

PETER I. YANEV – C.V.

PROFESSIONAL EXPERIENCE

Peter Yanev has 42 years of experience in natural hazards risk management and engineering, including earthquake, hurricane, flood, and tsunami risk engineering worldwide.

Mr. Yanev co-founded EQE International, Inc. in 1981 as the first earthquake risk engineering and risk management company, and grew the company to 750 professionals by 2001. As Chairman and as President of EQE, he led the company to its former preeminent position as the **world's largest provider** of technical services, software products and information for the quantification and management of property, operational and business risk covering earthquake, hurricanes, floods, tsunami, and other hazards. EQE was also one of the largest structural engineering companies in the United States and the largest provider of earthquake engineering, risk (PRA, PSA), and related services to industry. He opened and directed most of the company's 30 offices throughout the Americas, Europe, Asia and the Pacific. He also led EQECAT to its position as a leading provider of consulting services to the property/casualty insurance and financial services industries while **co-creating one of the world's first significant catastrophe analysis software models**.

Mr. Yanev's corporate clients include or have included about 85 of the 100 largest companies worldwide - power and energy, industrial, high-tech, biotech, finance, insurance and others. His clients also include government organizations in North and South America, Europe, Asia and the Pacific.

He has led and contributed to numerous World Bank earthquake and natural hazards projects, including the Istanbul Seismic Risk Mitigation Project (ISMEP) in Turkey, and projects in Romania, Bulgaria, Albania, China, the Philippines, Mexico and Central America. The ISMEP project has completed the strengthening and new construction of about 1,000 school, hospital, and government buildings in Istanbul.

Mr. Yanev has conducted about 50 field investigations of earthquakes (including the recent M8.8 Chile and M9.0 Japan earthquakes) and directed more than 50 additional field earthquake investigations (see below). He has also investigated over twenty large windstorms and floods.

Mr. Yanev has managed and participated in numerous projects in North America, Europe, Asia, South and Central America, and the Pacific. He has consulted in the evaluation, analysis, design, testing, and retrofit of new, operating and experimental **nuclear power plants** and other nuclear facilities, buildings of all types, manufacturing plants, power, utility and transportation systems, and industrial facilities since 1970. He has performed a great deal of work on power, transportation, communication and other lifeline facilities such as hospitals, industrial complexes, high-technology and manufacturing facilities, oil refineries, and commercial buildings. He has worked extensively on portfolio risk analysis and risk abatement programs for corporate clients and international organizations and governments.

Mr. Yanev co-originated the **U.S. Earthquake Experience Database** (also known as the SQUG and EPRI Databases), an exhaustive inventory of building, systems and equipment performance in earthquakes throughout the world gathered in over 100 earthquakes and used particularly in the nuclear power industry (originally through the Seismic Qualification Utility Group, or SQUG). He proposed and then managed the technical side of the SQUG project from 1981 through the mid-1990s for the development of alternative methodologies for the seismic qualification of operating equipment and components in nuclear power plants, based on direct experience with earthquakes. The project **saved several billion dollars worth of unnecessary analyses and testing** and dramatically shortened the duration of the originally scheduled work. He also participated in numerous nuclear Probabilistic Risk Analyses (PRAs) worldwide, starting with earthquake (external) events analyses and culminating with EQE's purchase in 1997 of Pickard, Lowe, and Garrick (PLG) Inc., a leading international engineering and applied science consulting firm.

His many research projects in earthquake engineering, risk analysis, and damage prediction have been sponsored by the National Science Foundation, the U.S. Geological Survey, the U.S. Federal Emergency Management Agency, the California Emergency Management Agency, the California Earthquake Authority, the U.S. Department of State, the U.S. Department of Energy, the International Atomic Energy Agency, Electric Power Research Institute, the World Bank, the United Nations, the European Union, the Governments of the UK, France, Japan, China, Bulgaria, Italy, Germany and other countries and international agencies.

From the late 1970s through 1981, Mr. Yanev developed the original methodology used in the Earthquake Risk Management Program, which is the basis for the current **Yanev Strategic Natural Hazards Risk Management™ Process**. Versions of his original methodology have been employed by several hundred major corporations, organizations, and government entities to evaluate and reduce earthquake risks to their facilities and properties. Mr. Yanev also introduced the concept of **Probable Maximum Loss (PML)** into earthquake risk analysis.

Mr. Yanev has served as a consultant to insurance and finance industries since 1973. In this capacity he has helped companies assess their catastrophe exposure and improve their individual risk underwriting capabilities. He has worked with senior management and corporate boards, underwriters, loss control engineers and claims adjusters in helping them develop the expertise needed to effectively and efficiently manage their exposure, including FM Global among others. This includes all aspects of catastrophe property risk underwriting, risk transfer and risk securitization. Mr. Yanev is also involved in the development and **proper use of catastrophe modeling software** for the insurance and capital markets industries. He is a frequent lecturer to risk management industry groups (including RIMS) and governments worldwide on the effects of natural disasters, the lessons learned, and natural disaster risk management strategies.

Mr. Yanev has published extensively in the field of earthquake engineering and risk assessment and reduction, including the best-selling book *Peace of Mind in Earthquake Country*, which was re-published in 2009 in its third edition. He has been involved in public and professional education through numerous television programs, a column in the San Francisco Chronicle, op-eds in major newspapers, and as a visiting Professor at Stanford University. He is Past-Founding President of the Northern California Chapter of the Earthquake Engineering Research Institute.

PROFESSIONAL HISTORY

Yanev Associates – Founder

San Francisco & Los Angeles, CA; New York, N.Y.; Charlotte, NC; Istanbul, Turkey
2001 - Present

The World Bank – Senior Consultant in Earthquake Engineering and Risk Management

Washington D.C., USA, 1992 – Present

Various Companies

Director of several engineering companies in Earthquake and Risk Engineering, Risk Management, Disaster Mitigation, and Structural Engineering
2001 – Present

EQE Inc. and EQECAT Inc. – Co-Founder, Chairman, President

San Francisco, California, 1981-2001
(Including **PLG Inc.** from 1997-2001); Sold in 2000 to ABS Group.

URS/John A. Blume – Manager/Nuclear Projects, Vice President

San Francisco, CA
1974-1981

Bechtel Power Corporation – Civil/Structural Engineer
San Francisco, CA
1970-1974

EDUCATION

Massachusetts Institute of Technology: M.S. Structural (Earthquake) Engineering, 1970
University of California, Berkeley: B.S. Civil (Structural) Engineering, 1968

RECENT ACADEMIC AND PROFESSIONAL ACTIVITIES

Mr. Yanev also served on several academic boards, including most recently:

- Visiting Committee of the Earth, Atmospheric and Planetary Sciences Department of the Massachusetts Institute of Technology (MIT), Cambridge, Massachusetts
- Visiting Committee of the Civil and Environmental Engineering Department of MIT
- The Advisory Council of the Civil and Environmental Engineering Department of the University of California, Berkeley

Mr. Yanev has also served on the boards of several corporations and professional societies.