

## ANDREW J WILLIAMS, P.E.

### CURRICULUM VITAE

#### EDUCATION

Bachelor of Science in Mechanical Engineering, Worcester Polytechnic Institute, Worcester, Massachusetts, 1993

Further Coursework in Biology, Organic Chemistry & Macro-Economics

Further Professional Studies in Design Development, Experimentation, Photography, Fire & Explosion Investigation, Fire Dynamics, Premise Wiring, Appliance Failures, HVAC/R Equipment, and Electrical Fires

#### EXPERIENCE

1999-present NEPONSET VALLEY ENGINEERING COMPANY, Inc., d/b/a GAI Engineers, a forensic engineering firm.

Investigate the technical aspects of property damage and personal injury matters, utilizing expertise in electrical and mechanical engineering.

Complete scene examinations, witness interviews, evidence examinations, research, document review, testing, engineering calculations, and report writing, as well as provide expert testimony, on electrical & mechanical equipment and systems.

Electrical projects include household appliances, consumer electronics, power tools, restaurant equipment, laundering equipment, computer systems, telephone systems, alarm systems, motors, premises wiring, electrical service equipment, etc.

Mechanical projects include HVAC equipment, plumbing fixtures, boilers, furnaces, water heaters, steam generators, water supply piping & components, gas supply piping & components, door opening/closing systems, food processing equipment, machine-shop equipment, janitorial equipment, etc.

1997-1999 ALLERGAN, Inc., Irvine, CA, a medical device manufacturer of equipment and disposables for the eye care industry.

Validated electro-mechanical designs, both existing and new, for reliability and robustness. Ensured final test of new equipment met all critical design specifications with high confidence (6 Sigma). Completed electronics troubleshooting, wiring harness design, sheet-metal chassis & plastic panel optimization, fastener selection, packaging development and material finishing selection.

- 1993-1997 HAEMONETICS, Corp., Braintree, MA, a medical device manufacturer of equipment and disposables for the blood processing industry.
- Completed Design of Experiments (DOE) and validation for disposables and equipment performance as well as thermoplastic forming processes. Assisted in capital upgrade projects, such as a 5000 square foot Class 1000 cleanroom. Procured automated process equipment as well as electrical and mechanical equipment. Responsible for department safety, including repetitive motion injuries, machine guarding and electromagnetic radiation.
- 1988-1993 GEM GRAVURE COMPANY, Inc., Hanover, MA, a manufacturer of equipment and disposables for the wire & cable industry.
- Completed refurbishment of customer-returned equipment from field, including trouble-shooting, teardown, installation of electrical & mechanical components, and acceptance testing. Completed fabrication of new equipment, including installation of electrical & mechanical components, and acceptance testing. Assisted in the research and development of new designs.

## **TRAINING**

<b><u>Date</u></b>	<b><u>Course Title</u></b>	<b><u>Hours</u></b>	<b><u>Sponsor(s)</u></b>
Aug 21	Metallurgical Failure Analysis	3	Decatur Professional Development
Aug 21	Variable Frequency Drives	3	Decatur Professional Development
Dec 20	LEED Rating Systems for Green Buildings	7	Decatur Professional Development
Dec 20	Power System Neutral Grounding	3	Decatur Professional Development
Jul 19	MagneTek: A Case Study in The Daubert Challenge	2	International Association of Arson Investigators
Jul 19	Evidence Examination: What Happens at the Lab	4	International Association of Arson Investigators
Jul 19	The Scientific Method for Fire and Explosion Investigations	3	International Association of Arson Investigators
Jul 19	Ethics and the Fire Investigator	3	International Association Of Arson Investigators
Jul 18	Commercial HVAC	6	Decatur Professional Development
Jan 18	The Practical Application of the Relationship between NFPA 1033 And NFPA 921	2	International Association of Arson Investigators
Jan 18	DNA	3	International Association Of Arson Investigators
Sep 17	HVAC Instrumentation and Control	6	Decatur Professional Development

<u>Date</u>	<u>Course Title</u>	<u>Hours</u>	<u>Sponsor(s)</u>
Jun 17	NFPA 1033 and Your Career	2	International Association Of Arson Investigators
Jun 17	Physical Evidence at the Fire Scene	4	International Association Of Arson Investigators
Jun 17	Introduction to Evidence	4	International Association Of Arson Investigators
Jun 17	Documenting the Event	4	International Association Of Arson Investigators
Mar 17	Hot Work Safety	3	National Fire Protection Association
Oct 16	Ionizing Radiation Hazards	1	Compliance Training Online
Feb 16	Service, Safety and Operational Training for Golden Engineering X-Ray Systems	4	Golden Engineering
Jun 15	Investigation of Fires Involving Lighting Fixtures	8	Maine Chapter of International Association of Arson Investigators
May 15	Asbestos Awareness	2	Association of Bay Area Governments
Oct 14	Investigating Solid Fuel-Burning Appliance Fires	16	Fire Findings Laboratories
Jul 12	Arc Mapping Basics	4	International Association Of Arson Investigators
Jul 12	Analysis of Station Nightclub Fire	4	International Association Of Arson Investigators
Nov 11	Air-Conditioning and Refrigeration	16	American Trainco
Dec 10	Arc Flash Mitigation	6	Three-C Electrical & ABB
Nov 09	Introduction to Arc Mapping	6	Massachusetts Chapter of International Association Of Arson Investigators
Jun 09	Asbestos and Respirator Training	4	Chem Scope
Jun 07	Fire and Arson Investigation Seminar On Appliance Fires	20	Massachusetts Chapter of International Association Of Arson Investigators
April 07	Investigating Residential Dryer Fires	16	Fire Findings Laboratories

