

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

| <u>Date</u> | <u>Course Title</u> | <u>Hours</u> | <u>Sponsor(s)</u> |
|--------------------|--|---------------------|--|
| 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 |
| 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 |

| <u>Date</u> | <u>Course Title</u> | <u>Hours</u> | <u>Sponsor(s)</u> |
|-------------|---|--------------|---|
| 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 |
| 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 |

| <u>Date</u> | <u>Course Title</u> | <u>Hours</u> | <u>Sponsor(s)</u> |
|-------------|---|--------------|--|
| 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 |
| 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 |

| <u>Date</u> | <u>Course Title</u> | <u>Hours</u> | <u>Sponsor(s)</u> |
|-------------|---|--------------|---------------------------------|
| 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> |
|-------------|--|--------------|---|
| 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 |
| 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 Detective, 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

Member, 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