Seminar 1:
Performance-Based Design for Life Safety

In this seminar, an overview will be provided of analysis methods applied to support performance based design, where an assessment of the interaction of people with fire is needed. The seminar will involve 3 principal components: tenability analysis, human response to fire, and evacuation analyses. The discussion on tenability analysis will include an overview of tenability limits and calculations methods. An array of evacuation analysis methods will be presented, ranging from computations involving only algebraic equations to computer simulations. Related to the evacuation analysis discussion will be a presentation of basic people movement characteristics (needed as input for any of the calculations). All of the discussions on analysis methods will include an overview of input sources and confidence levels in the computations. Trends observed from a compilation of research studies in human behavior research will also be presented.

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James A. Milke, P.E., is a Professor and Chair of the Department of Fire Protection Engineering at the University of Maryland. He received his Ph.D. in Aerospace Engineering, a M.S. degree in Mechanical Engineering, and a B.S. degree in Fire Protection Engineering from the University of Maryland. In addition, he has earned a B.S. degree in Physics from Ursinus College. Dr. Milke has served as a Research Fire Prevention Engineer at the Building and Fire Research Laboratory, National Institute of Standards and Technology, and as a Fire Protection Engineer for Fairfax County, Virginia.

Dr. Milke is a Fellow of the Society of Fire Protection Engineers and a past president. He is also a member of the National Fire Protection Association, as well as the UL Fire Council, and the International Association of Fire Safety Science.