



Exponent[®]
Engineering & Scientific Consulting

Bernard Ross, Ph.D., P.E.

Chairman Emeritus & Principal Engineer
149 Commonwealth Drive | Menlo Park, CA 94025
(650) 688-7200 tel | brross@exponent.com

Professional Profile

Dr. Ross specializes in heavy equipment failure analysis, crane, hoist and aerial devices accident investigation, mechanical and structural system assessment, machine design and guarding issues, product design review, and aviation accident reconstruction. His research expertise includes structural analysis, vibration and impact studies, fracture mechanics, explosion dynamics, and stability performance. Dr. Ross has drawn upon this background and experience to direct a variety of research projects and failure investigations dealing with agricultural, construction, industrial, and marine machinery problems; equipment control modeling; high-speed ground transportation studies; and ice-hydraulic structure interaction.

Prior to founding Failure Analysis Associates, Dr. Ross was employed as a mechanical-structural engineer in the aircraft industry by General Dynamics, Canadair, and McDonnell Douglas. He was also an engineering program manager at Stanford Research Institute from 1965-1970. Dr. Ross currently serves Stanford University as a Consulting Full Professor in the School of Engineering, where he teaches a successful graduate course titled, "Techniques of Failure Analysis." He travels internationally, lecturing on the topic of failure analysis and accident investigation. Dr. Ross has published more than 50 technical papers in peer-reviewed international journals and conference proceedings. He has been invited to present more than 135 seminars, lectures, and talks before university audiences, trade groups, engineering society meetings, insurance and claims agents conferences, and attorney-state bar organizations.

Academic Credentials & Professional Honors

Ph.D., Aeronautical Engineering, Stanford University, 1965

M.Sc., Aeronautical Engineering, Stanford University, 1959

B.M.E., Mechanical Engineering, Cornell University, 1957

Certificate of Advanced Engineering Study (Mechanical Engineering) Cornell University

NSF Post Graduate Program (Advanced Engineering Mechanics), Brown University, 1968

Research Fellow, Office National de Recherches Aérospatiales (ONERA), Paris

Visiting Professor, Graduate School of Civil Engineering, University of Santa Clara

Consulting Professor, School of Engineering, Stanford University

Advanced Fracture Mechanics Short Course, Etech, Pasadena, CA, 1995

Licenses and Certifications

Licensed Professional Mechanical Engineer, California, #ME15637

Prior Experience

Senior Research Engineer and Program Manager, Stanford Research Institute (SRI), 1965-1970

Vibration and Dynamics Engineer, Supersonic Concorde Project, ONERA, France, 1960

Stress Analyst, Douglas Aircraft Company, 1959

Structural Test Engineer, Canadair Division, General Dynamics Corp., 1956

Professional Affiliations

American Society of Mechanical Engineers (member)

Society of Automotive Engineers (member)

American Society of Safety Engineers (member)

National Society of Professional Engineers (member)

American Institute of Aeronautics and Astronautics (member)

American Society of Mechanical Engineers Design Engineering Division, Stress Analysis and Failure Prevention Committee (member)

Languages

French

Spanish

German

Italian