

# CURRICULUM VITAE

**James A. Milke**

Notarization: I have read the following and certify that this curriculum vitae is a current and accurate statement of my professional record.



March 23, 2023

## **1. PERSONAL INFORMATION**

### **a. Rank and Affiliation**

Fall 2008      Professor, Department of Fire Protection Engineering

### **b. Education**

Doctor of Philosophy, 1991

Aerospace Engineering, University of Maryland, College Park

Thesis Title: Structural Integrity of Composites under Load and Thermal Insult

Master of Science, 1981

Mechanical Engineering, University of Maryland, College Park

Thesis Title: Modeling of the Structural Response of Materials to Heating and Loading

Bachelor of Science, 1976

Fire Protection Engineering, University of Maryland, College Park

Bachelor of Science, 1974

Physics, Ursinus College, Departmental Honors

### **c. Experience, Department of Fire Protection Engineering, University of Maryland**

2020-present    Chair

2011-2020      Interim Chair

2009-2011     Director, Distance Program

2008-present   Professor

2005-2009     Co-Director, Distance Program

2001-2011     Associate Chair

2001            Acting Chair

1997-2008     Associate Professor

1992-1997     Assistant Professor

1981-1991     Lecturer

1977-1981     Research Assistant

### **d. Experience, Other Full-time**

1976-1977 Fire Protection Engineer, Fire Marshal's Office, Fairfax County, Virginia.  
1975 Engineering Technician, Goddard Space Flight Center, NASA, Greenbelt, MD.

#### **e. Part-time Appointments**

1982-1985 Research Fire Prevention Engineer, Center for Fire Research, National Bureau of Standards, Gaithersburg, MD.  
1979-present Instructor, Open University, University of Maryland, College Park, MD  
1978-1981 Instructor, Engineering Technology - Fire Science, University of Maryland, College Park and Catonsville, MD  
1977-1978 Lecturer, Fire Science Department, Northern Virginia Community College, Annandale, VA  
1977 Lecturer, Fire Science Department, Prince Georges Community College, Upper Marlboro, MD  
1970-1978 Paid & Vol. Firefighter, Collegeville, PA, Cherry Hill, NJ, College Park, MD.

#### **d. Registration**

Professional Engineer, State of Delaware, #6236 (1983 - present)

#### **e. Awards**

- 1988, First recipient of Director's Award, Society of Fire Protection Engineers, for service on Engineering Education Committee
- 1994, E. Robert Kent Outstanding Teaching Award, A. James Clark School of Engineering, University of Maryland
- 1995, John J. Ahern President's Award, Society of Fire Protection Engineers
- 1996, Harry C. Bigglestone Award, for best paper in Volume 31 (1995) of *Fire Technology*
- 1999, Best Paper for ICFRE2, with S. Hill and J. Quintiere
- 2000, Harry C. Bigglestone Award, for best paper in Volume 35 (1999) of *Fire Technology*
- 2002, Harry C. Bigglestone Award, for best paper in Volume 37 (2001) of *Fire Technology*
- 2002, Harold E. Nelson Award, Society of Fire Protection Engineers
- 2006, Faculty Service Award, A. James Clark School of Engineering, University of Maryland
- 2007, Founders Award, Chesapeake Chapter of SFPE
- 2007, Outstanding Gemstone Mentor Award, University of Maryland
- 2007, Jack Bono Engineering Communications Award, Society of Fire Protection Engineers
- 2009, John L. Bryan Mentoring Award, Society of Fire Protection Engineers
- 2012, 2011 Person of the Year, Automatic Fire Alarm Association
- 2013, Ronald K. Mengel Award for best paper at 2013 Suppression, Detection and Signaling Research and Applications Symposium
- 2016, Arthur B. Guise Medal, Society of Fire Protection Engineers
- 2017, ASHRAE 2016 Technical Paper Award

- 2018, Fire Industry Leadership Award, Siemens Building Technology Division
- 2021, Harmathy Award, for best paper in Volume 56 (2020) of *Fire Technology*
- 2022, Best Paper Award 2021, Editor's Choice for best paper in Volume 56 (2020) of *Fire Technology*

## RESEARCH, SCHOLARLY AND CREATIVE ACTIVITIES

(names of UMD student co-authors are underlined, main author indicated by \*)

### a. Books

#### i. Books authored

1. Klote, J.H.\* and **Milke J.A.**, Design of Smoke Management Systems, 1992, American Society of Heating, Refrigerating and Air-Conditioning Engineers, Atlanta.
2. Klote, J.H.\* and **Milke, J.A.**, Principles of Smoke Management, 2002, American Society of Heating, Refrigerating and Air-Conditioning Engineers, Atlanta.
3. J.H. Klote, **J.A. Milke**, P.G. Turnbull, A. Kashef, and M.J. Ferreira, *Handbook of Smoke Control Engineering*, 2012, American Society of Heating, Refrigerating and Air-Conditioning Engineers, Atlanta.

#### ii. Books edited

#### iii. Chapters in Books

1. **Milke, J.A.**, Chapter 5, "Pressure and Flow Instrumentation," Hydraulics for Fire Protection, H.E. Hickey, National Fire Protection Association, Quincy, MA., 1980.
2. **Milke, J.A.**, Chapter 2, "Fire Resistance and Fire Endurance," Fire Protection Structure and System Design, Open Learning Fire Service Program, J.L. Bryan, Ed., Ginn Custom Publishing, Lexington, MA., 1982.
3. **Milke, J.A.**, Chapter 3, "The Computations and Evaluation Procedures for Fire Resistance," Fire Protection Structure and System Design, Open Learning Fire Service Program, J.L. Bryan, Ed., Ginn Custom Publishing, Lexington, MA., 1982.
4. **Milke, J.A.**, Chapter 4, "Flame Spread Evaluation," Fire Protection Structure and System Design, Open Learning Fire Service Program, J.L. Bryan, Ed., Ginn Custom Publishing, Lexington, MA. 1982.
5. **Milke, J.A.**, Chapter 8, "Flashover," Fire Dynamics, Open Learning Fire Service Program, J.L. Bryan, Ed., Ginn Custom Publishing, Lexington, MA., 1984.

6. **Milke, J.A.**, Chapter 12, "Building Propagation," Fire Dynamics, Open Learning Fire Service Program, J.L. Bryan, Ed. Ginn Custom Publishing, Lexington, MA., 1984.
7. **Milke, J.A.**, Chapter 13, "Building Flame and Smoke Propagation," Fire Dynamics, Open Learning Fire Service Program, J.L. Bryan, Ginn Custom Publishing, Lexington, MA., 1984.
8. **Milke, J.A.**, Chapter 6, "Fire Modeling," Applications of Fire Research, Open Learning Fire Service Program, J.L. Bryan, Ginn Custom Publishing, Lexington, MA. 1984.
9. **Milke, J.A.**, Chapter 8, "Fire Suppression Research," Applications of Fire Research, Open Learning Fire Service Program, J.L. Bryan, Ginn Custom Publishing, Lexington, MA., 1984.
10. **Milke, J.A.**, Chapter 3-6, "Analytical Methods for Determining Fire Resistance of Steel Members," SFPE Handbook of Fire Protection Engineering, P.J. DiNenno, Ed., National Fire Protection Association, Quincy, MA., 1988.
11. **Milke J.A.**, "Analytical Methods for Determining Fire Resistance of Steel Members," SFPE Handbook of Fire Protection Engineering, Chapter 4-9, 2nd edition, P.J. DiNenno, Ed., National Fire Protection Association, Quincy, MA., 1995.
12. **Milke J.A.**, "Smoke Management in Covered Malls and Atria," SFPE Handbook of Fire Protection Engineering, Chapter 4-13, 2nd edition, P.J. DiNenno, Ed., National Fire Protection Association, Quincy, MA., 1995.
13. Rockett, J.A.\* and **Milke J.A.**, "Conduction of Heat in Solids," SFPE Handbook of Fire Protection Engineering, Chapter 1-2, 2nd edition, P.J. DiNenno, Ed., National Fire Protection Association, Quincy, MA., 1995.
14. **Milke J.A.**, "Analytical Methods for Determining Fire Resistance of Steel Members," SFPE Handbook of Fire Protection Engineering, 3rd edition, P.J. DiNenno, Ed., National Fire Protection Association, Quincy, MA., 2002.
15. **Milke J.A.**, "Smoke Management in Covered Malls and Atria," SFPE Handbook of Fire Protection Engineering, 3rd edition, P.J. DiNenno, Ed., National Fire Protection Association, Quincy, MA., 2002.
16. Rockett, J.A.\* and **Milke J.A.**, "Conduction of Heat in Solids," SFPE Handbook of Fire Protection Engineering, 3rd edition, P.J. DiNenno, Ed., National Fire Protection Association, Quincy, MA., 2002.
17. **Milke, J.A.**,\* and Klote, J.H., "Smoke Movement in Buildings," Fire Protection Handbook, 19<sup>th</sup> edition, A. Cote, Ed., National Fire Protection Association, Quincy, MA., 2003.
18. Custer, R.L.P.,\* and **Milke, J.A.**, "Fundamentals of Fire Detection," Fire Protection Handbook, 19<sup>th</sup> edition, A. Cote, Ed., National Fire Protection Association, Quincy, MA., 2003.
19. **Milke, J.A.**,\* and Kuligowski, E.D., "Fire Protection Engineering Educational Programs," History of Fire Protection Engineering, K.Richardson, Ed., National Fire Protection Association, Quincy, MA., 2003.
20. Custer, R.L.P.,\* and **Milke, J.A.**, "Fundamentals of Fire Detection," Fire Protection Handbook, 20<sup>th</sup> edition, A. Cote, Ed., National Fire Protection Association, Quincy, MA., 2008.

21. **Milke, J.A.**,\* and Klote, J.H., “Smoke Movement in Buildings,” Fire Protection Handbook, 20<sup>th</sup> edition, A. Cote, Ed., National Fire Protection Association, Quincy, MA., 2008.
22. **Milke J.A.**, “Analytical Methods for Determining Fire Resistance of Steel Members,” SFPE Handbook of Fire Protection Engineering, 4<sup>th</sup> edition, P.J. DiNenno Ed., National Fire Protection Association, Quincy, MA., 2008.
23. **Milke J.A.**, “Smoke Management in Covered Malls and Atria,” SFPE Handbook of Fire Protection Engineering, 4<sup>th</sup> edition, P.J. DiNenno Ed., National Fire Protection Association, Quincy, MA., 2008.
24. Rockett, J.A.\* and **Milke J.A.**, “Conduction of Heat in Solids,” SFPE Handbook of Fire Protection Engineering, P.J. DiNenno Ed., National Fire Protection Association, Quincy, MA., 2008.
25. **Milke J.A.**, “Analytical Methods for Determining Fire Resistance of Steel Members,” SFPE Handbook of Fire Protection Engineering, 5<sup>th</sup> edition, M. Hurley, Springer, New York, 2016.
26. **Milke J.A.**, “Smoke Control by Mechanical Exhaust and Venting,” SFPE Handbook of Fire Protection Engineering, 5<sup>th</sup> edition, M. Hurley, Springer, New York, 2016.
27. **Milke, J.A.**, “Smoke Movement in Buildings,” Fire Protection Handbook, 21<sup>st</sup> edition, A. National Fire Protection Association, Quincy, MA., 2023.
28. **Milke J.A.**, and Pongratz, C., “Smoke Control by Mechanical Exhaust and Venting in Large Volume Spaces,” SFPE Handbook of Fire Protection Engineering, 6<sup>th</sup> edition, C. Jelenewicz, Springer, New York, 2023.

#### **b. Articles in Refereed Journals**

1. **Milke, J.A.**, “What is a Fire Safety Effectiveness Statement?,” *Fire Safety J.*, 2, 1979/1980, 119-123.
2. **Milke, J.A.**, “Overview of Existing Analytical Methods for the Determination of Fire Resistance,” *Fire Technology*, 21 (1) February 1985, 59-65.
3. **Milke, J.A.**, “Calculating the Performance of Sprinkler Pipe Exposed to Fire Conditions,” *Fire Technology*, 22 (2) May 1986, 104-121.
4. **Milke, J.A.**, “Practical Applications: Procedure for Quantitative Analysis,” *Fire Safety J.*, 11, 1986, 135-139.
5. **Milke, J.A.**, “Smoke Management for Covered Malls and Atria,” *Fire Technology*, 26 (3) August 1990, 223-243.
6. **Milke, J.A.**\* and Vizzini, A.J., “Thermal Response of Fire-Exposed Composites,” *J. of Composites Technology and Research*, 13 (3) Fall, 1991, 145-151.
7. **Milke, J.A.**\*, and McAvoy, T.J., “Analysis of Fire and Non-fire Signatures for Discriminating Fire Detection” Proceedings of the 5th International Symposium of IAFSS, Australia, March 1997, 819-828.

8. **Milke, J.A.\*** and Vizzini, A.J., “Determination of a Load, Heat, Time-to-Failure Surface of Polymeric Composites,” High Temperature and Environmental Effects on Polymeric Composites, ASTM STP 1174, C.E. Harris and T.S. Gates, 1992, American Society of Testing and Materials, Philadelphia, 135-146.
9. Tomecek, D.V., and **Milke, J.A.\***, “A Study of the Effect of Partial Loss of Protection on the Fire Resistance of Steel Columns,” *Fire Technology*, 29 (1) 1st Quarter 1993, 3-21.
10. **Milke, J.A.\*** and Vizzini, A.J., “The Effects of Simulated Fire Exposure on Glass-Reinforced Thermoplastic Materials,” *J. of Fire Protection Engineering*, (5) 3 1993, 113-124.
11. **Milke, J.A.\*** and Mowrer, F.W., “Computer-Aided Design for Smoke Management in Atria and Covered Malls,” *ASHRAE Transactions*, OR-94-12-2, 1994.
12. **Milke, J.A.\*** and McAvoy, T.J., “Analysis of Signature Patterns for Discriminating Fire Detection with Multiple Sensors,” *Fire Technology*, 31 (3), 2nd Quarter 1995, 120-136 (received Harry C. Bigglestone Award).
13. McAvoy, T.J. \*, **Milke, J.A.**, and Kunt, T., “Using Multivariate Statistical Methods to Detect Fires,” *Fire Technology*, 32 (1) 1st Quarter 1996, 6-24.
14. **Milke, J.A.**, “Comparison of the Performance of Water Mist System Designs for Library Stack Areas,” *J. of Applied Fire Science*, 5 (3), 1996. 185-201.
15. **Milke, J.A.**, Tinker, S.C. \*, and di Marzo, M., “Effect of Dissolved Gases on Spray Evaporative Cooling with Water,” *Fire Technology*, 33 (2), 2nd Quarter, 1997, 99-114.
16. **Milke, J.A.\*** and Caro, A., “A Survey of Occupant Load Factors,” *J. of Fire Protection Engineering*, 8 (4), 1997, 169-182.
17. Kim, W.H. and **Milke, J.A.\***, “A Survey of Fuel Load in Architectural Offices in Korea”, *J. of Applied Fire Science*, 7 (1), 1998, 41-54.
18. **Milke, J.A.\***, Neidhart, S.R., and Strehlen, B.D., “Water Mist Fire Suppression for Electronic Equipment Applications,” *SSA J*, 12 (2), Summer 1998, 25-32.
19. **Milke, J.A.**, “Monitoring Multiple Aspects of Fire Signatures for Discriminating Fire Detection,” *Fire Technology*, 35 (3), 3<sup>rd</sup> Quarter 1999, 195-209 (received Harry C. Bigglestone Award).
20. **Milke, J.A.**, “An Overview of Analytical Methods to Evaluate the Fire Resistance of Structural Members,” *J. of Structural Engineering*, 125 (10), October 1999, 1179-1187.
21. **Milke, J.A.**, “Evaluating the Early Development of Smoke Hazard from Fires in Large Spaces,” *ASHRAE Transactions*, DA-00-6-3, 2000, 627-636.
22. Hagen, B.Chr., and **Milke, J.A.\***, “The Use of Gaseous Fire Signatures as a Mean to Detect Fires,” *Fire Safety J.*, 34 (1), 2000, 55-67.
23. **Milke, J.A.**, “Using Models to Support Smoke Management System Design,” *Fire Protection Engineering*, 7, Summer 2000, 17-22. (invited)
24. **Milke, J.A.**, “Evaluating the Smoke Hazard from Fires in Large Spaces”, *International J. on Engineering Performance-Based Fire Codes*, 2 (3), 2000.

