



Professor Ozden O. Ochoa

See:

<http://engineering.tamu.edu/mechanical/people/ochoa-ozden>

TEES Research Professor
Department of Mechanical Engineering
Texas A & M University

Education:

Ph.D., Mechanical Engineering, Texas A&M University, 1980
M.E., Nuclear Engineering, Texas A&M University, 1977
B.S., Mechanical Engineering, Bogazici University (Robert College), Turkey, 1976

Research Interests:

Dr. Ochoa's research expertise is focused on integrating computational and experimental mechanics to address material and structural characterization of fiber-reinforced polymer and ceramic matrix composites, and multi-functional carbon foams. Her significant research contributions are widely recognized in design and mechanics of composite materials-structures in aerospace, offshore, and automotive applications.

Awards & Honors:

Fellow of American Society for Composites
Fellow of American Society of Mechanical Engineers
Wayne Stinchcomb Award and memorial Lecture, ASTM Committee D-30, 2012
Composites Award, American Society for Composites 2005

TAMU Look College of Engineering Fellow, 2003-2004
Dean W.R. Woolrich "Engineer of the Year" Award ASME South Texas Section, 2003
U.S. National Committee on Theoretical and Applied Mechanics, 2002-2006
ASME Dedicated Service Award, 2000
Conoco CEA Award, 1997 and 1998
TEES Research Fellow, 1997
Texas A&M University, Mechanical Eng. Academy of Distinguished Graduates, 1997
Texas A&M University International Excellence Award, 1993
Texas A&M University Honors Program Teacher/Scholar Award, 1991
ASME Petroleum Division OTCE Service Award, 1992, 1993
Pi Tau Sigma, Phi Kappa Phi, Sigma Xi, Member

Experience:

Army Research Laboratory, Adelphi, Md:
Associate Director For Science And Technology, Ipa 9/2011-Present

Texas A&M University
Department Of Mechanical Engineering
Professor Emeritus And Tees Senior Research Professor 9/11-Present
Professor, 9/92-8/11, Associate Professor, 9/86-8/92, Assistant Professor, 9/80-8/86
Materials, Mechanics & Manufacturing Division Leader, 9/96-8/97
Accelerated Bs/Ms Program Advisor, 9/92-8/01
Office Of Graduate Studies, Vice President For Research And Graduate Studies Associate Dean, 9/02-8/07
Tamu-Ut Nsf Offshore Technology Research Center Structures & Materials Thrust Area Leader, 9/93-8/00

Afrl/Air Force Office Of Scientific Research, Arlington, Va
Director Of Aerospace Sciences And Materials, Ipa 7/05-8/06

Afrl/Mlbc Wright Patterson Afb, Dayton, Oh
Senior Scientist For Composites Branch, Ipa 7/03-6/05

Nato Science For Peace Program, Brussels, Belgium
Consultant, 6/99-12/05

Afosr, Directorate Of Aerospace Sciences And Materials, Washington, D.C.
Mechanics And Materials Program Manager, 9/97-8/99

Bell Helicopter Textron Inc., Fort Worth, Tx
Research Structures Division, Senior Specialist, 1/86-1/87

Abet,
Program Evaluator, Mechanical Engineering, 2002-Present

American Society Of Mechanical Engineers
Candidate For President, 6/09 (Not Elected)
Board Of Governors, 7/05-6/08
Council On Engineering
Vice President For Board On Communications, 7/01 -6/04
Task Force Implementation Committee, Member, 9/01 - 3/02
Budget Committee, 8/01 - 6/04
International Congress Planning Committee, Chair, 6/97-6/01
Aerospace Division

Executive Committee (Chair: 7/99-6/00), Member, 97-Present

Structures & Materials Committee (Chair: 7/95-6/97), Member, 89-Present

Public Affairs Programs-Government Relations

Inter-Council Committee On Federal R&D, Member, 1/98 - 12/00

American Society For Composites

Executive Committee, Past President, 1/08-12/11

President, 1/06-12/07

Vice President, 1/04-12/05

Executive Committee, Member At Large, 9/99-8/01

International Conference On Composite Materials (Iccm) Executive Council

President, 7/2011-Present

Senior Vice President, 7/09-6/2011

Vice President-Americas, 7/05-6/09

Member At Large, 7/01-6/05

Editorial Board

Journal Of Composite Materials

Reviewer:

Journal of Composite Materials, Int. Journal of Composite Science and Technology, Journal of Composite Structures, Int. Journal of Computational Mechanics, Int. Journal of Solids and Structures, Int. Journal of Nonlinear Mechanics, Journal of Sound and Vibration, Journal of Mechanics of Composite Materials and Structures, AIAA, ASM, ASTM, ASME, ARO, NSF, AFOSR, ONR, CFI-Canada, NSERC-Canada

Teaching And Graduate Student Advising:

Classes: Elasticity, Composite Materials, Energy Methods, Mechanics of Materials, Statics, Dynamics, Engineering Design I, II and III – capstone design studios

Advising: Served as the committee chair for thirty-five graduate students who specialized in computational and experimental mechanics of composites. Mentored numerous honors program university fellows and served as advisor for undergraduate theses.

