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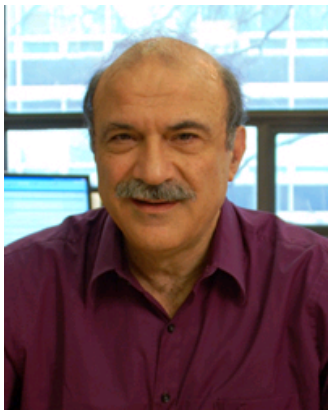

George E. Apostolakis

Professor of Nuclear Science and Engineering, and
Professor of Engineering Systems (Emeritus)

apostola@mit.edu
617-252-1570
617-258-8863 (fax)
24-221

Education

Diploma, Electrical Engineering, National Technical University, Athens, Greece, 1969
M.S., Engineering Science, California Institute of Technology, 1970
Ph.D., Engineering Science and Applied Mathematics,
California Institute of Technology, 1973

Research Interests

Methods for probabilistic risk assessment of complex technological systems; risk management involving several stakeholder groups; decision analysis, human reliability models; organizational factors and safety culture; software dependability; risk-informed, performance-based regulation; risk assessment and management of terrorist threats.

Teaching Interests

Probability and its Applications to Risk Assessment and Reliability; Risk-Benefit Analysis; Nuclear Reactor Safety.

Other Professional Activities

- Editor-in-Chief, *Reliability Engineering and System Safety* , An International Journal, Elsevier Science Publishers, England
- Founder and Secretary, International Association for Probabilistic Safety Assessment and Management
- Member, Advisory Committee on Reactor Safeguards (Chairman, 2001-2002), U.S. Nuclear Regulatory Commission
- Member, International Nuclear Technology Commission of the Federal States of Baden-Württemberg, Bavaria, and Hesse,Germany
- Member of the Editorial Boards of the journals *Process Safety and Environmental Protection*, Transactions of The Institution of Chemical Engineers, Part B (1991-Present); and *Risk Analysis*, An International Journal (1997-Present).
- Director, *Risk-Informed Operational Decision Management*, A Short Course for Utility Managers Sponsored by MIT and INPO, 1997-Present.
- Lecturer and member of the organizing committee, NASA Probabilistic Risk Assessment (PRA) Workshop for Managers and Practitioners, 2001.
- Technical Program Chairman, International Topical Meeting on Probabilistic Safety Assessment, Detroit, Michigan, October 6-10, 2002, American Nuclear Society.
- Chairman, NASA Peer Review Panel for the International Space Station Probabilistic Risk Assessment, 2002.

Honors and Awards

- Mark Mills Award, American Nuclear Society, 1974.
- Outstanding Service Award, Society for Risk Analysis, 1991.

Headlines

Prof. George Apostolakis sworn in as Commissioner of NRC

NRC

- Fellow, American Nuclear Society, 1992.
- Fellow, Society for Risk Analysis, 1992.
- Tommy Thompson Award, Nuclear Installations Safety Division, American Nuclear Society, 1999.
- The Ruth and Joel Spira Award for Distinguished Teaching, MIT School of Engineering, 2005.
- Arthur Holly Compton Award in Education, American Nuclear Society, ("for developing innovative ways to educate students and professional engineers in the art and science of probabilistic risk assessment"), 2005.
- Member, National Academy of Engineering, for "Innovations in the theory and practice of probabilistic risk assessment and risk management" (elected in 2007).

Selected Recent Publications

1. Fong, C.J., Apostolakis, G.E., Langewisch, D.R., Hejzlar, P., Todreas, N.E., and Driscoll, M.J., "Reliability Analysis of a Passive Cooling System using a Response Surface with an Application to the Flexible Conversion Ratio Reactor," Nuclear Engineering and Design, 239: 2660–2671, 2009.
2. Elliott, M.A., and Apostolakis, G.E., "Application of Risk-Informed Design Methods to select the PSACS Ultimate Heat Sink," Nuclear Engineering and Design, 239:2654–2659, 2009.
3. Li, H., Apostolakis, G.E., Gifun, J., VanSchalkwyk, W., Leite, S., and Barber, D., "Ranking the Risks from Multiple Hazards in a Small Community," Risk Analysis, 29:438-456, 2009.
4. Buongiorno, J., Hu, L.W., Apostolakis, G., Hannink, R., Lucas, T., and Chupin, A., "A Feasibility Assessment of the Use of Nanofluids to enhance the In-vessel Retention Capability in Light-water Reactors," Nuclear Engineering and Design, 239: 941–948, 2009.
5. Patalano, G., Apostolakis, G.E., and Hejzlar, P., "Risk-informed Design Changes in a Passive Decay Heat Removal System," Nuclear Technology, 163:191-208, 2008.
6. Koonce, A.M., Apostolakis, G.E., and Cook, B.K., "Bulk Power Grid Risk Analysis: Ranking Infrastructure Elements According to their Risk Significance," International Journal of Electrical Power and Energy Systems, 30:169-183, 2008.
7. Mackay, F.J., Apostolakis, G.E., and Hejzlar, P., "Incorporating Reliability Analysis into the Design of Passive Cooling Systems with an Application to a Gas-cooled Reactor," Nuclear Engineering and Design, 238:217-228, 2008.