25. S.D. Wolin\*, N.L. Ryder, F. Leprince, **J.A. Milke**, F.W. Mowrer and J.L. Torero, “Measurements of Smoke Characteristics in HVAC Ducts,” *Fire Technology*, 37, (4), 4<sup>th</sup> Quarter, October 2001, 363-395 (received Harry C. Bigglestone Award).
26. Hang, T. D., Meadows, D.J., and **Milke, J. A.\***, “The Effects of Sprinkler Activation on Smoke Characteristics,” *J. of Applied Fire Science*, 10, (1), 2001, 67-86.
27. Ryder, N.L., Wolin, S. D., and **Milke, J.A.\***, “An Investigation of the Reduction in Fire Resistance of Steel Columns Caused by Loss of Spray-Applied Fire Protection,” *J. of Fire Protection Engineering*, 12, 1, 2002, 31-44.
28. **Milke, J.A.\***, Mowrer, F.W., and Torero, J., “Use of Optical Density-Based Measurements as Metrics for Smoke Detectors,” *ASHRAE Transactions*, AC-02-8-2, Atlanta, ASHRAE, 2002.
29. **Milke, J.A.**, “Effectiveness of High-Capacity Smoke Exhaust in Large Spaces,” *J. of Fire Protection Engineering*, 13, 3, 111-128, 2002.
30. **Milke, J.A.**, “Building Performance Under Fire Exposure,” *Fire Protection Engineering*, 18, Spring 2003, 6-16. (invited)
31. **Milke, J.A.\***, Hulcher, M.E., Worrell, C.L., Gottuk, D.T., Williams, F.W., “Investigation of Multi-Sensor Algorithms for Fire Detection,” *Fire Technology*, 39, 4, 4<sup>th</sup> Quarter, October 2003, 363-382.
32. Mowrer, F.W.\*, **Milke, J.A.**, and Torero, J.L., “Comparative Driving Forces for Smoke Movement in Buildings,” *J. of Fire Protection Engineering*. 14, 4, 2004, 237-265.
33. Cestari, L.A., Worrell, C., and **Milke, J.A.\***, “Advanced Fire Detection Algorithms Using Data from the Home Smoke Detector Project,” *Fire Safety J.*, 40, 2005, 1-28.
34. Kuligowski, E.D., and **Milke, J.A.\***, “A Performance-Based Egress Analysis of a Hotel Building Using Two Models,” *J. of Fire Protection Engineering*, 15, 4, 2005, 287-306.
35. **Milke, J.A.\***, Hugue, D.E., Hoskins, B.L., and Carroll J.P., “Tenability Analyses in Performance-Based Design,” *Fire Protection Engineering*, 28, 2005, 50-56. (invited)
36. **Milke, J.A.\***, Carroll, J.P., and Hoskins, B.L., “Overview of Tenability Analyses in Smoke Management Applications,” *ASHRAE Transactions*, CH-06-3-1, Volume 112, Part 1, 2005.
37. Ferrino-McAllister, J.L. \*, Roby, R.J., **Milke, J.A.**, “Heating at Electrical Contacts: Characterizing the Effects of Torque, Contact Area, and Movement on the Temperature of Residential Receptacles,” *Fire Technology*, 42, (1), 1<sup>st</sup> Quarter, January 2006, 49-74.
38. Geiman, J.A.\*, Gottuk, D.T., and **Milke, J.A.**, “Evaluation of Smoke Detector Response Estimation Methods: Optical Density, Temperature Rise and Velocity at Alarm,” *J. of Fire Protection Engineering*, 16, 4, 2006. (received Jack Bono Engineering Communications Award)
39. Kerber, S. and **Milke, J.A.\*** Using FDS to Simulate Smoke Layer Interface Height in a Simple Atrium,” *Fire Technology*, 43, 1, March 2007, 45-75.

40. Gwynne, S.M.V., Kuligowski, E.D., Kratchman, J., and Milke, J.A., "Questioning the Linear Relationship Between Doorway Width and Achievable Flow Rate", *Fire Safety Journal*, 44, January 2009, 80-87.
41. Xuyao, Q., Wang, D., Milke, J.A., Zhong, X., "Crossing point temperature of coal Mining Science and Technology, volume 21, issue 2, year 2011, pp. 255 - 260
42. Hoskins, B.\* and **Milke, J.A.**, "Differences in Measurement Methods for Travel Distance and Area for Estimates of Occupant Speed on Stairs", *Fire Safety Journal*, 48, February 2012, 49-57.
43. **Milke, J.A.**, and Zevotek, R., "Analysis of the Response of Smoke Detectors to Smoldering Fires and Nuisance Sources," *Fire Technology*, 2015.
44. Chen, Hao, Pittman, William C., Hatanaka, Logan C., Harding, Brian Z. Boussouf, Adam, Moore, David A., Milke, J.A., Mannan, Sam, "Integration of process safety engineering and fire protection engineering for better safety performance," *J. of Loss Prevention in the Process Industries*, 37, 2015 24-81.
45. **Milke, J.A.**, "Fire Protection as the Underpinning of Good Process Safety Programs," *Journal of Loss Prevention in the Process Industries*, Jan. 2016, 329-333.
46. Pongratz, C., **Milke, J.A.**, and Trouve, A., A CFD Study to Identify Methods to Increase Maximum Velocity of Makeup Air for Atrium Smoke Control, ST-16-(RP-1600) *ASHRAE, Transactions*, Volume 122, Part 2, July 2016.
47. Doermann, J., Kuligowski, E.D., and **Milke, J.A.**, "From Social Science Research to Engineering Practice: Development of a Short Message Creation Tool for Wildfire Emergencies," *Fire Technology*, 57, 2021. 815-837 (received Harmathy and Editor's Choice awards).

### c. Monographs, Reports and Extension Publications

1. Watts, J.M.\*, **Milke, J.A.** Bryan, J.L., Dardis R., and Brannigan, V., "A Study of Fire Safety Effectiveness Statements", National Fire Prevention and Control Administration, Department of Commerce, Contract No. 7-35563, January 2, 1979.
2. Bryan, J. L.\*, **Milke, J.A.**, DiNenno, P. J., "Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at the Sheppard and Enoch Pratt Hospital on April 5, 1979," NBS-GCR-80-241, National Bureau of Standards, July 31, 1979.
3. Bryan, J.L.\*, **Milke, J.A.**, DiNenno, P. J., "Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Thurston Hall on April 19, 1979," NBS-GCR-80-193, National Bureau of Standards, July 31, 1979.



4. Bryan, J.L.\*, and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Pikesville Nursing and Convalescent Center on February 8, 1979,” NBS-GCR-80-236, National Bureau of Standards, August 31, 1979.
5. Bryan, J.L.\*, and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Hidden Brook Treatment Center on February 15, 1979”, NBS-GCR-80-238, National Bureau of Standards, August 31, 1979.
6. Bryan, J.L.\*, and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Maryland Masonic Home on June 21, 1979”, NBS-GCR-80-243, National Bureau of Standards, August 31, 1979.
7. Bryan, J.L.\*, and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Sheppard and Enoch Pratt Hospital on June 24, 1979,” NBS-GCR-80-244, National Bureau of Standards, August 31, 1979.
8. Hickey, H.E., and **Milke, J.A.** \*, “The Impact of Building Code Criteria and Emergency Preparedness Criteria on Water Demand Requirements to Fire Protection,” Federal Emergency Management Administration, September 30, 1979.
9. Bryan, J.L.\*, **Milke, J.A.**, and DiNenno, P.J., “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Roosevelt Hotel on April 24, 1979”, NBS-GCR-80-253, National Bureau of Standards, October 1979.
10. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Mt. Wilson Center on June 10, 1979,” NBS-GCR-80-262, National Bureau of Standards, October 31, 1979.
11. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Franklin Square Hospital on July 13, 1979”, NBS-GCR-80-260, National Bureau of Standards, October 31, 1979.
12. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at the Bethesda Health Center on June 12, 1979,” NBS-GCR-80-263, National Bureau of Standards, November 30, 1979.
13. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Reeder's Memorial Nursing Home on July 29, 1979,” NBS-GCR-80-264, National Bureau of Standards, November 30, 1979.
14. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Human Behavior in the Fire Incident at Union Hospital of Cecil County on July 29, 1979,” NBS-GCR-80-261, National Bureau of Standards, November 30, 1979.
15. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Crownsville Hospital Center on August 19, 1979,” NBS-GCR-80-265, National Bureau of Standards, November 30, 1979.

16. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Mt. Wilson Center on September 4, 1979,” NBS-GCR-80-266, National Bureau of Standards, December 31, 1979.
17. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at the Thomas B. Finan Center on September 9, 1979,” NBS-GCR-80-267, National Bureau of Standards, December 31, 1979.
18. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Crownsville Hospital Center on October 5 and 12, 1979,” NBS-GCR-80-268, National Bureau of Standards, December 31, 1979.
19. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Crownsville General Hospital on October 12, 1979,” NBS-GCR-80-269, National Bureau of Standards, January 31, 1980.
20. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Sheppard and Enoch Pratt Hospital on December 10, 1979,” NBS-GCR-80-272, National Bureau of Standards, January 31, 1980.
21. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Peninsula General Hospital on September 22, 1979,” NBS-GCR-80-270, National Bureau of Standards, February 29, 1980.
22. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Gunston School on November 30, 1979,” NBS-GCR-80-271, National Bureau of Standards, February 29, 1980.
23. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Fallston General Hospital on January 27, 1980,” NBS-GCR-80-273, National Bureau of Standards, March 31, 1980.
24. Bryan, J.L.\* and **Milke, J.A.**, and DiNenno, P.J., “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Taylor House on April 11, 1979,” NBS-GCR-80-200, National Bureau of Standards, April 1980.
25. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Washington Adventist Hospital on March 5, 1980,” NBS-GCR-80-274, National Bureau of Standards, April 30, 1980.
26. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Chesapeake Hall on February 3, 1980,” NBS-GCR-80-275, National Bureau of Standards, June 30, 1980.
27. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Patuxent Institute on March 5, 1980,” NBS-GCR-80-276, National Bureau of Standards, June 30, 1980.

28. Bryan, J.L.\* and **Milke, J.A.**, “An Examination and Analysis of the Dynamics of the Human Behavior in the Fire Incident at Wilson Health Care Center on June 25, 1980,” NBS-GCR-80-277, National Bureau of Standards, July 31, 1980.
29. Bryan, J.L.\*, DiNenno, P.J., and **Milke, J.A.**, “The Determination of Behavior Response in Fire Situations, Project People II. Final Report - Incident Reports, August, 1977 to June, 1980,” NBS-GCR-80-297, National Bureau of Standards, December, 1980.
30. **Milke, J.A.**, “Modeling of the Structural Response of Materials to Heating and Loading,” M.S. Thesis, College Park, University of Maryland, 1981.
31. Bryan, J.L.\* and **Milke, J.A.**, “The Determination of Behavior Response Patterns in Fire Situations, Project People II. Final Report - Health Care,” NBS-GCR-81-343, National Bureau of Standards, October 1981.
32. Alleman, J.E., **Milke, J.A.\***, and Hickey, H.E., “An Investigation of the Water Quality and Condition of Pipe in Existing Automatic Sprinkler Systems for the Analysis of Design Options with Residential Sprinkler Systems,” NBS-GCR-82-399, National Bureau of Standards August, 1982.
33. Bryan, J.L. and **Milke, J.A.\***, “A Fire Protection Engineering Analysis and Recommendations for the Protection of the Elevated I-95 Roadway over Grasmick’s Lumber Yard 6715 Quad Avenue, Baltimore City, Maryland,” for the Interstate Division of Baltimore City, Department of Fire Protection Engineering, University of Maryland, January 31, 1986.
34. Bryan, J.L. and **Milke, J.A.\***, “Development of Cost Effective Techniques for Alleviating Water Supply Deficiencies in a Residential Sprinkler System,” NBS-GCR-87-533, National Bureau of Standards, September, 1987.
35. Evans, D.D., **Milke, J.A.\***, and Hayes, W. Jr., “Water Suppression of Fully- Developed Wood Crib Fires in a Compartment,” NBSIR 88-3745, National Bureau of Standards, June, 1988.
36. Mowrer, F.W.\* , **Milke, J.A.**, and Clarke R.M., “Heavy Truck Fuel System Fire Safety Study,” DOT HS 807 484, National Highway Traffic Safety Administration, September, 1989.
37. **Milke, J.A.\***, and Bryan, J.L., “Development of a Technique to Assess the Adequacy of the Municipal Water Supply for a Residential Sprinkler System,” NIST-GCR-91-600, National Institute of Standards and Technology, September, 1989.
38. **Milke, J.A.**, “Structural Integrity of Composites under Load and Thermal Insult,” Ph.D. Dissertation, University of Maryland at College Park, December, 1991.
39. **Milke, J.A. \***, and Mowrer, F.W., “A Design Algorithm for Smoke Management Systems in Atria and Covered Malls,” Report FP 93-04, Report to American Society of Heating, Refrigerating and Air-Conditioning Engineers, University of Maryland, May 1993.
40. **Milke, J.A.\***, Hagen, B.C.; McAvoy, T.J.; Pan, D., “Large-Scale Experiments of Fire Signatures to Develop a Discriminating Fire Detector, NISTIR 5499, National Institute of Standards and Technology, Gaithersburg, MD, September 1994.