University Service, 1999-Present:

MEEN Post Tenure Review Committee, member, 2009 – 2010

AERO Department Head Search Committee, member 2008-2009

MEEN Tenure and Promotion Committee; member, 2007-2008; chair, 2009

MEEN Design Faculty Search Committee, chair, 12/06-08/08

COE Material Science and Engineering Program Review task force, 01/07-06/07

International Programs Enhancement Committee , member, 8/02 –8/03

Council of Principal Investigators, member, 7/01 - 8/03

MEEN Honors Nomination Committee, 8/01 - 8/03

Phi Kappa Phi Executive Committee, 9/01-8/03

Honors Program and University Fellows Programs Committee, 9/90-8/02

Sigma Xi Long Range Planning Committee, 5/00-5/01

Search Committee Member, MEEN Department Head , 6/01- 5/02

College of Engineering Scholars Program, Advisor, 9/89–8/01

Search Committee Member, Offshore Technology Research Center Director, 5/00-5/01

Mechanical Engineering Department, Advisory Committee, 8/99 - 8/01

Search Committee Chair, Executive Director for University Honors Program, 10/99-6/00

Selected Publications:

Books:

Proceedings of the 15th Annual Technical Conference of American Society for Composites Ochoa, O. O., Sue, H. J., Lagoudas, D and O'Brien, K., editors, Technomic, 2000, ISBN No. 1-58716-052-8

Finite Element Analysis of Composite Laminates, O. O. Ochoa and J. N. Reddy Kluwer Academic Publishers, 1992, ISBN 0-7923-1125-6

Papers:

Chouchaoui, C. S., and Ochoa, O. O., "Similitude Study for Laminated Cylindrical Tube under Tension, Torsion, Bending, Internal & External Pressure; Part I: Governing Equations", Composite Structures, 44/4, 1999, pp.221- 229.

Chouchaoui, C. S., and Ochoa, O. O., "Similitude Study for Laminated Cylindrical Tube under Tension, Torsion, Bending, Internal and External Pressure; Part II: Scale Models", Composite Structures, 44/4, 1999, pp.231-236.

Eason, T. G., and Ochoa, O. O., "Modeling Progressive Damage in Composites: A Shear Deformable Element for ABAQUS", Composite Structures, 34, 1996, pp. 119-128.

Ochoa, O. O., "Hybrid Composite Tubes for Offshore Applications", Revue de L'Institut Francais du Petrole, 1, 1995, pp. 97-104.

Guynn, E. G., Ochoa, O. O., and Bradley, W. L., "A Parametric Study of Variables that Affect Fiber Microbuckling Initiation in Notched Composite Laminates: PART I: Analysis, PART II: Experiments", J. of Composite Materials, 26, No. 11, 1992, pp. 1594-1643.

Guynn, E. G., Ochoa, O. O., and Bradley, W. L., "Analysis of Fiber Microbuckling in Thermoplastic Composites", Int. Journal of Non-Linear Mechanics, 27, No.6, 1992, pp.1039-1047.

Ochoa, O. O., and Roschke, P., "Damage Tolerance of Composite Tubes under Compressive Loading", Composite Structures, 19, 1991, pp. 1-14.

Walsh, T. J., and Ochoa, O. O., "Characterization of Stiffened Panels with Cutouts", Computational Mechanics'91 Theory and Applications, 1991, pp. 776-771.

Ochoa, O. O., Engblom, J. J., and Tucker, R. D., "A Study of the Effects of Kinematic and Material Characteristics on the Fundamental Frequency Calculations of Composite Plates," Journal of Sound and Vibration, 101(2), 1985, pp. 141-148.

- Kozma, F. K., and Ochoa, O. O., "Buckling of Composite Plates Using Shear Deformable Elements", AIAA Journal, 24, 1986, pp. 1721-1723.
- Guynn, E. G., Bradley, W. L., Ochoa, O. O., and Whitcomb, J.D., "A Comparison of Experimental Observations and Numerical Predictions for the Initiation of Fiber Microbuckling in Notched Composite Laminates", Composite Materials: Fatigue and Fracture, ASTM STP, 1989
- Nanami, N., and Ochoa, O.O., "Vibration and Dynamic Response of Hybrid Wind Turbine Blades", ASC 25th Annual Technical Conference, University of Dayton, OH, September, 2010.
- Kim, W. K., Ochoa, O. O., Ward, E. G. & Miller, C. A., "Structural Response of Composite Production Risers," 4th International Conference on Composite Materials for Offshore Operations, Houston, TX, October 4-6, 2005.
- Sarzynski, M., and Ochoa, O. O., "Carbon Foam Core Sandwich Beams: Flexure Response", The Fourth Canadian-International Composites Conference, Ottawa, Canada, August 2003.
- Ochoa, O. O., and Rodriguez, D., "Flexure Behavior of Composite Spoolable Tubes", Proceedings of 21st International Conference on Offshore Mechanics and Arctic Engineering, ID 28263 Oslo, Norway, June 2002.
- Rodriguez, D. E., and Ochoa, O. O., "Influence of Geometry, Lay-up, and Material on the Radius of Curvature of Spoolable Composite Tubulars", Proceedings of 16th Technical Conference of American Society for Composites, Paper ID 209, Blacksburg, Virginia, September 2001.
- Ochoa, O. O., "Unrealized Potential of Composites in Offshore Applications", Proceedings of 13th International Conference on Composite Materials, Paper ID 1686, Beijing, China, June 2001.
- Ochoa, O. O., and Judice, D., "Composite Spoolable Tubulars", Proceedings of the 9th US-Japan Conference on Composite Materials, Mishima, Japan, July 2000, pp. 513-520.
- Farivar-Sadri, K., and Ochoa, O. O., "Optimization of Composite Tubes for Offshore Applications", Proceedings, Ninth Technical Conference of the American Society for Composites, 1994, pp. 850-857.
- Eason, T., and Ochoa, O. O., "Incorporation of a Shear Deformable Element into ABAQUS to Model Composite Structures", 35th SDM Conference, 1994, Vol. 2, pp. 1144-1154.
- Ochoa, O. O., Kozma, F., and Engblom, J. J., "Stability Analysis of Composite Plates", Proc. of First International Symposium of Computational Mechanics, 1986, Tokyo, Japan, pp. 22.ix.