

QUALIFICATIONS AND PUBLICATIONS (PAST 10 YEARS)

DAVID J. ICOVE, Ph.D., P.E., CFEI

Icove & Associates, LLC

P.O. Box 1348

Knoxville, Tennessee 37901-1348

Phone: (865) 693-4361

Fax: (865) 693-4369



EDUCATION

- ❑ B.S., Electrical Engineering, University of Tennessee, Knoxville (1971)
- ❑ M.S., Electrical Engineering, University of Tennessee, Knoxville (1974)
 - Thesis: *FEDAP: The Fire Engineering Data Analysis Program*
- ❑ B.S., Fire Protection Engineering, University of Maryland, College Park, Maryland (1975)
 - Thesis: *Application of Pattern Recognition to Arson Investigation*
- ❑ Ph.D., Engineering Science and Mechanics, University of Tennessee, Knoxville (1979)
 - Dissertation: *Principles of Incendiary Crime Analysis*

PROFESSIONAL REGISTRATION

- ❑ Professional Engineer, State of Tennessee, Feb. 25, 1984, License No. 16650
- ❑ Professional Engineer, State of Virginia, Oct. 1, 1984, License No. 15062
- ❑ Professional Engineer, State of Texas, November 24, 2009, License No. 104460
- ❑ Temporary Registration, State of North Carolina, June 17, 2009 to June 17, 2010, No. 2009865,
- ❑ Certified Fire and Explosion Investigator, National Association of Fire Investigators, June 28, 2006, Rec. No. 7271-5469

EXPERIENCE

Oct. 2009 – Present

Research Professor

Oct. 1995 – Sept. 2009

Adjunct Assistant Professor

Jan. 1980 – Jan. 1984

Instructor

Department of Electrical Engineering and Computer Science
The University of Tennessee, Knoxville

Courses taught:

ECE 301/302 - Circuits, Electronics, Instruments)

EF 230 Computer Solution Engineering Problems

EF 402 - Electrical Engineering for the FE Exam

ME 495 - Enclosure Fire Dynamics

ECE 491/599 - Introduction to Pattern
Recognition)

ECE 599 - Fire Modeling and Visualization

ECE 599 - Pattern Recognition/Forensic Engineering

ECE 692 - Pattern Recognition/Cluster Analysis

Dec. 2004 – Present Adjunct Faculty
Professional Master of Fire Protection Engineering
The University of Maryland, College Park, MD
Courses taught:
ENFP 629D (Forensic Fire Analysis)
ENFP 629M (Performance Based Fire Codes Analysis)

Mar. 2006 – Present Reserve Deputy Sheriff
Fire Investigations Bureau
Knox County Sheriff's Department
Knoxville, Tennessee

1998 – Present President/Manager
Icove & Associates, LLC
Knoxville, Tennessee

Dec. 1993 – Dec. 2005 Federal Law Enforcement Agent
Criminal Investigations Division
U.S. Tennessee Valley Authority Police
Knoxville, Tennessee

Mar. 1984 – Dec. 1993 Program Manager, GM-1801-15
Arson and Bombing Investigative Services Subunit
Federal Bureau of Investigation
Behavioral Science Unit, Quantico, Virginia

Oct. 1979 – Dec. 1983 Supervisor, Arson Task Force
Knoxville Police Department, Knoxville, Tennessee

Mar. 1978 – Sep. 1979 Investigator, Ohio State Fire Marshal's Office
Reynoldsburg, Ohio

Aug. 1976 – Mar. 1978 Investigator, Tennessee State Fire Marshal's Office
Knoxville, Tennessee

Aug. 1971 – May 1975 Engineer, U.S. Navy, Hyattsville, Maryland
(See dates above on leave for additional degrees)

PATENTS

- ❑ U. S. Patent 6,741,983. J.D. Birdwell, T.W. Wang, R.D. Horn, P. Yadav, and D.J. Icove, "Method of Indexed Storage and Retrieval of Multidimensional Information," May 25, 2004
- ❑ U.S. Patent 7,272,612. J.D. Birdwell, T.W. Wang, R.D. Horn, P. Yadav, and D.J. Icove, "**Method of Partitioning Data Records,**" Sept. 18, 2007
- ❑ U.S. Patent 7,454,411. J.D. Birdwell, T.W. Wang, R.D. Horn, P. Yadav, and D.J. Icove, "Parallel Data Processing Architecture," Nov 18, 2008.
- ❑ U.S. Patent Pending, Application 20080309488, D.J. Icove and C.T. Lyster, "Passive Microwave Fire and Intrusion Detection System," Dec. 18, 2008.

TECHNICAL COMMITTEE MEMBERSHIPS

- ❑ *NFPA 921* "Technical Committee on Fire and Explosion Investigations," Member 1992 to present, and liaison member to *NFPA 901*, Fire Incident Reporting
- ❑ National Institute of Justice (NIJ), Technical Working Group Publications
 - *Fire and Arson Scene Evidence: A Guide for Public Safety Personnel (June 2000)*
 - *Electronic Crime Scene Investigation: A Guide for First Responders" (July 2001)*
- ❑ American Society for Testing and Materials (ASTM),
 - Committee E05 on *Fire Testing*, Member 2000 to present
 - Committee E30.11 on *Interdisciplinary Forensic Science Standards*, 2009 to present
 - Committee E58 on *Forensic Engineering*, 2009 to present.
- ❑ Underwriters Laboratory, Inc. "Fire Advisory Council," Member 2005 to present.