41. **Milke, J.A.\***, Dahlstrom, J. and Dubay, C., “Evaluation of The MicroMist Fire Suppression System - UL 2167 Residential Test Scenario,” Report FP 95-01, Report to Reliable Automatic Sprinkler Company, University of Maryland, February 1995.
42. **Milke, J.A.\***, Gerschefski, C.E., and Veltre, J.V., “Evaluation of Water Mist Suppression System Designs - Library Stack Test Scenarios,” Report FP 95-02, Report to Reliable Automatic Sprinkler Company, University of Maryland, April 1995.
43. **Milke, J.A.**, and Hill, S.M.\*, “Full-Scale Room Fire Experiments Conducted at the University of Maryland,” NIST-GCR-96-703, National Institute of Standards and Technology, June, 1996.
44. **Milke, J.A.\*** and Caro, T.C., “Evaluation of Survey Procedures for Determining Occupant Load Factors in Contemporary Office Buildings,” NIST-GCR-96-698, National Institute of Standards and Technology, September 1996.
45. Caro, T.C.\*, and **Milke, J.A.**, “A Survey of Fuel Loads in Contemporary Office Buildings,” NIST-GCR-96-697, National Institute of Standards and Technology, September, 1996.
46. **Milke, J.A.\***, and McAvoy, T.J., “Neural Networks for Smart Fire Detection,” NIST-GCR-96-699, National Institute of Standards and Technology, December, 1996.
47. **Milke, J.A.\***, and Hill, S.M., “Development of a Performance-Based Fire Protection Standard on Construction,” American Society of Civil Engineers, September, 1997.
48. **Milke, J.A.\***, Anderson, M.K., and Bowen, M.W., Determination of Recommended Clearance of Duct Surfaces to Combustibles. National Cooking Vent Duct Fire Test Project, University of Maryland, College Park, May 1998.
49. **Milke, J.A.\*** and Klote, J.H., “Smoke Management in Large Spaces in Buildings,” Building Control Commission of Victoria and The Broken Hill Proprietary Company Limited, Melbourne, Australia, July 1998.
50. **Milke, J.A.\***, Kuligowski, E.D., Quick, S., and Clayton, M.B., “Literature Review of Sound Localization and Wayfinding with Broadband Sound,” Department of Fire Protection Engineering, University of Maryland, October 21, 2002.
51. **Milke, J.A.\***, Mowrer, F.W., and Torero, J.L., “Investigation Of The Application Of Duct Smoke Detectors In Heating, Ventilating And Air Conditioning Systems,” Department of Fire Protection Engineering, University of Maryland, April 5, 2002.
52. **Milke, J.A.\*** and Booth, A.E., “EST Sound Localization Experiments,” Department of Fire Protection Engineering, University of Maryland, March 3, 2003.
53. Cestari, L.A., Worrell, C., and **Milke, J.A.\***, Assessments Of Multi-Components Fire Detection Algorithms Derived From Nuisance And Real Fire Data,” Department of Fire Protection Engineering, University of Maryland, May 2003.
54. **Milke, J.A.**, “National Residential Fire Sprinkler Initiative: Summary of Meeting April 9-10, 2003,” USFA, May 5, 2003.

55. **Milke, J.A.\***, and Hoskins, B.L., “Impact of Missing Protection on the Fire Resistance of Steel Assemblies,” for Duke Energy, Department of Fire Protection Engineering, University of Maryland, May 12, 2003.
56. **Milke, J.A.\***, Hugue, D.E., and Booth, A.E., “EST Wayfinding Experiments,” Department of Fire Protection Engineering, University of Maryland, November 17, 2003.
57. **Milke, J.A.**, Second Meeting of the National Residential Fire Sprinkler Initiative Summary of Meeting, June 30 and July 1, 2004, United States Fire Administration, Emmitsburg, MD, July 30, 2004.
58. Cates, Tiffney A., and **Milke, J.A.\***, “Stop, Drop, and Roll – The Technical Substantiation Behind Public Fire Safety Messaging,” Fire Protection Research Foundation, Quincy, MA, April 2006.
59. **Milke, J.A.\***, Sunderland, P.B., Levy, K.M., Ontiveros, V.L., and Carey, A.C.. “Fire Safety of the Traveling Public and Firefighters Today’s and Tomorrow’s Vehicle Fleet,” Fire Protection Research Foundation, Quincy, MA, April 2007.
60. Kouchinsky, A.J., and **Milke, J.A.\***, “Analysis of Response Characteristics of CCTV Surveillance for Fire Detection,” Maryland Industrial Partnerships and axonX, August 2007.
61. **Milke, J.A.\***, Di Marzo, M., Ozog, N., and Liekach, D. “Investigation Ignition, Detection and Suppression of MLRS Tube Fires,” Precision Fires Rocket and Missile Systems Project Office, Redstone Arsenal, AL, August 2007.
62. **Milke, J.A.\***, “Overview of Hazard Assessment for Rail Cars,” Korean Railroad Research Institute, August 2007.
63. **Milke, J.A.**, Mowrer, F.W., and Gandhi, P., Validation of a Smoke Detection Performance Prediction Methodology, Fire Protection Research Foundation, Quincy, MA, October 2008.
64. **Milke, J.A.\***, Campanella, A.J., Childers, Cathleen T. and Wright, Brittany D., “Performance of Smoke Detectors and Sprinklers in Residential and Health-Care Occupancies,” for National Electrical Manufacturers Association, Department of Fire Protection Engineering, University of Maryland, May 14, 2010.
65. **Milke, J. A.**, “History of Smoke Detection: A Profile of How the Technology and Role of Smoke Detection Has Changed,” Siemens Industry, Inc., Building Technologies Division, Florham Park, NJ, September 8, 2010.
66. Feng J.T., and **Milke, J.A.**, “Analysis of the Response of Smoke Detectors to Smoldering Fires and Nuisance Sources,” for Maryland Industrial Partnerships and USI Electric, January 2012.
67. **Milke, J.A.**, Hanson, Robert E. and Mizrach, Daniel E., “Comparison of the Life Safety Performance of Smoke Detectors and Sprinklers in Commercial, Industrial and Education Institution Housing,” for National Electrical Manufacturers Association, Department of Fire Protection Engineering, University of Maryland, April 29, 2013.

68. **Milke, J.A.**, “Analysis of Observations of People Movement Characteristics during Evacuation of High Rise Office Buildings,” for National Institute of Standards and Technology, Department of Fire Protection Engineering, University of Maryland, April 2013.
69. **Lannon, Chad M.**, and **Milke, J.A.**, “Evaluation of Fire Service Training Fires,” for Fire Protection Research Foundation, Department of Fire Protection Engineering, University of Maryland, December 16, 2013.
70. **Wills, Rosalie, Milke, J., Royle, Sara, and Steranka, Kristin**, “Commercial Roof-Mounted Photovoltaic System Installation Best Practices Review and All Hazard Assessment, for Fire Protection Research Foundation, Department of Fire Protection Engineering, University of Maryland, February 13, 2014.
71. **Milke, J.A.**, “Effectiveness and Reliability of Fire Protection Systems,” Fire Protection Engineering, Oct 1, 2014.
72. **Hanson, Robert E. and Milke, J.A.**, “Assessment of Fire Risk in U.S. Residences,” for Building Technology Research, State Farm, Department of Fire Protection Engineering, University of Maryland, January 2015.
73. **Pongratz, C., Trouve A., and Milke, J.A.**, “Methods to Increase Maximum Velocity of Make-up Air for Atrium Smoke Control - CFD Study,” ASHRAE 1600-RP, Department of Fire Protection Engineering, University of Maryland, June 2015.
74. **Milke, J.A.**, **Isman, K.E., and Ryder, N.L.**, “Bangladeshi Garment Factory Fire Safety,” Department of Fire Protection Engineering, University of Maryland, January 2016.
75. **Milke, J.A.** and **Mustafa, S.**, “Effect of Detector Sensitivity Changes on the Provision of Adequate Warning to Building Occupants,” Department of Fire Protection Engineering, University of Maryland, February 2016.
76. **Milke, J.A.**, “Performance Analysis of Simplex TrueAlert ES Addressable Notification Appliances,” for Johnson Controls, Inc., Department of Fire Protection Engineering, University of Maryland, May 2017.
77. **Milke, J.A.**, “Comparison of Designs with Simplex TrueAlert ES Addressable and Nonaddressable Notification Appliances,” for Johnson Controls, Inc., Department of Fire Protection Engineering, University of Maryland, May 2017.
78. **Milke, J.A.**, **Chin, Selena, Schraffenberger, Nicholas, and Lemberos, Irene**, “Improvements in Aircraft Fire Detection,” for Federal Aviation Administration, US Department of Transportation, Department of Fire Protection Engineering, University of Maryland, October 2017.
79. **Dunne, S. Lee, Candice, Nguyen, Nam, Slingluff, Caroline, Milke, J.**, “Railing Height, Design and Criteria Review,” for Fire Protection Research Foundation, Department of Fire Protection Engineering, University of Maryland, June 2019.

80. **Milke, J.A.**, “TEST REPORT: Experiments of Detector Response with High Ambient Velocity Airflows,” for Xtralis by Honeywell, Department of Fire Protection Engineering, University of Maryland, August 2019.
81. **Milke, J.A.**, Behera, S., Lee, Kelliann and Slingluff, Caroline, “Review of Foam Fire Suppression System Discharges in Aircraft Hangars,” for National Air Transportation Association, Department of Fire Protection Engineering, University of Maryland, November 2019.
82. **Milke, J.A.**, Brondum, N., Dunne, S., Whitcomb, C., “Review of Foam Fire Suppression System Discharges in Aircraft Hangars,” for Poole Fire Protection, Department of Fire Protection Engineering, University of Maryland, February 22, 2021.
83. **Milke, J.**, Norwood, L., Ball, A., Cobbs, J., DeLucca, A., Tan, G. and Widenhofer, Z., “Occupant Evacuation Behavior in Wildland Fires,” Fire Protection Research Foundation, May, 2021.
84. **Milke, J.A.**, Gallo, J, and Wong, A. “Fire Safety Challenges in Informal Settlements,” FPEeXTRA, SFPE, August 27, 2021.
85. **Milke, J.** and Poole, J., Performance Criteria for Aircraft Hangar Fire Protection Systems, Fire Protection Research Foundation, January 2022.
86. **Milke, J.**, Stacy D. and Poole, J., Design Fire and Material Performance Database Report, SFPE Foundation, February, 2022.
87. **Milke, J.** and McAllister, J., Carbon Monoxide Incidents: A Review of the Data Landscape, Fire Protection Research Foundation, September 2022.

**d. Book Reviews, Other Articles, Notes**

1. **Milke, J.A.**, “How Much Water Is Enough?,” The International Fire Chief, 46 (3) March, 1980, 22-24.
2. **Milke, J.A.**, “Book Review: Design of Structures Against Fire,” Fire Technology, 23 (2) May 1987, 166-168.
3. **Milke, J.A.**, “Book Review: Fire Engineering for Building Structures and Safety,” Fire Technology, 27 (1) February 1991, 84-85.
4. **Milke, J.A.**, “Software Review: Temperature Analysis of Structures Exposed to Fire,” Fire Technology, 28 (2) May 1992, 184-189.
5. **Milke, J.A.**, “Smoke Management Systems in Atria and Covered Malls,” SFPE Bulletin, May/June 1992, 6-8.
6. Hagen, B.Chr. \*, and **Milke, J.A.**, “Software Review: PCL's Analysis of Thermal Hazards on Offshore Structures (PATHOS 2),” Fire Technology, 30 (1) 1st Quarter 1994, 173-178.

7. **Milke, J.A.** \*, and Mowrer, F.W., “Computer Aided Design for Smoke Management,” *ASHRAE J.*, 37 (8) August 1995, 153-158.
8. **Milke, J.A.**, “Research Needs for Assessing the Fire Severity in Performance-Based Fire Resistance Analyses,” National Academies Press, Washington, DC, July 3, 2003.
9. Ferrino-McAllister, J.L. \*, Roby, R.J., Klassen, M.S. and **Milke, J.A.**, “Heating of Electrical Conductors: Characterizing the Deformation of Cables Exposed to External Radiant Heating and Internal Overload, *Fire & Arson Investigator*, October 2005, 43-49.
10. **Milke, J.A.**, “What Every Engineer Designing Smoke Control Systems Should Know,” *Construction Specifying Engineer*, April 25, 2022.

#### **e. Talks, Abstracts and Other Professional Papers Presented**

##### *i. Invited Talks*

1. **Milke, J.A.**, “Fire Hazard Assessment in Atriums,” NFPA Roundtable on Fire Safety in Atriums - Are the Codes Meeting the Challenge?, Washington D.C., December 15, 1988.
2. **Milke, J.A.**, “Fire Resistance Evaluation of Building Assemblies Associated with Elevators,” 2nd Symposium on Elevators, Fire, and Accessibility, American Society of Mechanical Engineers, Baltimore, April 19-21, 1995.
3. **Milke, J.A.**, “Fire Resistance of Modeling - Steel Structures,” Workshop on Design Calculations for Fire Resistance, University of British Columbia, June 1-2, 1995.
4. **Milke, J.A.**, “Engineering Analysis Methods to Assess the Fire Resistance of Building Assemblies,” American Society of Mechanical Engineers International Joint Power Generation Conference, Minneapolis, MN, October 10, 1995.
5. **Milke, J.A.**, “Multivariate Methods for Discriminating Fire Detection,” 13th Meeting of the UJNR Panel on Fire Research and Safety, Gaithersburg, MD: March 20, 1996.
6. **Milke, J.A.**, “Analysis of Signature Patterns for Discriminating Fire Detection with Multiple Sensors,” Harry C. Bigglestone Lecture, National Fire Protection Association Annual Meeting, Boston, MA, May 20, 1996.
7. **Milke, J.A.**, “Applying Research Results to Provide Cost Effective Fire Protection System Designs,” Global Building Model in the Next Millennium Convention 12-15 April 1999, Melbourne, Australia.
8. **Milke, J.A.**, “Monitoring Multiple Aspects of Fire Signatures for Discriminating Fire Detection,” Harry C. Bigglestone Lecture, National Fire Protection Association Annual Meeting, Denver, CO, May 15, 2000.
9. **Milke, J.A.**, “Fire Safety Issues” at Forum on “Designing Structures to be Less Vulnerable to Terrorist Attacks,” CERF’s Executive Program Series, Designing and Managing Vulnerability, Washington, DC, October 23, 2001.



10. **Milke, J.A.**, “ASCE/SFPE Standard on Performance-based Structural Fire Protection Analyses,” Research Needs for Fire Resistance Determination and Performance Prediction, NIST, Gaithersburg, February 19, 2002.
11. **Milke, J.A.**, “Reflections on the Performance of the Buildings in the World Trade Center Disaster,” Distinguished Lecture, Singapore Structural Steel Society, October 25, 2002, Singapore.
12. **Milke, J.A.**, “Analysis Tools and Design Methods: Current Best Practices,” NIST Workshop on National R&D Roadmap for Fire Safety Design and Retrofit of Structures, Baltimore, MD, October 3, 2003.
13. **Milke, J.A.**, “Introduction & Forces Affecting Smoke Movement,” International Seminar: Protection Activa Control de Humos, Universidad Católica de Chile, Santiago, Chile, July 30, 2008.
14. **Milke, J.A.**, “Stair Pressurization Systems,” International Seminar: Protection Activa Control de Humos, Universidad Católica de Chile, Santiago, Chile, July 31, 2008.
15. **Milke, J.A.**, “Atrium Smoke Management,” International Seminar: Protection Activa Control de Humos, Universidad Católica de Chile, Santiago, Chile, July 31, 2008.
16. **Milke, J.A.**, “Smoke Management: State-of-the-Art and Areas for Improvement,” Keynote Presentation, 2008 SFPE Engineering Technology Conference, Charlotte, NC, October 13, 2008.

