



Professor Ahmed A. A. Khdeir

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Mechanical Engineering Department
King Saud University, Kingdom of Saudi Arabia

Education:

1986 – Ph.D. Engineering Mechanics, Virginia Polytechnic Institute and State University (VPISU)

1982 – M.Sc. Engineering Mechanics, VPISU

1981 – B.Sc. Civil Engineering, University of Jordan, Amman, Jordan

Career:

2002 – present: Professor, Dept. of Mechanical Engineering, King Saud University, Saudi Arabia

1998 – 2002 Associate Professor, Dept. of Mechanical Engineering, King Saud University

1997 – 1998 Associate Professor, Dept. of Civil Engineering Birzeit University, Palestine

1992 – 1997 Assistant and Associate Professor, Dept Civil Engineering, Middle East Technical University, Ankara, Turkey

1989 – 1990 Assistant Professor Dept. of Mechanical Engineering, Kuwait University Kuwait

1987 – 1989 Assistant Professor, Dept. of Engineering Science and Mechanics, VPISU

Research Interests:

Theories of plates, shells, beams and arches of laminated composites & higher-order theories;

Thermoelastic behavior of composite structures;

Stochastic and dynamic response of laminated composite structural systems;

Vibrations and nonlinear oscillations of continuous and discrete systems: analytical and numerical;

Elastic stability of composite structures;

Piezoelectric smart materials and structures.

Selected publications:

- "Thermoelastic Response of Cross-Ply Laminated Shells based on a Rigorous Shell Theory", A. A. Khdeir, Journal of Thermal Stresses, Vol. 35, No. 11, November 2012, pp. 1000-1017.
- "Comparative Dynamic and Static Studies for Cross-Ply Shells Based on a Deep Thick Shell Theory", Ahmed Adel Khdeir, International Journal of Vehicle Noise and Vibration, Vol. 7, No. 4, Dec. 2011, pp.306-327.
- "Exact Analysis for Static Response of Cross Ply Laminated Smart Shells", A. A. Khdeir and O. J. Aldraihem, Composite Structures, Vol. 94, No. 1, Dec. 2011, pp. 92-101.
- "Analysis of Smart Cross-Ply Laminated Shells with Shear Piezoelectric Actuators", A. A. Khdeir and O. J. Aldraihem, Smart Materials and Structures, Vol. 20, No. 10, Oct. 2011, 105030
- "Thermally Induced Vibrations of Cross-Ply Laminated Shallow Shells", A. A.Khdeir, Acta Mechanica, Vol. 151, 2001, pp. 135-147
- "Thermal Buckling of Cross-Ply Laminated Composite Beams", A. A. Khdeir, Acta Mechanica, Vol. 149, 2001, pp. 201-213
- "Analysis of the Dynamic Response of Cross-Ply Laminated Shallow Shells with Various Boundary Conditions", A. A. Khdeir, Journal of King Saud University (Engineering Sciences), Vol. 12, 2000, pp. 85-115
- "Buckling of Cross-Ply Laminated Beams with Arbitrary Boundary Conditions", A. A. Khdeir and J. N. Reddy, Composite Structures, Vol. 37, 1997, pp. 1-3
- "Thermoelastic Analysis of Cross-Ply Laminated Circular Cylindrical Shells", A. A. Khdeir, International Journal of Solids and Structures, Vol. 33, 1996, pp. 4007-4017
- "A Remark on the State-Space Concept Applied to Bending, Buckling and Free Vibration of Composite Laminates", A. A. Khdeir, Computers and Structures, Vol. 59, 1996, pp. 813-817
- "Dynamic Response of Cross-Ply Laminated Circular Cylindrical Shells with Various Boundary Conditions", A. A. Khdeir, Acta Mechanica, Vol. 112, 1995, pp. 117-134
- "Dynamic Response of Cross-Ply Shallow shells with Levy-Type Boundary Conditions", A. A. Khdeir, American Institute of Aeronautics and Astronautics Journal, Vol. 32, 1994, pp. 2484-2486
- "Influence of Edge Conditions on the Modal Characteristics of Cross-Ply Laminated Shells", A. A. Khdeir and J. N. Reddy, Computers and Structures, Vol. 34, 1990, pp. 817-826
- "On the Transient Response of Cross-Ply Laminated Circular Cylindrical Shells", A. A. Khdeir, J. N. Reddy and D. Frederick, International Journal of Impact Engineering, Vol. 9, 1990, pp. 475-484
- "Buckling and Vibration of Laminated Composite Plates Using Various Plate Theories", J. N. Reddy and A. A. Khdeir, American Institute of Aeronautics and Astronautics Journal, Vol. 27, 1989, pp. 1808-1817

"A Study of Bending, Vibration and Buckling of Cross-Ply Circular Cylindrical Shells with Various Shell Theories", A. A. Khdeir, J. N. Reddy and D. Frederick, International Journal of Engineering Science, Vol. 27, 1989, pp. 1337-1351

"Comparison Between Shear Deformable and Kirchhoff Theories for Bending, Buckling and Vibration of Antisymmetric Angle-Ply Laminated Plates," A. A. Khdeir, Composite Structures, Vol. 13, 1989, pp. 159-172

"Dynamic Response of Cross-Ply Laminated Shallow Shells According to a Refined Shear Deformation Theory", J. N. Reddy and A. A. Khdeir, The Journal of the Acoustical Society of America, Vol. 85, 1989, pp. 2423-2431

"Stability of Antisymmetric Angle-Ply Laminated Plates", A. A. Khdeir, ASCE, Journal of Engineering Mechanics Division, Vol. 115, 1989, pp. 952-962

"Free Vibration and Buckling of Unsymmetric Cross-Ply Laminated Plates Using a Refined Theory", A. A. Khdeir, Journal of Sound and Vibration, Vol. 128, 1989, pp. 377-395

"A Shear Deformable Theory of Laminated Composite Shallow Shell-Type Panels and Their Response Analysis-Part I. Free Vibration and Buckling", L. Librescu, A. A. Khdeir and D. Frederick, Acta Mechanica, Vol. 76, 1989, pp. 1-33

"A Shear Deformable Theory of Laminated Composite Shallow Shell-Type Panels and Their Response Analysis-Part II. Static Response", A. A. Khdeir, L. Librescu and D. Frederick, Acta Mechanica, Vol. 77, 1989, pp. 1-12

"Free Vibration and Buckling of Symmetric Cross-Ply Laminated Plates by an Exact Method", A. A. Khdeir, Journal of Sound and Vibration, Vol. 126, 1988, pp. 447-461

"Analysis of Symmetric Cross-Ply Laminated Elastic Plates Using a Higher-Order Theory- Part II. Buckling and Free Vibration", A. A. Khdeir and L. Librescu, Composite Structures, Vol. 9, 1988, pp. 259-277.

"Aeroelastic Divergence of Swept Forward Composite Wings Including Warping Restraint Effect", L. Librescu and A. A. Khdeir, American Institute of Aeronautics and Astronautics Journal, Vol. 26, 1988, pp. 133-137