



Professor Hisao Fukunaga

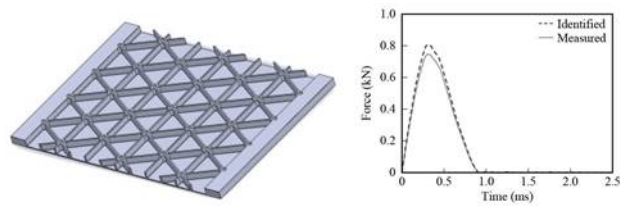


Fig.1 Impact force identification of isogrid stiffened panels.

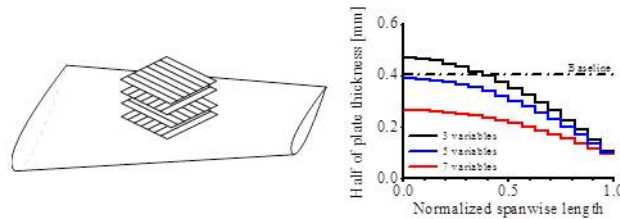


Fig.2 Optimum design of CFRP wing structures.

See:
http://db.tohoku.ac.jp/whois/e_detail/6d7078f20eb73ffa7a6dee26832a4dff.html
<http://www.mech.tohoku.ac.jp/e/labs/detail.php?cid=10&pid=460>
<http://db.tohoku.ac.jp/whois/view?l=en&u=6d7078f20eb73ffa7a6dee26832a4dff&c=8&k=&dm=&sf=&o=&p=7>

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Research Subjects:

Optimum Design of Composite Structures(1990-)
Damage Identification of Composite Structures(2001-)
Modelling and Optimization of Light Weight Structures(2000-)

Selected Publications:

H. Fukunaga and M. Uemura, "Optimum design of helically wound Composite pressure vessels," Journal of Composite Structure, vol. 1, pp. 31, 49, 1983.

H. Fukunaga and T. W. Chou, "Simplified design techniques for laminated cylindrical pressure vessels under stiffness and strength constraints," Journal of Composite Mat., vol. 22, pp. 1157-1169, 1988.

H. Fukunaga and G. N. Vanderplaats, "Stiffness optimization of orthotropic laminated composites using lamination parameters," AIAA journal, vol. 29, no. 4, pp. 641-646, 1991

Fukunaga, H. and Sekine, H. "A laminate design for elastic properties of symmetric laminates with extension-shear or bending- twisting coupling". Journal of Comp. Mat., Vol. 28, No. 8, pp. 708-731, 1994.

H. Fukunaga, H. Sekine, M. Sato, and A. Iino, "Buckling design of symmetrically laminated plates using lamination parameters," *Computers & Structures*, vol. 57, no. 4, pp. 643–649, 1995.

Ning Hu, Hisao Fukunaga, Hideki Sekine, Kouchakzadeh Mohammad Ali, "Compressive buckling of laminates with an embedded delamination", *Composites Science and Technology* Vol. 59, 1999, pp. 1247-1260, doi: S0266-3538(98)00166-3

Hu, N., Fukunaga, H., Lu, C., Kameyama, M., and Yan, B., Prediction of elastic properties of carbon nanotube reinforced composites. DOI: 10.1098/rspa.2004.1422

M. Kameyama and H. Fukunaga, "Optimum design of composite plate wings for aeroelastic characteristics using lamination parameters," *Computers & Structures*, vol. 85, no. 3–4, pp. 213–224, Feb. 2007.

Ning Hu, Kazuhiko Nunoya and Hisao Fukunaga, "Compressive Instability of Carbon Nanotubes", *Key Engineering Materials* Vols. 353-358 (2007) pp. 2187-2190

N. Hu, K. Nunoya, D. Pan, T. Okabe and H. Fukunaga, "Prediction of buckling characteristics of carbon nanotubes", *International Journal of Solids and Structures*, Vol. 44, No. 20, October 2007, pp. 6535-6550, doi:10.1016/j.ijsolstr.2007.02.043