*ii. Refereed Conference Proceedings*

1. **Milke, J.A.\*** and Vizzini, A.J., “Modeling and Evaluation of the Thermal Response of Fire Exposed Composites,” Proceedings of the 5th AIAA/ASME Thermophysical and Heat Transfer Conference, J.G. Quintiere and L.Y. Cooper, HTD-Vol. 141, 1990, American Society of Mechanical Engineers, 15-22.
2. **Milke, J.A.\*** and Vizzini, A.J., “Feasibility of Using Small-Scale Tests to Evaluate the Fire Resistance of Reinforced Thermoplastics,” Proceedings: Fire and Materials-1st International Conference, 1992, 305-310.
3. **Milke, J.A.\***, Ryder, N.L., and Wolin, S.D., “An Investigation of the Reduction in Fire Resistance of Steel Columns Caused by Loss of Spray-Applied Fire Protection,” Proceedings of the 7th International Symposium of IAFSS, Worcester, MA, June 2002, 1025-1036.

*iii. Unrefereed Conference Proceedings*

1. Watts, J.M.\*, and **Milke, J.A.**, “A Study of Fire Safety Effectiveness Statements,” Proceedings: National Fire Prevention and Control Administration Regulatory Impact Programs Conference, Camp Hill, PA, July 20, 1978, 20-30.

2. **Milke, J.A.**, "What is a Fire Safety Effectiveness Statement?," Proceedings: International Symposium on Fire Risk Evaluation in Industry, Stockholm, 1979, 51-62.
3. **Milke, J.A.**, "The Human Factor in Hospital Fires," Proceedings: California Conference on Hospital Safety, San Francisco, CA, November 15, 1979, p. 1-7.
4. **Milke, J.A.**, "Estimating the Fire Resistance of Tubular Steel Columns," Proceedings: Symposium on Hollow Structural Sections in Building Construction, Chicago, September, 1985, 218.
5. **Milke, J.A.**, "Smoke Management Design Considerations for Covered Malls and Atria," Proceedings: International Fire Protection Engineering Institute-V, Ottawa, 1989, Sect. 3.
6. **Milke, J.A.** \* and Vizzini, A.J., "Three-Dimensional Heat Transfer Model to Predict the Effect of the Short-Term Heating on the Structural Performance of Composites," Proceedings: AIAA/ASME/ASCE/AHS/ASC 31st Structures, Structural Dynamics and Materials Conference, Long Beach, 1990, 831-839.
7. **Milke, J.A.**, "Models for Smoke Management Design in Atria," Proceedings: Symposium on Computer Applications in Fire Protection Engineering, Worcester, MA, June, 1993, 35-42.
8. **Milke, J.A.** \*, and Denny, S., "Initial Application of Neural Networks to Discriminate Between Fire and Non-Fire Odors," Proceedings: Society of Fire Protection Engineers Engineering Seminar, San Francisco, May, 1994, 81-88.
9. **Milke, J.A.**, "Fire Resistance Evaluation of Building Assemblies Associated with Elevators," Proceedings: 2nd Symposium on Elevators, Fire, and Accessibility, Baltimore, April, 1995, American Society of Mechanical Engineers, 78-84.
10. **Milke, J.A.**, "Application of Neural Networks for Discriminating Fire Detectors," Proceedings: 10th International Conference on Fire Detection, AUBE '95, Duisburg, Germany, April, 1995, 213-222.
11. **Milke, J.A.** \*, and Gerschefski, C., "Overview of Water Mist Research for Library Applications," Proceedings: International Conference on Fire Research and Engineering," Orlando, FL, September, 1995, 133-140.
12. **Milke, J.A.** \*, McAvoy, T.J., Kunt, T. and Hopkins, M., "Using Multivariate Statistical Methods to Detect Fires," Proceedings: International Conference on Fire Research and Engineering," Orlando, FL, September, 1995, 301-306.
13. **Milke, J.A.**, "Performance-Based Design of Fire Resistant Assemblies," Proceedings: Fire Protection Design for High Challenge or Special Hazard Applications, Boston, MA, May, 1996, 13-18.
14. **Milke, J.A.**, "Limitation of Current U.S. Standards and Challenges of Proposed Performance-Based Standards," NIST SP 919, Proceedings of International Workshop on Fire Performance of High-Strength Concrete. Proceedings. Appendix B: Workshop Papers, Gaithersburg, MD, Phan, L.T., Carino, N.J., Duthinh, D., Garboczi, E., Editors, 1997, p. 87-93.

15. **Milke, J.A.**, “A Simplified Model for Estimating the Thermal Response of Steel Beam/Concrete Slab Ceiling Assemblies,” Proceedings: 2<sup>nd</sup> International Conference on Fire Research and Engineering, Bethesda, MD, SFPE, 1998, 365-376.
16. **Hill, S.M.** \*, **Quintiere, J.G.**, and **Milke, J.A.**, “Analysis of Smoke Layer Properties During the Transient Filling Period in Atria and Large-Volume Spaces,” Proceedings: 2<sup>nd</sup> International Conference on Fire Research and Engineering, Bethesda, MD, SFPE, 1998, 463-474. Cited as “Best Paper” of the Conference.
17. **Shaner, D.L.** and **Milke, J.A.** \*, “Discrimination Between Smoldering and Nuisance Sources Using Gas Signatures,” Proceedings: 2<sup>nd</sup> International Conference on Fire Research and Engineering, Bethesda, MD, SFPE, 1998, 500-511.
18. **Milke, J.A.**, “Modeling to Support the Design of Smoke Management Systems,” Proceedings: Working With Code Officials in Performance-Based Design, SFPE Engineering Seminar, Cincinnati, OH, May, 1998, 38-45.
19. **Milke, J.A.**, “Estimating the Fire Performance of Steel Structural Members,” Proceedings of the 1999 Structures Congress, ASCE, 1999, 381-384.
20. **Milke, J.A.**, “Estimating the Fire Performance of Concrete and Masonry Structural Members,” Proceedings of the 1999 Structures Congress, ASCE, 1999.
21. **Milke, J.A.**, “Performance-Based Analysis of Fire Resistance of Construction Assemblies,” Proceedings: 3<sup>rd</sup> International Conference on Fire Research and Engineering, Bethesda, MD, SFPE, 1999, 311-324.
22. **Wolin, S.D.** \*, **Ryder, N.L.**, **Leprince, F.**, **Milke, J.A.**, **Mowrer, F.W.** and **Torero, J.L.**, “Measurements of Smoke Characteristics in HVAC Ducts,” Proceedings of the Fire Suppression and Detection Research Application Symposium, Quincy, MA, Fire Protection Research Foundation, 2001.
23. **Milke, J.A.**, “Performance-Based Analysis Methods to Determine the Fire Resistance of Structural Members,” Proceedings of the 2001 Structures Congress, ASCE, 2001.
24. **Milke, J.A.**, “Contemporary Fire Detection and Suppression Alternatives for Water-Sensitive Areas,” Disaster Preparedness, Response and Recovery, 26<sup>th</sup> Annual Meeting of the American Institute for Conservation of Historic and Artistic Works,” Arlington, VA, June 2, 1998.
25. **Milke, J.A.**, “Effectiveness of High-Capacity Smoke Exhaust in Large Spaces,” International Conference on Engineered Fire Protection Design, San Francisco, CA, June 14, 2001.
26. **Milke, J.A.**, “Principles of Smoke Management and Fire Detection for Tunnels,” Seminar: Fire Safety and Prevention Design for Disasters in Railway Tunnels, Korean Railroad Institute, Seoul, August 22, 2006.
27. **Levy, K.M.**, **Milke, J.A.**, and **Sunderland, P.B.**, “Fire Safety of the Traveling Public and Firefighters for Tomorrow’s Vehicles,” SAE World Congress, Detroit, SAE Paper 2008-01-0558 (2008).

28. Milke, J.A., Mowrer, F.W., and Gandhi, P., Guidelines for Estimating Smoke Detector Response, SUPDET 2009, Orlando, FL, February 27, 2009.
29. Milke, J.A., Where Do We Go from Here – The Future of Smoke Detector Response Prediction, SUPDET 2009, Orlando, FL, February 27, 2009.
30. Milke, J.A., “Guidelines for Estimating Smoke Detector Response,” 9<sup>th</sup> International Conference on Performance-Based Codes, Society of Fire Protection Engineers, Hong Kong, June 21, 2012.
31. Milke, J.A., “Fire Protection as the Underpinning of Good Process Safety Programs,” MKOPSC 17<sup>th</sup> Annual International Symposium, College Station, TX, October 30, 2014.

**f. Contracts and Grants**

<b>Detection</b>			
<b>PI/Co-PI</b>	<b>Project Title</b>	<b>Funding Source</b>	<b>Inclusive Dates</b>
Co-PI	Smart Fire Detection Using Neural Networks	National Institute of Standards and Technology	Sept. 1992 - Aug. 1996
PI	Evaluation of Response Characteristics of Advanced Fire Detector	Sentrol, Inc.	Aug. 1996 – Oct. 1996
Co-PI	Investigation of the Application of Duct Smoke Detectors in Heating, Ventilation and Air Conditioning Systems	Fire Detection Institute	Feb. 1999 – Feb. 2001
PI	Investigation into the Characteristics of a Smart Fire Detector	Hughes Associates	Jan. 2001 – Jan. 2002
PI	Analysis of Fire Signatures Toward the Development of An Advanced Fire Detector	National Institute of Standards and Technology	Aug. 2001 – Aug. 2002
PI	Evaluation of Directional, Broadband Sound for Use in Emergency Evacuation	Edwards Systems Technology	March 2002- March 2003
PI	Testing of LED-Based Sensor for Fire Detection	Southwest Sciences, Inc.	Aug. 2002 – March 2003
Co-PI	Fire Detection and Suppression for MLRS	Naval Surface Warfare Center	Dec. 2005- June 2007
PI	CCTV Surveillance for Fire Detection	axonX & MIPS	Aug. 2006- July 2007
Co-PI	Validation of a Smoke Detection Performance Prediction Methodology	National Fire Protection Research Foundation	Dec. 2006- Jan. 2008
PI	Performance of Video Detection System	UTRC	March 2007- April 2007
PI	Analysis of Data from Smoke Characterization Project	Underwriters Laboratories	August 2007- June 2008
PI	Performance of Smoke Detectors and Sprinklers in Residential and Health-Care Occupancies	National Electrical Manufacturers Association	Nov. 2009- May 2010
PI	History of Smoke Detection: A Profile of How the Technology and Role of Smoke Detection Has Changed	Siemens Industry, Inc Building Technologies Division	May 2010- Aug. 2010
PI	Analysis of the Response of Smoke Detectors to Smoldering Fires and Nuisance Sources	MIPS, USI	March 2011- March 2012
PI	Comparison of the Life Safety Performance of Smoke Detectors and Sprinklers in Commercial, Industrial and Education Institution Housing	National Electrical Manufacturers Association	Nov. 2011- March 2013
PI	Analysis of Data from Cooktop Fire Experiments	Underwriters Laboratories	Nov 2012- July 2013

PI	Effect of Detector Sensitivity Changes on the Provision of Adequate Warning to Building Occupants	Xtralis	Dec 2014- Apr 2015
PI	Improvements in Aircraft Fire Detection	FAA	Aug 2016- June 2020
PI	Performance Analysis of TrueAlert ES Notification Appliances	Johnson Controls Fire	Jan 2017 – May 2017
PI	Experiments of Detector Response with High Ambient Velocity Airflows	Xtralis/Honeywell	Jun 2020- Aug 2020
Co-PI	Modeling of Aircraft Hangar Situational Awareness	Battelle	June 2021- May 2022
PI	Detection of signatures from internal contaminant sources	FAA	Sept 2022- Aug 2023

<b>Suppression</b>			
<b>PI/Co-PI</b>	<b>Project Title</b>	<b>Funding Source</b>	<b>Inclusive Dates</b>
Co-PI	Development of Cost Estimation Guidelines for Residential Sprinkler Systems	National Bureau of Standards	Jan. 1987 – Sept. 1987
Co-PI	Development of a Technique to Assess the Adequacy of the Municipal Water Supply System for Residential Sprinkler Systems	National Bureau of Standards	Oct. 1987- Sept. 1988
Co-PI	Experimental Evaluation of Performance Characteristics of a Water Mist Extinguishing System	Reliable Automatic Sprinkler Company	Oct. 1993 – Mar. 1995
PI	Experimental Evaluation of a Water Fog Extinguishing System	General Research Board, UMCP	Jun. 1994 – Aug. 1994
PI	Experimental Evaluation of Water Mist System Design Parameters	Hughes Associates	Apr. 1995 – Jan. 1997
PI	Experimental Evaluation of the Effect of Anechoic Foam on Automatic Sprinklers	Naval Facilities Engineering Command	May 1996 – Aug. 1996
PI	Evaluation of Water Mist as a Fire Suppression Alternative for Agricultural Applications	General Research Board, UMCP	Jun. 1996 – Aug. 1996.
PI	Hazard-Based Analysis of Suppression Systems for Solid Waste Transfer Stations	Browning-Ferris Industries	Nov. 1996 – Jan. 1997
PI	Analysis of the Effect of Water Quality on the Activation of Automatic Sprinklers	Fire Protection Management	Apr. 1997 – Sept. 1997
PI	Analysis of Water Mist Designs and Fire Risk in Hotels	EDI, Inc.	Aug. 1997 – May 1998
PI	Water Mist for Shipboard Applications	VTEC Laboratories, Inc.	June 1999 – Dec. 1999
PI	Replacement of Dual Sprinkler and Hydrant Risers with a Single Riser System	Victoria University of Technology	May 2000 – Nov. 2000
PI	Performance Analysis of Hi-Fog Fire Protection System	Marioff Corp., Oy	August 2002 – April 2003

PI	Effect of Nozzle Factors on Extinguishment by AFFF	Hughes Associates	June 2003- May 2004
PI	Performance of Plastic Pipe Exposed to Fire	Rehau Incorporated	July 2007- Sept. 2007
PI	Fire Protection Technical Service	MD Aviation Administration	June 2004- June 2006
PI	Review of Foam Fire Suppression System Discharges in Aircraft Hangars	National Air Transportation Association	July 2019- Nov. 2019
PI	Review of Foam Suppression System Discharges in Aircraft Hangars	Poole Fire Protection	Dec. 2019- May 2020
PI	Modeling of Aircraft Hangar Water Mist Fire Suppression	Battelle	June 2020- June 2022
PI	Performance Criteria for Aircraft Hangar Fire Protection Systems	Poole Fire Protection	Dec. 2020- Sept. 2021
Co-PI	Additional Modeling of Aircraft Hangar Water Mist Fire Suppression System	Battelle	June 2022- June 2023
Co-PI	Modeling of Aircraft Hangar Water Mist Fire Suppression	Battelle	Sept 2022- June 2023