<u>Date</u>	<u>Course Title</u>	<u>Hours</u>	<u>Sponsor(s)</u>
Sep 06	Commercial Kitchen Systems	6	Massachusetts Chapter Of International Association Of Arson Investigators & FIREPRO
Jun 06	Forensic Fire Investigation	16	Massachusetts Chapter Of International Association Of Arson Investigators
Sep 05	Electric Motors & Controls	14	American Trainco
Nov 04	Investigations of Electrical and Appliance Related Fires	20	International Association of Arson Investigators & Association of Home Appliance Manufacturers
Mar 04	The Reid Technique of Interviewing and Interrogation.	24	John E. Reid & Associates
Feb 04	Fire Alarms	6	Massachusetts Electrical Contractors Association
Sep 03	Heating System Fires	6	Massachusetts Chapter Of International Association Of Arson Investigators
Jun 03	Live Burns of Appliances	8	Massachusetts Chapter Of International Association Of Arson Investigators
Mar 03	Lightning Detection	4	Vaisala
Aug 02	2002 National Fire, Arson and Explosion. Investigation Training Program	24	National Association of Fire Investigators
Nov 02	Small Appliance Fire/ Product Liability	12	Massachusetts Chapter of International Association Of Arson Investigators
Nov 02	Grounding	4	Massachusetts Electrical Contractors Association
Nov 02	Investigation of Gas and Electric Appliance Fires Seminar	16	Fire Findings Laboratories
Sep 02	Explosives, Secondary Devices, Explosions and Their Investigation	6	Massachusetts Chapter International Association Of Arson Investigators
Jun 02	Testifying Skills Workshop	8	SEAK
Jan 02	Post Fire Investigation of Electrical Components	6	Massachusetts Chapter of International Association Of Arson Investigators

<u>Date</u>	<u>Course Title</u>	<u>Hours</u>	<u>Sponsor(s)</u>
Nov 01	Basic Fire Science and Fire Investigation	12	Massachusetts Chapter of International Association Of Arson Investigators
Mar 01	Motor Vehicle Accident Reconstruction	24	Society of Automotive Engineers
Jan 01	Forensic Photography	6	Massachusetts Chapter Of International Association Of Arson Investigators
Nov 98	Basic Geometric Dimensioning and Tolerancing	16	Worcester Polytechnic Institute
Jun 98	Design for Manufacture and Assembly	16	Worcester Polytechnic Institute
Dec 96	Failure Mode and Effects Analysis Workshop	16	Worcester Polytechnic Institute
Oct 96	Basic Project Management	16	Worcester Polytechnic Institute
Jun 96	Introduction to Design of Experiments and Statistical Process Control	16	Worcester Polytechnic Institute
Jun 96	The Taguchi Method of Experimental Design	8	Worcester Polytechnic Institute
Mar 96	Time Management	8	Worcester Polytechnic Institute

### **SEMINARS GIVEN**

<u>Date</u>	<u>Topic</u>	<u>Hours</u>	<u>Sponsor(s)</u>
Aug 21	Portable Appliance Fires	6	Vermont Chapter Of International Association Of Arson Investigators
Jun 19	Portable Appliance Fires	6	Maine Chapter Of International Association Of Arson Investigators
Nov 18	Portable Appliance Fires	6	Massachusetts Chapter Of International Association Of Arson Investigators
Mar 14	Electricity and Fire	8	Rhode Island Chapter Of International Association Of Arson Investigators
Jan 13	Residential Forensic Fire Investigations	2	American Society of Home Inspectors

<u>Date</u>	<u>Topic</u>	<u>Hours</u>	<u>Sponsor(s)</u>
Dec 07	The Legal, Investigative and Technical Aspects of Claim Investigations	2	Adjuster's Roundtable of Boston
Jan 07	Electricity and Fire	6	Connecticut Chapter Of International Association Of Arson Investigators

## **PROFESSIONAL**

Registered Professional Engineer, PEN.0029092 - Connecticut, 13041 - Maine, 45453 - Massachusetts, 13882 - New Hampshire, 9981 - Rhode Island, 018.0088630 - Vermont  
Licensed Private Investigator, LP0694D, Massachusetts  
Certified Fire & Explosion Investigator, 8446-3596, National Association of Fire Investigators  
Certified Evidence Collection Technician, 722, International Association of Arson Investigators  
Certified EPA Section 608 Technician, Universal, TEEP10191040511-101929  
Member, Standards Technical Panels 982, *Motor-Operated Household Food Preparing Machines*, Underwriters Laboratories  
Member, Standards Technical Panels 1024, *Electric Room Heaters*, Underwriters Laboratories  
Member, Standards Technical Panels 1026, *Household Cooking Appliances*, Underwriters Laboratories  
Chair, Town of Easton, Municipal Building Committee  
American Society of Mechanical Engineers, 2927747  
Institute of Electrical and Electronics Engineers, 41307491  
International Association of Arson Investigators, 26220  
National Association of Fire Investigations, 8446  
National Fire Protection Association, 2030453  
National Society of Professional Engineers, 300025312