PROFESSIONAL ASSOCIATION MEMBERSHIPS

- ❑ Institute of Electrical and Electronic Engineers (IEEE), Member since 1971, Senior Member since 2000.
- ❑ Society of Fire Protection Engineers (SFPE), Member since 1971.
- ❑ International Association of Arson Investigators (IAAI), Member since 1973.
- ❑ National Fire Protection Association (NFPA), Member since 1979.
- ❑ American Society for Industrial Security (ASIS), Member since 1984.
- ❑ International Association of Bomb Technicians and Investigators (IABTI), Member since 1988.
- ❑ International Homicide Investigators Association (IHIA), Charter Member since 1989.
- ❑ National Society of Professional Engineers (NSPE), Member since 1997.
- ❑ National Arson Forum, Charter member since 1986.
- ❑ Society of Police Futurists International (PFI), Charter Member since 1991.
- ❑ Presidents Club, University of Tennessee, Member since 1998.
- ❑ American Society for Testing and Materials (ASTM), Member since 2000.
- ❑ National Association of Fire Investigators (NAFI), Member since 2001.
- ❑ International Code Council (ICC), Member since 2009.

TEXTBOOKS

- ❑ D.J. Icove and J.D. DeHaan. 2009. ***Forensic Fire Scene Reconstruction***, 2nd Edition (Prentice Hall, ISBN 0-13-222857-2, Upper Saddle River, New Jersey, 2009.)
- ❑ D.J. Icove. 2006. ***Forensics in Fire*** (Harcourt Education, 2006 ISBN 1869703871, 9781869703875.)
- ❑ D.J. Icove, C.M. Blocher, and J.D. DeHaan. 2002. ***Instructor's Manual to Kirk's Fire Investigation***, 5th Edition. (Prentice Hall, ISBN 0-13-060458-5, Upper Saddle River, NJ, 2002.)
- ❑ D.J. Icove, V.B. Wherry and J.D. Schroeder. 1998. ***Combating Arson-for-Profit: Advanced Techniques for Investigators, 2nd Edition***. (Battelle Press, ISBN 0-934550-2, Columbus, OH, 1998.)

TEXTBOOK CHAPTERS

- ❑ A.D. Sapp, T.G. Huff, G.P. Gary, and D.J. Icove. 1998. "Arson and Fire-Related Crime Factors" in V.B. Van Hasselt and M. Hersen, editors, ***Handbook of Psychological Approaches with Violent Offenders***. (Plenum Publishing Corp., New York, NY, ISBN 0-306-45845-4, 1998.)

PAPERS

- ❑ A.T. Tinsley and D.J. Icove. 2008. *"An Assessment of the Use of Structural Deformation as a Method for Determining Area of Fire Origin."* (ISFI 2008, International Symposium on Fire Investigation Science and Technology, Cincinnati, Ohio, May 19-21, 2008)
- ❑ D.J. Icove and M.W. Dalton. 2008. *"A Comprehensive Prosecution Report Format for Arson Cases."* (ISFI 2008, International Symposium on Fire Investigation Science and Technology, Cincinnati, Ohio, May 19-21, 2008)
- ❑ D.J. Icove and C.T. Lyster. 2007. *"Passive Microwave Fire Detection: A Survey and Assessment,"* (11th International Conference on Fire Scene and Engineering, University of London, Royal Holloway College, United Kingdom, September 3-5, 2007.)
- ❑ D.J. Icove and G.A. Haynes. 2007. *"Guidelines for Conducting Peer Reviews of Complex Fire Investigations."* (Fire and Materials Conference, San Francisco, California, January 29-31, 2007.)
- ❑ D.J. Icove and J.D. DeHaan. 2006. *"Hourglass Burn Patterns: A Scientific Explanation for their Formation,"* (International Symposium on Fire Investigation Science and Technology, Cincinnati, Ohio, June 26-28, 2006.)
- ❑ D.J. Icove, H.E. Welborn, A.J. Vonarx, E.C. Adams, J.R. Lally, T.G. Huff. 2006. *"Scientific Investigation and Modeling of Prehistoric Structural Fires at Chevelon Pueblo."* (International Symposium on Fire Investigation Science and Technology, Cincinnati, Ohio, June 26-28, 2006.)
- ❑ D.J. Icove and J.D. DeHaan. 2004. *"NFPA 921's Impact on Fire Scene Reconstructions," Fire Protection Engineering Magazine,* (Society of Fire Protection Engineers, Bethesda, Maryland, Vol. 21, pp. 10-16. Winter 2004)
- ❑ A.M. Christensen and D.J. Icove. 2004. *"The Application of NIST's Fire Dynamics Simulator to the Investigation of Carbon Monoxide Exposure in the Deaths of Three Pittsburgh Fire Fighters,"* (*Journal of Forensic Science*, Vol. 49, No.1, January 2004.)
- ❑ T.G. Huff, G.P. Gary, D.J. Icove. 2001. *"The Myth of Pyromania," Fire and Arson Investigator,* (International Association of Arson Investigators, Bridgeton, MO, Vol. 51, No. 1, October 2001, pp. 28-37.)
- ❑ H. Stambaugh, D.S. Beaupre, D.J. Icove, R. Baker, W. Cassaday, and W.P. Williams. 2001. *"Electronic Crime Needs Assessment for State and Local Law Enforcement," National Institute of Justice, U.S. Department of Justice, Office of Justice Programs, National Institute of Justice, NCJ 186276. March 2001.)*