<b>Structural Fire Protection</b>			
<b>PI/Co-PI</b>	<b>Project Title</b>	<b>Funding Source</b>	<b>Inclusive Dates</b>
PI	Fire Performance of Advanced Composites	Minta-Martin Foundation	July 1989 - June 1993
Co-PI	Development of a General Stress Model for Thermally Degraded Composites	Hughes Associates	Feb. 1990 – Sept. 1990
Co-PI	Load, Heat Flux, Time-to-Failure of Thermoplastic Composites	Hughes Associates	Mar. 1991 - Dec. 1991
Co-PI	Fire Safety Engineering	National Institute of Standards and Technology	May 1996 – Apr. 1997
PI	National Cooking Vent Duct Fire Test Project	National Fire Protection Research Foundation	Jun. 1997 – Sept. 1997
PI	Development of an Engineering Standard on the Performance of Structural Members During Fire Conditions	American Society of Civil Engineers	August 1997 – September 1999
PI	Impact of Missing Protection on the Fire Resistance of Steel Assemblies	Duke Energy	Sept. 2001- Dec. 2002
PI	Fire Performance Data – Phase I: Multi-Family Residential	Portland Cement Assoc.	June 2004 – May 2005
PI	Assessment of Computational Models in Structural Fire Protection	ArupFire	Aug. 2007- June 2008
PI	Development of Empirical Guidelines for Firestop Systems	Hilti	Jan. 2017- Dec. 2019

<b>Smoke Management</b>			

<b>PI/Co-PI</b>	<b>Project Title</b>	<b>Funding Source</b>	<b>Inclusive Dates</b>
Co-PI	Algorithm for Design Analysis of Atrium Smoke Management Systems	American Society of Heating Refrigerating and Air Conditioning Engineers	Sept. 1990 - Dec. 1992
PI	Smoke Management in Open Spaces in Large Buildings	Broken Hill Proprietary, Ltd.	Jan. 1998 – April 1998
PI	Fire Protection Technical Service	MD Aviation Administration	July 2006- June 2009
Co-PI	Methods to Increase Maximum Velocity of Make-up Air for Atrium Smoke Control - CFD Study	ASHRAE	Aug. 2013- Jan. 2015
PI	Reliability of Fire Dampers, Smoke Dampers and Smoke Control Systems	NEMIC	Dec 2020- Aug 2021

<b>Life Safety</b>			
<b>PI/Co-PI</b>	<b>Project Title</b>	<b>Funding Source</b>	<b>Inclusive Dates</b>
PI	A Survey of Occupant Load Factors and Fuel Load in Contemporary Office Buildings	National Institute of Standards and Technology	Apr. 1994 – Dec. 1994
PI	Evacuation Analysis of Ships	U.S. Coast Guard	Sept. 2000 – Jan. 2001
PI	Residential Fire-Injury Behavioral Risk Factors	Battelle	Aug. 2002- Aug. 2005
PI	Review Methodology of Performance-Based Life Safety Assessments	Architect of the Capitol	April 2005- Sept 2005
PI	Stop, Drop and Roll: The Technical Substantiation Behind Public Safety Messaging	Fire Protection Research Foundation	Aug. 2005- Mar.2006
PI	Analysis of Observations of People Movement Characteristics during Evacuation of High Rise Office Buildings	National Institute of Standards and Technology	Aug. 2009- Aug. 2011
PI	Railing Height, Design and Criteria Review	Fire Protection Research Foundation	Jan. 2019- June 2019
PI	Occupant Evacuation Behavior in Wildland Fires: Gap Analysis	Fire Protection Research Foundation	Aug 2020- Jan 2021

<b>Misc.</b>			
<b>PI/Co-PI</b>	<b>Project Title</b>	<b>Funding Source</b>	<b>Inclusive Dates</b>
Co-PI	An Analysis of Cost-Effective Fire Protection for Interstate Highway Structures	Interstate Division for Baltimore City	Jan. 1986 - Dec. 1986
PI	Evaluation of FLITE Software	Natl Inst. of Standards & Technology	Feb. 1996 – Dec. 1996



PI	U.S. Building Surveys of Cables in Plenums	National Research Council of Canada	Feb. 2000 – Aug. 2000
PI	Analysis of Safety Compliance in Legislative Buildings	Office of Compliance	Oct. 2001 – Sept. 2006
Co-PI	Fire Safety of the Traveling Public and Firefighters for Today’s and Tomorrow’s Vehicle Fleet	Fire Protection Research Foundation	Aug. 2006-Mar.2007
PI	The Development of Fire Modeling Guide for Rail Passenger Car	Korea Railroad Research Institute	Jan. 2007-July 2007
PI	Evaluation of Fire Service Training Fires	Fire Protection Research Foundation	Dec 2012 - May 2013
PI	Photovoltaic Panel Installation Best Practices Review and All Hazard Assessment	Fire Protection Research Foundation	April 2013 – Dec 2013
PI	Assessment of Fire Risk in US Residences	State Farm	Feb 2014-Jan 2015
PI	Development and Delivery of Principles of Fire Protection Engineering	Bangladesh University of Engineering and Technology	Jan 2017-Jan 2017
PI	Development of Fire Resistant Hoselines	Fire and Risk Alliance	June 2017-Dec 2017
PI	Design Fire and Material Performance Database	Poole Fire Protection	March 2021-Feb 2022
PI	Carbon Monoxide Incidents: A Review of the Data Landscape	Fire Protection Research Foundation	Jan 2022-Aug 2022

#### **g. Editorships, Editorial Boards and Reviewing Activities**

Editorial Board: Fire Technology

Referee for

- ◆ Fire Technology
- ◆ J. of Fire Protection Engineering
- ◆ Fire Safety J.
- ◆ J. of Fire Sciences
- ◆ Fire and Materials
- ◆ J. of Structural Engineering
- ◆ ASHRAE Transactions
- ◆ J. of Architectural Engineering
- ◆ Engineering J.
- ◆ ACI Structural J.
- ◆ J. of Experimental Thermal and Fluid Science,

Program Chair, 8<sup>th</sup> IAFSS symposium (2005)  
Reviewer of papers for 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 7<sup>th</sup> IAFSS symposia (1992, 1996, 1999, 2002)  
Reviewer of papers for CIB Structures Conference  
Reviewer of papers for 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> Structures in Fire Conferences

Reviewer of NSF and NIST proposals (1993-1996)  
Reviewer of book, *Introduction to Fire Technology* for Delmar Publishers (1995)

**h. Other: Presentations at Meetings (no proceedings)**

1. Milke, J.A., "What is a Fire Safety Effectiveness Statement?," presented at the National Fire Protection Association Fall Meeting, Montreal, Quebec, November 15, 1978.
2. Milke, J.A., "Search and Rescue - A Continuing Priority," presented at the National Fire Protection Association Fall Meeting, Phoenix, AZ, November 13, 1979.
3. Milke, J.A., "A Summary of the Human Behavior in Fire Incidents at St. Joseph's Hospital and the University Nursing Home," Veterans Administration, Washington, D.C., May 28, 1980.
4. Milke, J.A., "An Overview of Water Quality Analyses and Flow Tests Conducted on Residential Sprinkler Systems," presented at the Fourth Annual Conference on Fire Research, Gaithersburg, MD, October 24, 1980.
5. Milke, J.A., "Preliminary Conclusions on the Water Quality and Pipe Condition of Existing Residential Sprinkler Systems," presented at the National Fire Protection Association Fall Meeting, San Diego, CA, November 17, 1980.
6. Milke, J.A., "Project People II - Evacuation Data," presented at the International Life Safety and Egress Seminar, College Park, MD, November 24, 1981.
7. Milke, J.A., "Code Implications of People Behavior in Actual Fires," presented at the Sixth Annual Conference on Fire Research, Gaithersburg, MD, September 21, 1982.
8. Milke, J.A., "Sprinkler System Design Considerations for Rack Storage," presented at the Society of Fire Protection Engineers Three Rivers Chapter Seminar on Fire Protection for Storage Facilities, Pittsburgh, PA, April 18, 1983.
9. Milke, J.A., "Calculating the Failure of Sprinkler Pipe Exposed to High Temperature," presented at the Society of Fire Protection Engineers Annual Meeting, New Orleans, LA, May 22, 1984.
10. Milke, J.A., "Practical Application," presented at the SFPE Symposium on Techniques of Quantitative Fire Hazard Analysis, College Park, MD, March 6, 1985.
11. Milke, J.A., "An Overview of Structural Design Methods for Fire Conditions," presented at the ASCE Spring Convention, Denver, CO, May 1, 1985.
12. Milke, J.A., "SFPE Educational Programs and the University of Maryland Curriculum," presented at the National Fire Protection Association Annual Meeting, Atlanta, GA, May 19, 1986.

13. Milke, J.A., "Design Considerations for Atriums and Large Spaces," presented at the National Fire Protection Association Fall Meeting, Portland, OR, November 10, 1987.
14. Milke, J.A., "Verifying Fire Protection Models," presented at the Society of Fire Protection Engineers Annual Meeting, Los Angeles, CA, May 17, 1988.
15. Milke, J.A., "Design Analysis for Smoke Control in Large Open Areas," presented at the SFPE Chesapeake Chapter Seminar "Smoke Control: Design Application and Experience," Laurel, MD, March 16, 1989.
16. Milke, J.A., "Seminar on Smoke Management System Design," Philadelphia Chapter of the American Society of Heating, Refrigerating and Air Conditioning Engineers, Philadelphia, PA, February 11-12, 1993.
17. Milke, J.A., "Computer Aided Design for Smoke Management in Atria," presented at the Society of Fire Protection Engineers Chesapeake Chapter Spring Seminar, College Park, MD, March 23, 1993.
18. Milke, J.A., "An Introduction of the NFPA 92B Standard and its Background," presented at the Seminar on Protection of Atria, Lund University, Lund, Sweden, May 11, 1993.
19. Milke, J.A., "Fire Protection for Hazardous Materials Outdoor Storage: Underground Tanks vs. Above Ground Tanks," presented at Seminar on The Impact of Environmental Regulations on Fire Protection, Safety Council of Maryland, Baltimore, October 7, 1993.
20. Milke, J.A., "Towards an Artificial Nose for Fire Detection," presented at the Annual Conference on Fire Research, Rockville, MD, October 19, 1993.
21. Milke, J.A., "Initial Application of Neural Networks to Discriminate Between Fire and Non-Fire Odors," presented at the Annual Conference on Fire Research, Rockville, MD, October 19, 1993.
22. Milke, J.A., "Coordination Issues for Fire Alarm and HVAC Systems," presented at the St. Louis Chapter of the American Society of Heating, Refrigerating and Air Conditioning Engineers, St. Louis, October 10, 1994.
23. Milke, J.A., "Large-scale Experiments of Fire Signatures to Develop a Discriminating Fire Detector," presented at the Annual Conference on Fire Research, Gaithersburg MD, October 19, 1994.
24. Milke, J.A., "Fire Safe Design for Atriums," presented at the Federal Fire Forum, Gaithersburg, MD, November 1, 1994.
25. Milke, J.A., "Experimental Evaluation of Water Mist for Fire Suppression," presented at the National Fire Protection Association Fall Meeting, Toronto, November 16, 1994.
26. Milke, J.A., "Overview of Water Mist Fire Suppression Systems," presented at the:
  - Maryland Chapter of Risk and Insurance Management Society, College Park, MD, September 16, 1994.
  - Virginia Chapters of Society of Fire Protection Engineers and American Society of Safety Engineers, Richmond, VA, January 23, 1995.
  - Minnesota Fire Protection Council, Minneapolis, MN, March 29, 1995.

- St. Louis Chapter of Society of Fire Protection Engineers, St. Louis, January 16, 1996.
  - Rocky Mountain Chapter of Society of Fire Protection Engineers, Denver, CO, February, 7, 1996.
  - Special Fire Extinguishing Technologies Seminar, NY-NJ Chapter of Society of Fire Protection Engineers, Newark, NJ, April 1, 1996.
  - 2nd Annual Fire Protection Engineering Trade Show, Phoenix, AZ, June 13, 1996.
  - Michigan Chapter of Society of Fire Protection Engineers, Livonia, MI, January, 21, 1997.
27. Milke, J.A., "Applications and Limitations of Engineering Principles for Smoke Management System Design," presented at the meeting of American Society of Heating, Refrigerating and Air Conditioning Engineers National Capital Chapter and the Society of Fire Protection Engineers Chesapeake Chapter, Arlington, VA, March 15, 1995.
  28. Milke, J.A., "Fire Resistance Modeling of Steel Structures: Fundamentals," University of British Columbia, Vancouver, BC, June 1, 1995.
  29. Milke, J.A., "Fire Resistance Modeling of Steel Structures: Applications," University of British Columbia, Vancouver, BC, June 2, 1995.
  30. Milke, J.A., "Computer Modeling for Fire and Smoke Management," presented at the 1996 American Society of Heating, Refrigerating and Air Conditioning Engineers Annual Meeting, Seminar 03, San Antonio, TX, June 23, 1996.
  31. Milke, J.A., "Understanding Fire Development," 47th Annual Michigan Fire Inspectors Society Fall Education Seminar, Michigan State University, September 19, 1996.
  32. Milke, J.A., "Challenges of Smoke Management System Design and Testing," Minnesota Fire Protection Council, Minneapolis, MN, October 23, 1996.
  33. Milke, J.A., "Evaluating the Fire Resistance of Composite Construction Assemblies," Composites Institute, International Composites Expo '97, Nashville, TN, January 29, 1997.
  34. Milke, J.A., "Discriminating Fire Detection with Multiple Sensors and Neural Networks," National Fire Protection Research Foundation, Fire Suppression and Detection Symposium, Orlando, FL, February 12, 1997.
  35. Milke, J.A., "Limitations of Current U.S. Standards and Challenges of Proposed Performance-Based Standards," National Institute of Standards and Technology Workshop on Fire Performance of High-Strength Concrete, Gaithersburg, MD, February 13, 1997.
  36. Milke, J.A., "Analysis of Fire and Non-fire Signatures for Discriminating Fire Detection," 5th International Symposium on Fire Safety Science, Melbourne, Australia, March 5, 1997.
  37. Milke, J.A., "A Proposed System of Performance Based Standards: Motivation, Structure, and Concerns," Performance Based Standards - The 2nd Symposium of the Oklahoma State University's School of Fire Protection and Safety, Stillwater, OK, March 20, 1997.
  38. Milke, J.A., "Water Mist Fire Suppression for Electronic Equipment Applications," 19th Annual International High Technology, Safety, Industrial Hygiene and Environmental Conference and Exhibition, Semiconductor Safety Association, Orlando, FL, April 3, 1997.

