



# RESUME OF MARK C. LOBO, PhD

## SUMMARY

Mechanical engineer with 15 years of thermal, structural and fluid dynamic analysis experience in the manufacturing, construction and aerospace industries. Research and development for new product design in cutting-edge technologies such as composite flywheels and solar power applications. Finite element analysis for forensic applications in the manufacturing and construction industries.

## PROFESSIONAL EXPERIENCE

**MDE Inc. – Seattle, WA** (2000 to Present)  
Associate Engineer

**NovaComp Engineering, Inc. – Seattle, WA** (1993 to Present)

Vice-President and thermal-fluid analysis specialist – Thermal, structural and fluid dynamic analysis for a broad range of applications. These have included forensic investigations of structural members and flow of water in piping systems; new product design in cutting-edge technology fields such as composite materials and fuel cells; troubleshooting problems in and improving existing product designs and processes; product design, evaluation and optimization for aerospace structural applications. Customer technical support representative for MARC, a leading non-linear finite element software product for simulation of physical processes. Computer-controlled data acquisition and processing. Major clients in recent years include The Boeing Company, the MSC Software Corp., Aerojet, GE and General Dynamics.

**University of Washington – Seattle, WA** (1991 and 1994)

Instructor – Introductory freshman-level FORTRAN programming course (1991) and sophomore-level Engineering Statics (1994) offered by the College of Engineering as part of pre-engineering curriculum.

## EDUCATION & TRAINING

B. Tech. Mechanical Engineering, Indian Institute of Technology, Bombay (1984)

M.S. Mechanical Engineering, Mississippi State University (1986)

Ph. D Mechanical Engineering, University of Washington, Seattle (1994)

## PUBLICATIONS & PRESENTATIONS

“FEA Modeling Techniques for Centrifugally Loaded Filament Wound Flywheels,” with Juhlin, N.F. and Bowler, M.E., presented at the MARC 25th Anniversary International Users Conference, Monterey, CA, Oct. 7-8, 1996.

“Use of the Discrete Maximum Principle in Finite-Element Analysis of Combined Conduction and Radiation in Nonparticipating Media,” with A.F. Emery, Numerical Heat Transfer, Part B, Vol. 27, pp. 447-465, 1995.

“A Study of Finite-Element Thermal Radiation Analysis Using the Discrete Maximum Principle,” Ph.D. dissertation, University of Washington, Seattle, WA, 1994.

“The Discrete Maximum Principle in Finite Element Thermal Radiation Analysis,” with A.F. Emery, Numerical Heat Transfer, Part B, Vol. 24, pp. 209-227, 1993.

“A Comparative Study of Methods for Computing the Diffuse Radiation Viewfactors for Complex Structures,” with A.F. Emery, O. Johansson, and A. Abrous, ASME Journal of Heat Transfer, Vol. 113, No. 2, pp. 413-422, 1991.

