



**Professor Mohammad Tawfik**

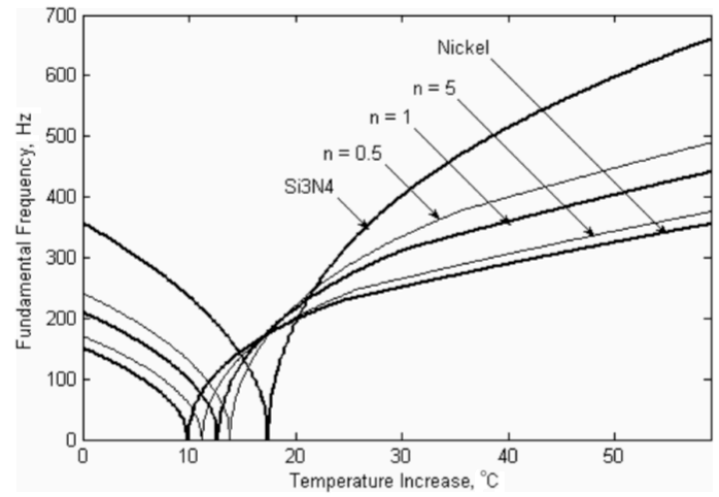
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<https://scholar.google.com/citations?user=8SU00eQAAAAJ&hl=th>  
[https://www.researchgate.net/profile/Mohammad\\_Tawfik](https://www.researchgate.net/profile/Mohammad_Tawfik)

Aerospace Engineering, Zewail University of Science and Technology, Egypt  
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**Selected Publications:**

Bin Duan, Mohammad Tawfik, Sylvain N. Goek, Jeng-Jong Ro and Chuh Mei, "Analysis and control of large thermal deflection of composite plates using shape memory alloy", Proceedings of SPIE – The International Society for Optical Engineering, June 2000  
 Bin Duan, Mohammad Tawfik, Sylvain N. Goek, Jeng-Jong Ro and Chuh Mei, "Vibration of laminated composite plates embedded with shape memory alloy at elevated temperatures", Proceedings of SPIE – The International Society for Optical Engineering, June 2000  
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 M. Tawfik, J. J. Ro, C. Mei, 'Thermal post-buckling and aeroelastic behaviour of shape memory alloy reinforced plates' Smart Mater. Struct. 11 (2002): 297-307



**Fig. 5 Natural frequencies in the prebuckled and postbuckled regions for different volume fraction exponents  $n$ .**

From: Ibrahim, H. H., Tawfik, M., and Al-Ajmi, M., "Thermal Buckling and Nonlinear Flutter Behavior of Functionally Graded Material Panels," Journal of Aircraft, Vol. 44, No. 5, 2007, pp. 1610–1618.

Mohammad Tawfik, "Vibration control of plates using periodically distributed shunted piezoelectric patches, Ph.D. Thesis, 2003

M. Tawfik and A. Baz, "Experimental and spectral finite element study of plates with shunted piezoelectric patches", *International Journal of Acoustics and Vibration*, June 2004

Ibrahim, H. H., Tawfik, M., and Al-Ajmi, M., "Aero-Thermo-Mechanical Characteristics of Functionally Graded Material Panels with Temperature-Dependent Material Properties," *Proceedings of the 8th International Congress of Fluid Dynamics and Propulsion (ICFDP 8)*, American Society of Mechanical Engineers, ICFDP-EG-116, 2006.

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Mohammed A. Al-Ajmi and Mohammad Tawfik, "Modal analysis and control of adaptive structures with shear piezoelectric actuators", *The 13th International Congress on Sound and Vibration (ICSV13)*, Vienna, Austria, July 2-6, 2006

Mohammad Tawfik, "A spectral finite element model for thin plate vibration", *14th International Congress on Sound and Vibration (ICSV14)*, Cairns, Australia, 9-12 July, 2007

Ibrahim, H. H., Tawfik, M., and Al-Ajmi, M., "Random response of functionally graded material plates subject to white-Gaussian noise and thermal environment", *ECCOMAS Thematic Conference on Computational Methods in Structural Dynamics and Earthquake Engineering*, Retbymno, Crete, Greece, 13-16 June 2007

Ibrahim, H. H., Tawfik, M., and Al-Ajmi, M., "Thermal Buckling and Nonlinear Flutter Behavior of Functionally Graded Material Panels," *Journal of Aircraft*, Vol. 44, No. 5, 2007, pp. 1610–1618.

Hesham H. Ibrahim, Mohammad Tawfik, Hani M. Negm and Hong Hee Yoo, "Nonlinear flutter of shape memory alloy hybrid composite panels subject to thermal and random acoustic loads", *15th International Congress on Sound and Vibration (ICSV15)*, Daejeon, Korea, 6-10 July 2008

Ibrahim, H. H., Tawfik, M., and Al-Ajmi, M., "Non-Linear Panel Flutter for Temperature-Dependent Functionally Graded Material Panels", *Computational Mechanics*, Vol. 41, No. 2, 2008, pp. 325–334.

Shaker, A., Abdelrahman, W. G., Tawfik, M. and Sadek, E. [2008] " Stochastic finite element analysis of the free vibration of laminated composite plates," *Computational Mechanics* 41(4), 493–501.

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Hossam T. Badran, Mohammad Tawfik and Hani M. Negm, "Improving wing aeroelastic characteristics using periodic design", *Advances in Aircraft and Spacecraft Science*, Vol. 4, No 4, pp 469-485, 2017

Kamal Hassan, Ehab Ali and Mohammad Tawfik, "Finite Elements for the One Variable Version of Mindlin-Reissner Plate", *Latin American Journal of Solids and Structures*, Vol. 17, No. 6, 299, 2020