39. Milke, J.A., "CO<sub>2</sub> Sensing Technology for Fire Detection," National Fire Protection Association Annual Meeting, Los Angeles, May 20, 1997.
40. Milke, J.A., "Predicting the Performance of Construction," National Fire Protection Association Annual Meeting, Los Angeles, May 20, 1997.
41. Milke, J.A., "Fire Applications of Network Flow Modeling," ASHRAE Annual Meeting, Boston, June 29, 1997.
42. Milke, J.A., "A Simplified Model for Estimating the Thermal Response of Steel Beam/Concrete Slab Ceiling Assemblies," ICFRE2, Gaithersburg, MD, August 14, 1997.
43. Milke, J.A., and Shaner, D.L., "Discrimination Between Smoldering and Nuisance Sources Using Gas Signatures," ICFRE2, Gaithersburg, MD, August 15, 1997.
44. Milke, J.A., "Overview of Research on Smart Detection," Cerberus Pyrotronics, Zurich, Switzerland, October 20, 1997.
45. Milke, J.A., "Applying Standard Fire Test Results in Real Buildings," Florida Fire Marshals Conference, Ft. Lauderdale, November 1, 1997.
46. Milke, J.A., "Evaluating Smoke Management Designs and Test Plans," Florida Fire Marshals Conference, Ft. Lauderdale, November 2, 1997.
47. Milke, J.A., "Fire Protection Engineering in the U.S. - A Period of Change," Seoul Polytechnic University, November 10, 1997.
48. Milke, J.A., "Risk Analysis Methods and Interpretation of Results," Samsung Fire and Marine Insurance Seminar, Seoul, November 12, 1997.
49. Milke, J.A., "Fire Protection of Computer Rooms," Samsung Fire and Marine Insurance Seminar, Seoul, November 12, 1997.
50. Milke, J.A., "Smoke Management in Large Spaces," Victoria Building Control Commission, Sydney, February 23, 1998 and Melbourne, February 25, 1998.
51. Milke, J.A., "Interaction of Smoke Management and Other Fire Protection Systems," presented at the meeting of American Society of Heating, Refrigerating and Air Conditioning Engineers National Capital Chapter and the Society of Fire Protection Engineers Chesapeake Chapter, Arlington, VA, March 11, 1998.
52. Milke, J.A., "Fire Detection and Suppression Systems," Fire Protection Forum for Historic Annapolis, Annapolis, MD, May 28, 1998.
53. Milke, J.A., "Fire Protection Planning: Before, During and After the Fire", Seminar on Fire Protection Systems, Bangkok, Thailand, November 9, 1998.
54. Milke, J.A., "Smoke Hazard and Smoke Movement", Seminar on Fire Protection Systems, Bangkok, Thailand, November 9, 1998.
55. Milke, J.A., "Water Mist Systems", Seminar on Fire Protection Systems, Bangkok, Thailand, November 10, 1998.

56. Milke, J.A., "Response of People to Fire", Seminar on Fire Protection Systems, Bangkok, Thailand, November 10, 1998.
57. Milke, J.A., "Fire Behavior-Beyond the Basics," Chief Officers Seminar, Maryland Fire and Rescue Institute, January 17, 1999.
58. Milke, J.A., "Using Multiple Sensors for Discriminating Fire Detection," Fire Suppression and Detection Research Application Symposium, Orlando FL, February 25, 1999.
59. Milke, J.A., "Fire Behavior for Fire Officers," 1999 National Fire Service Staff and Command Course," Ocean City, March 25, 1999.
60. Milke, J.A., "Smoke Management Systems," Melbourne, Sydney and Brisbane, April, 1999.
61. Milke, J.A., "Estimating the Fire Performance of Concrete and Masonry Structural Members," Proceedings of the 1999 Structures Congress, ASCE, 1999, 377-380.
62. Milke, J.A., "Estimating the Fire Performance of Steel Structural Members," 1999 Structures Congress, ASCE, New Orleans, April, 1999.
63. Milke, J.A., "Education Issues," Second Conference on Fire Safety Design in the 21<sup>st</sup> Century, WPI, June 9, 1999.
64. Milke, J.A., "Evaluating the Early Development of Smoke Hazard from Fires in Large Spaces," 2000 ASHRAE Winter Meeting, Dallas, TX, February 6, 2000.
65. Milke, J.A., "Design and Modeling of Smoke Movement in Atria," International Workshop on Performance Based Design for Fire Safety, Vancouver, February 18, 2000.
66. Milke, J.A., Cholin, J.M., and Mowrer, F.M., "Investigation into the Application of Duct Smoke Detectors in Heating, Ventilating and Air Conditioning Systems: A Status Report," World Fire Safety Congress, Denver CO, May 16, 2000.
67. Milke, J.A. and Colletto, A., "Performance-Based Structural Fire Protection Design: Project Overview," World Fire Safety Congress, Denver CO, May 16, 2000.
68. Milke, J.A., "Monitoring Multiple Aspects of Fire Signatures for Discriminating Fire Detection," Building and Fire Research Laboratory, NIST, June 20, 2000.
69. Milke, J.A., "Smoke Management System Design Aides Using Models," Fire Protection Engineering, 7, 2000, 17-18, 22.
70. Milke, J.A., "A Framework for Performance-Based Fire Resistance Analyses," Fire and Materials 2001, San Francisco, CA, January 24, 2001.
71. Milke, J.A., "Pursuing a Career in Fire Protection Engineering," Trinity College, April 21, 2001.
72. Milke, J.A., "Measurements of Smoke Characteristics in HVAC Ducts," NFPA World Fire Safety Congress, Anaheim, CA, May 15, 2001.
73. Milke, J.A., "Performance-Based Analysis Methods to Determine the Fire Resistance of Structural Members," 2001 Structures Congress, Washington, DC, May 2001

74. Milke, J.A., "Effectiveness of High-Capacity Smoke Exhaust in Large Spaces," International Conference on Engineered Fire Protection Design, San Francisco, CA, June 14, 2001.
75. Milke, J.A., "Fire Safety Issues," Corporate Advisory Board and the Building Futures Council, Civil Engineering Research Foundation, Washington, DC, October 23, 2001.
76. Milke, J.A., "Contemporary Issues for Smoke Management in Large Spaces," National Capital Region Chapter of SFPE, Ottawa, ON, November 29, 2001.
77. Milke, J.A., "Use of Optical Density-Based Measurements as Metrics for Smoke Detectors," 2002 ASHRAE Winter Meeting, Atlantic City, NJ, January 14, 2002.
78. Milke, J.A., "The Coming-of-Age of Fire Protection Engineering," Oregon Center for Advanced Technology Education, Portland, OR, January 18, 2002.
79. Milke, J.A., "Investigation into the Characteristics of a Smart Fire Detector," Fire Suppression and Detection Research Application Symposium, Fire Protection Research Foundation, Tampa, FL, January 24, 2002.
80. Milke, J.A., "Building Performance Study of the World Trade Center Incident," Flame Retardants in Our New World, FRCA Spring 2002 Conference, San Antonio, TX, March 12, 2002.
81. Milke, J.A., "Review of the Performance of Fire-Exposed Buildings in the World Trade Center," Structures in Fire, Christchurch, New Zealand, March 18, 2002.
82. Milke, J.A., "Scope of the World Trade Center Building Performance Study," University of Canterbury, Christchurch, New Zealand, March 18, 2002.
83. Milke, J.A., "Effect of Fire on Building Materials," Minnesota Chapter IAAI 2002 Fire Investigation Conference, St. Cloud, MN, March 29, 2002.
84. Milke, J.A., "Fire Protection Issues: WTC and Pentagon," Structures Congress, ASCE, Denver CO, April 5, 2002.
85. Milke, J.A., "Assessing Fire Severity in Performance-Based Fire Resistance Analyses," Identifying Innovative Research Needs to Foster Improved Fire Safety in the United States, National Research Council, Washington, DC, April 16, 2002.
86. Milke, J.A., "Terrorist attack(s) on New York WTC – findings on evacuation issues," CIB Global Leaders Summit on Tall Buildings, BRE, Watford, UK, April 24, 2002.
87. Milke, J.A., "Overview of the WTC Building Performance Study," SFPE Annual Meeting, Minneapolis, MN, May 19, 2002.
88. Milke, J.A., "The BPAT Study of the World Trade Center Disaster," World Safety Conference, Minneapolis, MN, May 20, 2002.
89. Milke, J.A., "Description of Fire Exposure to Exterior Structural Members," World Safety Conference, Minneapolis, MN, May 21, 2002.
90. Milke, J.A., "Investigation of the Application of Duct Smoke Detectors in HVAC Systems – Final Report," World Safety Conference, Minneapolis, MN, May 22, 2002.

91. Milke, J.A., "Overview of the Building Performance Study of the World Trade Center: Collapse of the Twin Towers," Fire Risk and Hazard Assessment Research Application Symposium, Fire Protection Research Foundation, Baltimore, MD, July 25, 2002.
92. Milke, J.A., "The Study of Building Performance in the WTC Disaster," presented at the
  - a. International Finance Corporation, Washington, DC, May 24, 2002.
  - b. American Institute of Steel Construction, Chicago, IL, May 9, 2002.
  - c. Quad States Building Officials, Sidney, NE, August 8, 2002.
  - d. Austin/San Antonio Chapter SFPE, September 11, 2002.
  - e. Northeast Ohio Chapter of SFPE, Cleveland, OH, September 12, 2002.
  - f. Ohio Chapter of SFPE, Columbus, OH, September 12, 2002.
  - g. Tri-states Chapter of SFPE, Cincinnati, OH, September 13, 2002.
  - h. SFPE Professional Development Week, Baltimore, MD, September 18, 2002.
  - i. Mid-Atlantic Life Safety, Columbia, MD, October 1, 2002.
  - j. Association of Professional Engineers and Geoscientists of New Brunswick, Fredericton, NB, October 3, 2002
  - k. Southern Ontario Chapter of SFPE, Toronto, ON, October 8, 2002.
  - l. MO-KAN Chapter of SFPE, Kansas City, KS, October 10, 2002.
  - m. Three Rivers Chapter of SFPE, Pittsburgh, PA, November 15, 2002
93. Milke, J.A., "Study of Building Performance in the WTC Buildings," International Symposium on Structures in Fire, Singapore, October 24, 2002.
94. Milke, J.A., "Study of Building Performance in the WTC Buildings," International Symposium on Structures in Fire, Hong Kong, October 28, 2002.
95. Milke, J.A., "Heating of Floor Systems in WTC 1 and 2," Structures Congress, ASCE, Seattle, WA, May 30, 2003.
96. Milke, J.A., "Fire Resistance Analysis," Rocky Mountain Chapter, SFPE, Westminster, CO, June 13, 2003.
97. Milke, J.A., "Fire Resistance Analysis," Tennessee Valley Chapter, SFPE, Oak Ridge, TN, August 21, 2003.
98. Milke, J.A., "Smoke Management Analysis," Tennessee Valley Chapter, SFPE, Oak Ridge, TN, August 22, 2003.
99. Milke, J.A., "Smoke Management Analysis," Broward County Board of Appeals, Fort Lauderdale, FL, August 27, 2003.
100. Milke, J.A., "The Study of Building Performance in the World Trade Center Incident," Bourgen-Bresse, France, September 25, 2003.
101. Geiman, J.A., Gottuk, D.T., and Milke, J.A., "Evaluation of Smoke Detector Response Estimation Methods," NFPRF Fire Detection and Suppression Symposium, Orlando, FL, January 2004.



102. Milke, J.A., and Roushdy, S., “Innovations and Student Impressions of Distance Delivery of an Engineering Curriculum,” Teaching with Technology Conference, College Park, MD, April 9, 2004.
103. Milke, J.A., “Evacuation and Toxicity Analysis,” Florida Chapter of SFPE, Orlando, FL, April 29, 2004.
104. Almand, K.H., and Milke, J.A., “Distance Learning for the Fire Service – Principles of Fire Protection Engineering,” NFPA World Safety Congress, Salt Lake City, May 25, 2004.
105. Milke, J.A., “Overview of Smoke Management Systems,” EduCode International Meeting, Las Vegas, NV, February 11, 2005.
106. Milke, J.A., “Design Approaches to Meet Smoke Management Challenges,” Southeastern SFPE Chapter Seminar, Atlanta, GA, March 3, 2005.
107. Milke, J.A., “Testing & Commissioning of Smoke Management Systems,” Southeastern SFPE Chapter Seminar, Atlanta, GA, March 3, 2005.
108. Milke, J.A., “Introduction to Structural Fire Protection Engineering,” Koffel Associates Annual Meeting, Maui, HI, August 1, 2005.
109. Milke, J.A., “Introduction to Structural Fire Protection Engineering,” Hawaii Chapter of SFPE, Honolulu, HI, August 5, 2005.
110. Milke, J.A., “Introduction to Structural Fire Protection Engineering,” EduCode International Meeting, Las Vegas, NV, March 3, 2006.
111. Milke, J.A., “How to Obtain Credible Results from Evacuation Models,” Minnesota Chapter of SFPE, Minneapolis, MN, May 30, 2006.
112. Milke, J.A., “Stop, Drop, and Roll” – The Technical Substantiation Behind Public Fire Safety Messaging,” NFPA World Safety Congress, Orlando, FL, June 6, 2006.
113. Milke, J.A., “The Interdisciplinary Nature of Structural Fire Protection,” *Structure*, Vol. 13, No. 6, NCSEA/CAE/SEI, June 2006.
114. Milke, J.A., “Hot Buttons to Recruit Young Candidates to the Fire Protection Industry” Mid-Atlantic Regional Meeting, National Fire Sprinkler Association, Ocean City, MD, July 21, 2006.
115. Milke, J.A., “Effectiveness of High-Capacity Smoke Exhaust in Large Spaces,” International Colloquium on Challenging Topics of Fire Safety and Combustion 2006, Chung Ang University, Seoul, August 23, 2006.
116. Milke, J.A., “Technical Writing Roundtable: Priorities for Teaching Technical Writing in an Ever-expanding Universe of Possibilities,” University of Maryland, August 29, 2006.
117. Milke, J.A., “Structural Fire Resistance: Past Accomplishments and Future Opportunities,” RJA Group Technical Leadership Conference, Chicago, IL, September 8, 2006.
118. Milke, J.A., “Design of Sprinkler Systems,” ASPE DC Chapter, Tysons Corner, VA, March 21, 2007.

119. Milke, J.A., "Simple Calculation Methods for Predicting SFS," National Workshop on Structures and Fire: Research Needs, Michigan State University, June 11, 2007.
120. Milke, J.A., "Round Table Discussion on Smoke Control," Arup, San Francisco, September 27, 2007.
121. Milke, J.A. and Lamont, S.L., Santa Clara Structural Fire Protection,
122. Milke, J.A., "Multi-Sensor Fire and Smoke Detection," UL University, Chicago, IL, November, 15, 2007.
123. Milke, J.A., University of Edinburgh, Edinburgh, Scotland, February 8, 2008.
124. Milke, J.A., "US Practice in Structural Fire Protection, Arup, London, February 18, 2008.
125. Milke, J.A., "Structural Fire Engineering in North America since 9/11," University of Canterbury, Christchurch, New Zealand, March 2008.
126. Milke, J.A., "Recent Advances in Smoke (and Fire) Detection Technology," SFPE Chesapeake Chapter Education Seminar, Beltsville, MD, April 8, 2008.
127. Milke, J.A., "Smoke Characterization- Issues-Progress-What the future will bring," NEMA 3SB Industry Forum, Santa Fe, NM, April 30, 2008.
128. Milke, J.A., "Smoke Control Discussion – Passive Systems," SFPE Southern California Chapter, Los Angeles, CA, July 9, 2008.
129. Milke, J.A., "Smoke Management in Laboratory Buildings," North Carolina State University, Raleigh, NC, July 18, 2008.
130. Milke, J.A., "Fire Protection Engineering Education," Panel on U.S. Training and Education System (for engineers - designers, architects, inspectors, construction site supervisors) in Fire Safety for Buildings, National Institute of Standards and Technology, Gaithersburg, MD, September 26, 2008.
131. Milke, J.A., "Tenability Analysis," Greater Atlanta SFPE Chapter, Atlanta, GA, March 17, 2009.
132. Milke, J.A., "Smoke Control System Design-Promises and Pitfalls," Greater Atlanta SFPE Chapter, Atlanta, GA, March 18, 2009.
133. Milke, J.A. and Mottley, M., "Video Image Detection," 2009 Preservation Workshop, Fire Protection Options for Historic Buildings, Modern technology meets historic fabric, Arlington, VA, March 20, 2009.
134. Milke, J.A., "Analysis of Response Characteristics of CCTV Surveillance for Fire Detection," Maryland Industrial Partnerships, College Park, MD, March 31, 2009.
135. Milke, J.A., "Fire Protection Engineering Distance Learning Programs," NEI Fire Protection Information Forum, Savannah, GA, September 22, 2009.

