

# **Dr. John D. Stevenson**

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## **BRIEF PROFESSIONAL PROFILE**

Dr. John D. Stevenson is a Senior Consultant of Ghiocel Predictive Technologies Inc. and the Manager of the Cleveland OH Office. Dr. Stevenson has over 35 years experience in the structural-mechanical design of potentially hazardous facilities in the nuclear, petrochemical and biomedical industries. Dr. Stevenson is a pioneer in the development of reliability-based and risk-informed design and optimization of structural systems.

Dr. Stevenson developed one of the first applications of probability of failure objective functions to the optimum design of structures and mechanical systems and components. His experience includes optimum design of blast resistant shelters and as the Manager of Structural Systems Engineering for Westinghouse Atomic Power Division was responsible for risk analysis and extreme load design criteria for 6 Westinghouse turnkey nuclear power plant construction projects.

Between 1981 and 1995 Dr. Stevenson acted as President and Senior Consultant to a 5 office consulting engineering firm specializing in extreme load (seismic, wind, explosive blast and accident) analysis of nuclear and petrochemical facilities worldwide. Since 1989 he has served as an outside expert to the Defense Nuclear Facility Safety Board having responsibility for safety review of construction and operability of the U.S. Department of Energy nuclear weapons material and waste processing and storage facilities. He has served as a consultant to the General Accounting Office on evaluation of safety of liquefied natural gas storage facilities.

Dr. Stevenson has also acted as a technical expert for the International Atomic Energy Agency since 1975. He has participated in more than 50 IAEA missions associated with extreme load design of nuclear facilities primarily in developing countries and development of IAEA extreme load design safety standards.

Dr. Stevenson was awarded a Ph.D. in Civil Engineering from Case Western Reserve University in 1968. He is a member of Codes and Standards Organizations sponsored by:

- American Society of Civil Engineers, former of Nuclear Standard Committee
- American Society of Mechanical Engineers
- American Nuclear Society
- American Concrete Institute
- American Institute of Steel Construction
- International Atomic Energy Agency

Dr. Stevenson published more than 100 papers and gave many invited talks at large corporations and national Labs, including Oakridge, Lawrence Livermore, Argonne, Los Alamos and International Conferences and Agencies including IAEA and SMiRT conferences.

In 1981 he published as a Chair Editor the reference book for nuclear industry on “Structural Analysis and Design for Nuclear Facilities” by ASCE. In 1991 Dr. Stevenson received several prestigious awards of ASCE and ASME as a national recognition of his professional accomplishments.