research Centre for Advanced Composite Structures, 2005–2008

Professional Affiliations

- Engineers Australia
- Australian Composite Structures Society (Past Melbourne Chapter Chairman)
- Golden Key International Honor Society