136. Milke, J.A., "The Collection of Topics which Comprise Fire Protection Engineering," Firestop Contractors International Association Annual Meeting, Key Biscayne, FL November 12, 2009.
137. Milke, J.A., "Smoke Control: Recent Progress and Areas for Improvement," SFPE Minnesota Chapter, Minneapolis, MN, February 24, 2010.
138. Milke, J.A., "Performance of Smoke Detectors and Sprinklers in Residential and Health-Care Occupancies," NFPA World Fire Safety Conference, Las Vegas, NV, June 8, 2010. (Also presented at AFAA Codes Conference & Annual Meeting, San Diego, CA, April 30, 2010 and NEMA 3SB Meeting, Savannah, GA., May 11, 2010).
139. Milke, J.A., "Theory of Smoke Management," Northern California-Nevada Chapter of the Society of Fire Protection Engineers, Santa Clara, CA, June 15, 2010.
140. Milke, J.A., and Blair, A., "The Effect of Stair Width on Occupant Speed and Flow in High Rise Buildings," National Institute of Standards and Technology, Gaithersburg, MD, August 17, 2010.
141. Milke, J.A., "The History of Smoke Detection: A Profile of How the Technology and Role of Smoke Detection has Changed," presented at SUPDET 2011 Conference, Orlando, FL, March 23, 2011.
142. Milke, J.A., "Sprinklers and Vents: A Widely Debated Combination," NFSA Annual Seminar and Exhibition, Baltimore, MD, April 8, 2011.
143. Milke, J.A., "The Relative Role of Smoke Detectors and Sprinklers in Providing Life Safety in Residential Occupancies," NFPA Conference and Expo, Boston, MA, June 13, 2011.
144. Milke, J.A. and Leahy, A., "Observed Trends in Human Behavior Phenomena within High-Rise Stairwells," National Institute of Standards and Technology, Gaithersburg, MD, August 23, 2011.
145. Milke, J.A., "Detection Research at the University of Maryland," presented at NEMA 3SB meeting, Key West, FL, Nov. 3, 2011.
146. Milke, J.A., "Fire Protection Systems in Buildings and Industrial Complexes," 11 Congreso Internacional de Bomberos, Bogota, Columbia, Nov. 30, 2011.
147. Milke, J.A., "Smoke Control: Recent Progress and Areas for Improvement,"
  - a. Kansas SFPE Chapter, Kansas City, KS, January 9, 2012;
  - b. Chicago SFPE Chapter, September 17, 2012
  - c. Wisconsin SFPE Chapter, September 18, 2012.
148. Milke, J.A., "Life After a Bachelor's Degree," Oklahoma State University, Stillwater, OK, April 2, 2012.
149. Milke, J.A., "SFPE Goals for 2012," Napa, CA, April 18, 2012.
150. Milke, J.A., "Guidelines for Estimating Smoke Detector Response" 9th International Conference on Performance-Based Codes and Fire Safety Design Methods, Hong Kong, June 20, 2012.

151. Milke, J.A., "Comparative Loss of Life and Injury Analysis in Commercial, Industrial and Education Institution Housing," presented at NEMA 3SB meeting, Napa, CA, April 18, 2012 and Atlanta, GA September 19, 2012.
152. Milke, J.A., "Overview of World Trade Center Disaster," Rio Grande Chapter of the Society of Fire Protection Engineers, Santa Fe, NM, October 30, 2012.
153. Milke, J.A., "Overview of Engineering Methods for Cost-Effectiveness Analyses of Smoke Control Systems," presented at Fire Australia, Fire Protection Association Australia, Melbourne, November 14, 2012.
154. Milke, J.A., "Comparative Loss of Life and Injury Analysis in Commercial, Industrial and Education Institution Housing," 2013 Suppression, Detection and Signaling Research and Applications Symposium, Orlando, FL, February 26, 2013.
155. Zevotek, R., Milke, J., and Fabian, T., "Predictors for the Detection of Cooktop Fires," 2013 Suppression, Detection and Signaling Research and Applications Symposium, Orlando, FL, February 26, 2013. (received Ronald K. Mengel Award for best paper)
156. Milke, J.A., "Assessment of Existing Fire Protection Features," 9<sup>th</sup> Annual Fire Safety Conference SFPE Greater Atlanta Chapter, March 13, 2013.
157. Milke, J.A., "Reviewing Reliability Statistics for Fire Protection," NFSA Annual Seminar, Las Vegas, NV, April 5, 2013.
158. Klote, J.H., Ferreira, M.J., and Milke, J.A., "Elevator Pressurization," Fire Protection Engineering, April 2013.
159. Milke, J.A., "Comparative Loss of Life and Injury Analysis in Commercial, Industrial and Education Institution Housing," presented at NEMA 3SB meeting, Deerfield Beach, FL, April 17, 2013.
160. Milke, J.A., "Performance and Reliability of Fire Protection Systems," FCIA Annual Seminar, Denver, CO, May 1, 2013.
161. Milke, J.A., "Performance of Fire Protection Systems in the Field," NASA Operational Safety Guest Lecture, Goddard Space Flight Center, Greenbelt, MD, May 21, 2013.
162. Milke, J.A., "Fire Protection Systems in Buildings and Industrial Complexes," III FORO NFPA 2013, Lima, Peru, May 31, 2013.
163. Milke, J.A., "Fire Protection Engineering Education," III FORO NFPA 2013, Lima, Peru, June 1, 2013.
164. Milke, J.A., "Performance of Smoke Detectors and Sprinklers in Commercial Occupancies," NFPA Conference and Expo, Chicago, IL, June 10, 2013.
165. Milke, J.A., "Performance of Smoke Detectors and Sprinklers in Residential and Healthcare Occupancies, AFAA Illinois meeting, Addison, IL, June 14, 2013.
166. Fabian, T., Milke, J.A. and Zevotek, R. "Predicators for the Detection of Cooktop Fires," SFPE Engineering Technology Conference, Austin, TX, October 29, 2013.

167. Campbell, C. and Milke, J.A., "An Overview of Research on Occupant Movement in Stairwells," SFPE Engineering Technology Conference, Austin, TX, October 29, 2013.
168. Milke, J.A., "Performance and Reliability of Active and Passive Fire Protection Systems," Virginia Central Chapter of SFPE, Henrico, VA, November 25, 2013.
169. Milke, J.A., "Comparative Loss of Life and Injury Analysis in Commercial and Industrial Occupancies," Sao Paulo, Brazil, December 10, 2013.
170. Milke, J.A., "Performance and Reliability of Active and Passive Fire Protection Systems," Chesapeake Chapter of SFPE, College Park, MD, January 8, 2014.
171. Milke, J.A., "Analysis of the Response of Smoke Detectors to Smoldering Fires and Nuisance Sources, 2014 Suppression, Detection and Signaling Research and Applications Symposium, Orlando, FL, March 6, 2014.
172. Milke, J.A., "An Overview of Research on Occupant Movement in Stairwells," 10<sup>th</sup> Annual Fire Safety Conference SFPE Greater Atlanta Chapter, March 12, 2014.
173. Milke, J.A., "Compartmentalization Design," 2014 EHSFP Conference, Northrup Grumman, Linthicum, MD, May 21, 2014.
174. Lannon, C. and Milke, J.A., "Hazard Assessment for Fire Fighter Training Buildings," NFPA Conference and Expo, Las Vegas, NV, June 11, 2014.
175. Milke, J.A., "Introduction to Smoke Control Systems," Medellin, Colombia, July 10-11, 2014.
176. Milke, J.A., "Performance and Reliability of Active and Passive Fire Protection Systems," New England SFPE Chapter, Norwood, MA, October 6, 2014.
177. Milke, J.A., "Computational Design Aids for Smoke Management Systems," Greater Atlanta Chapter SFPE, Gwinnett, GA, March 2015.
178. Milke, J.A., "Structural Fire Protection," Congresso Internacional De Protection Contra Incendios, Bogota, Colombia, May 2015.
179. Milke, J.A., "Smoke Control: Recent Progress and Areas for Improvement," Rocky Mountain Chapter SFPE, Denver CO, March 10, 2016.
180. Milke, J.A., "Fire Resistant Building Assemblies Assessment Methods," Greater Atlanta Chapter SFPE, Gwinnett, GA, March 15, 2016.
181. Pongratz, C., and Milke, J., TP S1: Airflow Measurement and Predictions A CFD Study to Identify Methods to Increase Maximum Velocity of Make-Up Air for Atrium Smoke Control, 2016 ASHRAE Annual Conference
182. Milke, J.A., "Transformative Changes in Fire Protection Engineering," Guise Medal Lecture, Denver CO, September 26, 2016.
183. Milke, J.A., "Transformative Changes in Fire Protection Engineering," Chesapeake Chapter SFPE, January 10, 2017.

184. Milke, J.A., "Proving the Power of Addressable Notification," NFPA Conference and Expo, Las Vegas, NV, June 5, 2017.
185. Milke, J.A., "Engineers on Fire: Contemporary Smoke Control Design and Testing," Honeywell Educational Seminar Series," Miami, FL, June 28, 2017.
186. Milke, J.A., "Smoke Control – Simplifying a Complex and Critical System," Honeywell APC 2017, Scottsdale, AZ, October 9-10, 2017.
187. Milke, J.A., "Transformative Changes in Fire Protection Engineering," FireTech 2018, Stillwater, OK, March 20, 2018.
188. Milke, J.A., "The History of Smoke Control and Remaining Areas for Improvement," FireTech 2018, Stillwater, OK, March 20, 2018.
189. Milke, J.A., "Overview of the Department of Fire Protection Engineering at the University of Maryland," NEMA Industry Forum, Alexandria, VA, May 1, 2018.
190. Milke, J.A., "The History of Smoke Control and Remaining Areas of Improvement," SFPE Philadelphia-Delaware Valley Chapter SFPE, King of Prussia, PA, April 11, 2019.
191. Milke, J.A., "Fearless Ideas for Fire Safety- Situational Awareness in Fire Incidents," NEMA Industry Forum, Alexandria, VA, April 30, 2019.
192. Milke, J.A., "Smoke Control Design," Industry Roundtable with Rodger Reiswig. Podcast with Johnson Controls, July 29, 2019.
193. Milke, J.A., "Advances in Fire Safety Solutions through Research," Fire Safety and Emergency Preparedness Conference, Canadian Nuclear Society, Ottawa Canada, October 30, 2019.
194. Milke, J.A. and Gerard, Robert, "Navigating the 'New Normal': COVID-19 Social Distancing Simulation for Public Buildings and Spaces," Webinar, University of Maryland, June 25, 2020.
195. Milke, J.A. and Hanegan, Traci, "Epidemic Preparedness for Our Buildings," Webinar, University of Maryland, July 28, 2020.
196. Milke, J.A., "Computational Simulations to Develop Plans for Reopening During COVID-19," Faculty Lecture Series, Department of Fire Protection Engineering, University of Maryland, July 29, 2020.
197. Milke, J.A., "Fire Protection Engineering for the Next Generation," Smart Infrastructure Summit & Expo, Siemens Building Technologies, Oct. 1, 2020.
198. Milke, J.A., "Impact of Fire Protection Solutions on the Environment," SFPE Virtual Annual Conference, November 10, 2020.
199. Milke, J.A., "Providing a Pathway to Professional Licensure through Accredited Education," SFPE Virtual Annual Conference, November 11, 2020.
200. Milke, J.A., "Predictive Diagnostics in Life-Safety," Johnson Controls: Predictive Life Safety Webinar, December 10, 2020.

201. Milke, J.A., and Fisher, D., “Hangar Foam Systems: Recent Field Experience, Environmental Concerns, and the Search for Alternatives,” Greater Atlanta Chapter of SFPE 17<sup>th</sup> Annual Fire Safety Conference, March 17, 2021.
202. Milke, J.A., “Foam Systems in Aircraft Hangars: Recent Field Experience, Environmental Concerns, and the Search for Alternatives,” Chesapeake Chapter SFPE, May 12, 2021.
203. Milke, J.A., “Social Inequities of Implementing Fire Safety in Developing Countries,” Fire Protection Engineering Faculty Lecture Series, University of Maryland, July 14, 2021.
204. Milke, J.A., “What is a Fire Protection Engineer,” Industry Roundtable with Rodger Reiswig. Podcast with Johnson Controls, September 2, 2021.
205. Milke, J.A., “Fire Engineering: Scope and Application in the Modern World,” Expert Lecture for GSFC University, December 4, 2021.
206. Milke, J.A. and Poole, J., “Design Fire and Material Performance Database Project,” SFPE Foundation, March 1, 2022.
207. Milke, J.A. and Stacy, D., Poole, J., “Design Fire and Material Performance Database Project,” Greater Atlanta Chapter of SFPE, March 16, 2022.
208. Milke, J.A. and Poole, J., “Performance Criteria for Aircraft Hangar Fire Protection Systems,” Fire Protection Research Foundation, March 24, 2022.
209. Milke, J.A., “New Developments in Smoke Control Designs,” Northern California-Nevada SFPE Chapter, April 15, 2022.
210. Milke, J.A., “Smoke Management - Tenability Analyses and Selection of Design Fires,” SFPE Premium Webinar Series, April 19, 2022.
211. Milke, J.A., “Performance Criteria for Aircraft Hangar Fire Protection Systems,” Seminar for NASA Fire Protection, April 21, 2022.
212. Milke, J.A., “Use of AI and Machine Learning for Situational Awareness,” Grand Challenges Initiative, SFPE Foundation, April 28, 2022.
213. Milke, J.A., and Poole, J., “Performance Criteria for Aircraft Hangar Fire Protection Systems,” 2022 NFPA Conference and Expo, Boston, MA, June 9, 2022.
214. Milke, J.A., SUPDET Conference, Fire Protection Research Foundation, Atlanta, GA, September 15, 2022.
215. Milke, J.A., The FPE Profession: Past, Present, and Predictions of the Future,” 19th Annual Fire Safety Conference Greater Atlanta Chapter, SFPE, Duluth, GA, March 15, 2023.

### **3. TEACHING AND ADVISING**

#### **a. Courses Taught (2011-2020)**

*Hot Topics in Fire Protection Engineering*

*Introduction to Life Safety Analysis*  
*Structural Fire Protection*  
*Smoke Management and Fire Alarm Systems*  
*Smoke Detection and Management*  
*Smoke Control*  
*Advanced Life Safety Analysis*  
*Risk-Informed Performance Based Design*

**b. Manuals, Notes, Software, Webpages and Other Contributions to Teaching**

- Developed and delivered initial course for distance delivery in Department (2004).
- Developed software used as design aid in ENFP 405 to evaluate fire resistance of protected structural steel members.
- Led working group to develop users guide of existing software (FIRES-T3) for finite element heat transfer analysis used in ENFP 312, 405 and 621.
- Directed students to provide a user guide for widely recognized software (ASCOS) and (CONTAMW) from the National Institute of Standards and Technology. Subsequently, the students' user's guides were incorporated into publications of the American Society of Heating, Refrigerating and Air-Conditioning Engineers.
- Videotaped lectures for ENFP 627 for distance delivery, Summer 2013.
- Videotaped lectures for prospective MOOC course, "The Effect of Fires on People, Property and the Environment," Fall 2013.

