



Stephen Tsai

Professor (Research) of Aeronautics and Astronautics, Emeritus

 Curriculum Vitae available Online

CONTACT INFORMATION

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Bio

BIO

Professor Tsai's research interest is in the development of design methodology of composite materials and structures. As an emerging technology, composite materials offer unique performances for structures that combine light weight with durability. Keys to the successful utilization of composite materials are predictability in performance and cost effective design of anisotropic, laminated structures. Current emphasis is placed on the understanding of failure modes, and computer simulation for design and cost estimation.

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Aeronautics and Astronautics
- Member, Cardiovascular Institute

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, National Academy of Engineering (1995 - present)

Publications

PUBLICATIONS

- **Smart cure of thick composite filament wound structures to minimize the development of residual stresses** *EUROMECH 453 Colloquium on Internal Stresses in Polymer Composite Processing and Service Life*
Lee, D. H., Kim, S. K., Lee, W. I., Ha, S. K., Tsai, S. W.
ELSEVIER SCI LTD.2006: 530-37
- **Three decades of composites activities at US Air Force Materials Laboratory** *COMPOSITES SCIENCE AND TECHNOLOGY*
Tsai, S. W.
2005; 65 (15-16): 2295-2299
- **Time- and temperature-dependent failures of a metal-to-composites bonded joint with PMMA adhesive material** *JOURNAL OF COMPOSITE MATERIALS*
Sihn, S., Miyano, Y., Nakada, M., Tsai, S. W.
2003; 37 (1): 35-54
- **A progressive quadratic failure criterion, part B** *COMPOSITES SCIENCE AND TECHNOLOGY*

Kuraishi, A., Tsai, S. W., Liu, K. K.
2002; 62 (12-13): 1683-1695

- **PECVD silicon carbide as a chemically resistant material for micromachined transducers** *9th International Conference on Solid-State Sensors and Actuators*
Flannery, A. F., Mourlas, N. J., Stormont, C. W., Tsai, S., Tan, S. H., Heck, J., Monk, D., Kim, T., Gogoi, B., Kovacs, G. T.
ELSEVIER SCIENCE SA.1998: 48-55
- **A progressive quadratic failure criterion for a laminate** *COMPOSITES SCIENCE AND TECHNOLOGY*
Liu, K. S., Tsai, S. W.
1998; 58 (7): 1023-1032
- **Obituary: Late Professor Tsuyoshi Hayashi** *ADVANCED COMPOSITE MATERIALS*
Hoff, R., Springer, G. S., Tsai, S. W.
1998; 7 (3): 217-218
- **Analysis and behavior of grid structures** *COMPOSITES SCIENCE AND TECHNOLOGY*
Huybrechts, S., Tsai, S. W.
1996; 56 (9): 1001-1015
- **SCHOOLING TAIWAN WOMEN - EDUCATIONAL-ATTAINMENT IN THE MID-20TH CENTURY** *Meeting of the Research-Committee-on-Social-Stratification of the International-Sociological-Association*
Tsai, S. L., Gates, H., Chiu, H. Y.
AMER SOCIOLOGICAL ASSOC.1994: 243-63