**c. Advising (other than research direction)**

Available to all undergraduate fire protection engineering students (approximately 100) in addition to prospective students. Advise all students in online graduate program.

**ii. Graduate (Master's), Main Advisor, Master's Theses**

Name	Thesis Title	Date
Debra Bernstein	Using Fire Modeling to Compare the Hazard Levels in Office Building Corridors	1992
Randall Shearman	Algorithm for Design Analysis of Atrium Smoke Management	1992
Samuel Denny	Development of a Discriminating Fire Detector for Use in Residential Occupancies	1993
Bjarne Hagen	Evaluation of Gaseous Signatures in Large-Scale Test	1994
Arif Muhaimin	Vapor Cloud Explosion Hazard Analysis	1996



Dennis McCrory	Evaluation of Unmanned Test Facility's Capability to Measure Inhalation Gas Temperatures of Self-Contained Breathing Apparatus (SCBA) in High Heat Environments	1996
Mark Hopkins	A Study of Gaseous Signatures in Large-Scale Tests with Multiple Source Scenarios	1996
John V. Veltre	Cooling Rates of High and Low Momentum Water Mist Systems	1996
Susan S. Harrington	TIMTEX: A Hydraulic Flow Model for Emergency Egress	1996
Gerard G. Back, III	A Quasi-Steady State Model for Predicting Fire Suppression in Spaces Protected by Water Mist Systems	1996
Eric R. Rosenbaum	Evaluation of Fire Safety Design Alternatives	1997
Deborah L. Shaner	Discrimination Between Smoldering and Nuisance Sources Using Gas Signatures	1997
Philip Tapper	Fire Detection in Highbay Facilities Using a Modified LAVENT Computer Model	1997
Mary P. Hunstad	Heptafluoropropane as a Fire Suppression Alternative to Halon 1301 in Shipboard Flammable Liquid Storerooms	1998
Julie Nevaizer	Development of Generic Toxic Potency Data for Lethal and Incapacitation Effects of Fire Smoke on Humans	2001
Clarence Worrell	Evaluation of Advanced Fire Detection Algorithms Using Data From the Home Smoke Alarm Project	2002
Jamie L. Ferrino	An Investigation of Fire Phenomena in Residential Electrical Wiring and Connections	2002
Luis A. Cestari	Assessments of Multi-Component Fire Detection Algorithm Derived from Nuisance and Fire Data	2003
Justin Geiman	Evaluation of Smoke Detector Response Estimation Methods	2003
Erica Kuligowski	The Evaluation of a Performance-Based Design Process for a Hotel Building: The Comparison of Two Egress Models	2003
Bryan Hoskins	Characterization of the MIL-F24385F Nozzle	2005
Suzette Hartmann	A Study on Total Evacuation versus Select Evacuation for High-Rise Office Buildings	2005
Stephen I. Kerber	Positive Pressure Ventilation	2005
Darlene T. Rini	Critical Behavior of Long Span Cellular Beams in Fire	2006

Jessica Kratchman	An Investigation on the Effects of Firefighter Counterflow and Human Behavior in a Six-Story Building Evacuation	2006
Nicholas E. Ozog	Ignition Testing Of U.S. Army Rocket Launch Tubes With Comparative Heat Transfer Analysis	2007
Alan J. Kouchinsky	Development Of Video Image Detection Algorithm For Smoke Plumes	2007
Andrew T. Pomeroy	Analysis of the Effects of Temperature and Velocity on the Response Time Index of Heat Detectors	2010
John H.T. Miller	Analyzing Photo-Electric Smoke Detector Response Based On Aspirated Smoke Detector Obscuration	2010
Alyson J. Blair	The Effect of Stair Width on Occupant Speed and Flow of High Rise Buildings	2010
Andrew Leahy	Observed Trends in Human Behavior Phenomena within High-Rise Stairwells	2011
Gabriel Taylor	Evaluation of Critical Nuclear Power Plant Electrical Cable Response to Severe Thermal Fire Conditions	2012
Matthew D. Baker	Observed Behavior of Platoon Dynamics During High-rise Stairwell Evacuations	2012
Christopher Campbell	Occupant Merging Behavior During Egress From High Rise Buildings	2012
Kelly M. Opert	Assessment of Natural Vertical Ventilation for Smoke and Hot Gas Layer Control in a Residential Scale Structure	2012
Romil Patel	Effects of Radiant Heat Flux on Clean Agent Performance for Class-C Standards	2012
Christine Pongratz	Methods to Increase Velocity of Makeup Air for Atrium Smoke Control – A CFD Study	2014
Robert E. Hanson	Fire Hazard of the Contemporary American Home	2014
Robin E. Zevotek	Identification of Precursor Signals to Impending Cooking Related Fires	2014
Joseph Willi	Analysis of Propane Gas Fire Experiments and Simulations in Residential Scale Structures	2017
John M. Regan	Study of the Fidelity and Safety of the Fire Service Training Environment	2017
Katherine L. Ahrens	Increased Individual Size and Its Potential Effects of Emergency Evacuation Scenarios	2018
Selena K. Chin	The Scalability of Smoke Density and Viability of New Detection Methods in Aircrafts	2018

Luying Zhai	The Comparison of Total and Phased Evacuation Strategies for a High-rise Office Building	2019
Julie A. Bryant	Evaluation of the Accuracy of Fire Service Thermal Imaging Cameras to Measure Temperatures in Structure Fires	2019
Jessica Doermann	Development of a Research-Based Short Message Creation Tool for Wildfire Emergencies	2019
Jennifer Wood	Strategies for Improved Fire Detection Response Times in Aircraft Cargo Compartments	2020
Adam Quiat	Analysis of Propane Gas Burner Experiments and FDS Simulations in Two-Story Residential Structure with HVAC	2020
Karolyn Steranka	Feasibility Analysis and FDS Modeling of Water Mist Fire Suppression Systems for Protection of Aircraft Hangars	2021
Danielle Knox	Potential Effects of Increased Individual Size on Stairway Egress Time	2021
Deepanshu Bhatia	Pyrolysis Modeling and Material Property Validation with Flame Heat Feedback Model Application	2021
Kathryn Donlin	Determining Available Safe Egress Time Using a Variable Fractional Effective Dosage Analysis of Heat and Asphyxiant Gases In Single-Story Occupancies	2021
Shaheer Ahmad	Influence of the Air Gap in Firefighter Personal Protective Equipment on Skin Temperature in Pre-Flashover Thermal Exposures	2022
Alison Davis	Feasibility Analysis of Coupling FDS Modeling with Machine Learning for Situation Awareness in Aircraft Hangars	2022
Matthew Harris	Predicting the Temperature Increase of Residential Siding and Decking Materials in the WUI Due to External Heat Flux	2022
Adam Lee	Identifying Smoke Detection Biases within Differing Room Configurations for Zone and Computational Fluid Dynamic Models	2022
Nicholas Brondum	Firefighter Portable Radio Carrying Methods: Pocket or Strap?	2022
Genevieve Tan	Development of a Coupled FDS Modeling and Video Analysis Approach to Estimate the Burning Characteristics of a Thin-walled Humanitarian Shelter	2022

Examiner of thesis:

Martin Cole, Fire Risk Centre, Victoria Univ. of Technology, Melbourne, Australia (2000)

Elissa Fazio, Fire Risk Centre, Victoria Univ. of Technology, Melbourne, Australia (2006)

### **iii. Graduate (Doctorate)**

#### Main Advisor:

Erin M. Ashley, “Waking Effectiveness of Emergency Alerting Devices for the Hearing Able, Hard of Hearing and Deaf Populations”, 2007

Bryan L. Hoskins, “The Effects of Individual Characteristics and Group Dynamics in Stairs,” 2011

#### External Examiner:

Farid Alfawakhiri, Civil and Environmental Engineering, Carleton University, Ottawa, Canada (2001)

Ehab Zalok, Civil and Environmental Engineering, Carleton University, Ottawa, Canada (2006)

Roger Harrison, Department of Civil and Natural Resources Engineering, University of Canterbury, New Zealand (2009)

### **f. Extension Activities**

Develop and deliver general fire protection seminar for U.S. Veterans Administration, Insurance Services Office, U.S.F.& G., Naval Surface Weapons Center (1981-1986)

Develop and deliver seminars on hydraulics for National Foam (1983-1984) and Keystone Water Company (1984)

Develop and deliver courses for the Society of Fire Protection Engineers (1985-2014)

- Estimating the Fire Resistance of Steel Structural Members
- Design of Smoke Management Systems
- Smoke Management in Atria and Malls
- Smoke Management Systems
- Principles of Fire Protection Engineering
- Principles of Structural Fire Protection

Develop and deliver seminars for the Fire Marshals Association of North America:

- Principles of Fire Protection Engineering (1989-2003)
- Advanced Fire Protection Institute (1992)

Develop and deliver the following seminars for staff engineers at Duke Power:

- Heat Transfer Applications in Fire Protection (1992)
- Applications in Fire Dynamics (1994)
- Analytical Methods for Fire Resistance (1995)
- Fire Hazard Analysis Methods (1997)

Develop and deliver the seminar on fire development and material response to Santa Clara County (CA) Arson Task Force (1992)

Develop and deliver the course on Designing Building Fire Safety, Multiprotection Design Summer Institute, Emergency Management Institute, Federal Emergency Management Agency (1993-2000).

Develop training modules on structural fire protection, and life safety for Certified Fire Investigators Program, Bureau of Alcohol, Tobacco and Firearms (1993-2005)

Smoke management lectures for Marriott Corporation (June and October, 1996), Minnesota Fire Marshals Association (November, 1996; June 2011), New Zealand (July, August, 1997, March 2008), Greater Atlanta Chapter SFPE (2010), Building Performance Institute (Texas) (May 2012)

Special lectures on fire modeling to Korean students (June, 1997)

Develop and deliver the courses on Fire Modeling for US Naval Facilities Engineering Command (2000, 2003)

Develop and deliver course on Structural Fire Protection for ASCE (2002), Department of Energy (2012), OPCI (Bogata, Colombia)(2013)

Develop and deliver course on Hazard Analysis for Korean Railroad Research Institute (2007)

Develop and deliver seminar on Fire Protection Engineering for BP Alaska (2008)

Develop and deliver seminars for RJ Bartlett Engineering, Fredericton Canada (1999-2011)

Develop and deliver seminars, "LLNL Fire Modeling Short Course," Lawrence Livermore Laboratory, Livermore CA (March 2012)

#### **4. SERVICE**

##### **a. Professional**

##### *i. Offices and Committee Memberships held in Professional Organizations*

###### National Fire Protection Association

- Member of Standards Council (2008-2014)
- Technical Committees
  - Smoke Management Systems (member: 1987-present)(Chair: 1997-2006)
  - Fire Tests (1982-2001)(alternate, 2001-2011)
  - Safety to Life (alternate) (1986-2008)
  - Building Construction (1985-1994)
- Research Section (member: 1994-present)(Chair, 1998-1999)

###### Society of Fire Protection Engineers (SFPE)

- Board of Directors (2004-2013), President (2012)
- Engineering Education Committee (1982-2004) (past chairman, 1985-1990)
- Chairman, Task group on Advancement of the Technology in Structural Fire Protection (1984-1985)
- Chairman of task group on Documentation of Fire Models (1992-1994)
- Past president of Chesapeake Chapter (1987-1988)
- Steering Committee on Research Agenda (1999)

###### American Society of Civil Engineers:

- Charter Member, Structural Engineering Institute (1993-2012)
- American Society of Civil Engineers/Society of Fire Protection Engineers Committee on Structural Design for Fire Conditions (1987-2014)(Chair, 1995-2008)

- Program Committee, 2005 Structures Congress

American Institute of Steel Construction

- Fire Steering Committee (2000-present)
- Committee on Specifications, fire task group (2001-2016)

American Society for Testing and Materials: E-5 Technical Committee (1983-2011)

Underwriters Laboratories

- Fire Council (1989-present)
- Technical Advisory Panel on Smoke Detectors (1996-1997)
- Member of STP's on fire resistance, smoke and heat vents and smoke detectors

Institution of Structural Engineers: Fire Engineering Task Group (2004 – 2017)

*ii. Other Unpaid Services to Local, State and Federal Agencies*

- Consumer Product Safety Commission, Chairman's Roundtable on Residential Smoke Detection (1998)
- Steering Committee, Home Smoke Alarm Project, CPSC (2001-2003)
- Participation with Governor's Task Force on the Deaf and Hard of Hearing, 2006.
- Testify at House of Delegates Hearing, LNG Storage, March 12, 2009.

*iii. Other Non-University Committees, Commissions and Panels*

- Project Technical Panel, numerous projects, National Fire Protection Research Foundation (2005-present)

**b. Campus**

*i. Departmental*

- Chair (2011-present)
- Distance Program, Director (2009-present), Co-Director (2005-2009)
- Associate Chair (2001-2011)
- Acting Chair (2001)
- Graduate Director (1998-2001)
- Curriculum revision
- Member of fpe alumni committee for endowed chair campaign (1988-1993)
- Search Committees – John L. Bryan Endowed Chair, ENFP Chair, ENFP Faculty Positions (1994, 1995, 1998, 2000, 2003-2004, 2006-2007)

## *ii. College*

- Programs, Curricula and Courses (1986-2001)
- Undergraduate Recruitment (1993, 2001-2011)
- Awards (1995-1997, 2000-2009)
- Search Committee - College Counselor (1995), Coordinator (Chair, 2005)
- Engineering Council (2003-2010)
- Review of chair of department, BioE Dept. (2020-2021)

## *iii. Campus*

- Faculty Senate (1996 - 1999)
- Environmental Safety, and Health Operations Committee (2002 - 2003)

### Faculty Advisor

- Tau Beta Pi, MD Beta, (1981 - 2012)
- Salamander, Beta Chapter, (1993 - 2012)
- Student Chapter, Society of Fire Protection Engineers (2001-present)
- University of Maryland Men's Ice Hockey Team (2000-2007, 2009-2011)

## **c. Community, State, National**

- Co-chair of panel on Sensors, Workshop on Fire Detector Research, NIST (1995)
- Prince Georges County Fire Department, experimental program evaluating the performance of unprotected sprinkler pipe in residential sprinkler systems (1995)
- Chair working group on Codes and Standards, Workshop on Fire Performance of High-Strength Concrete, NIST (1997)
- Northern Virginia Curriculum Advisory Committee (1997-2012)
- Judge, 8<sup>th</sup> Annual Fire Fighting Robot Contest, Trinity College, April 22, 2001.
- Maryland State Fireman's Association Scholarship Committee (2001-present)
- WTC Briefing to UK Fire and Emergency Planning Directorate and Department for Transport, Local Government and the Regions, April 24, 2002.
- College Park Volunteer Fire Department, Executive Committee (2004-2007)