



# LGI FORENSIC ENGINEERING, P.C.

Engineers, Architects, Consultants, and Investigators

Since 1952

## STEVEN PIETROPAOLO, P.E., CFEI, CFII

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### Qualifications & Services

**Steven Pietropaolo** has a Bachelor Degree of Engineering in **Electrical Engineering** and a Masters of Science Degree in **Mechanical Engineering** from Manhattan College. Mr. Pietropaolo is a Licensed Professional Engineer (P.E.) in the State of New York, amongst others. He is a Certified Fire and Explosion Investigator and a Certified Fire Investigator Instructor. He has over 25 years of hands on engineering experience including electrical, mechanical, materials, safety, fire protection and construction. He has knowledge of codes and standards used in construction and industry including building codes, safety codes and industrial codes. His expertise is in the field of forensic investigations of product defects, fires/explosions, fire protection systems, accidents/injuries, building failures, and electro/mechanical system failures. He has extensive experience in Utility Company procedures/equipment and investigating major incidents involving electrical, gas, steam system failures, and construction accidents. He has testified as an expert witness many times in cases in New York, New Jersey, Connecticut, and Federal Courts. He has been retained on numerous large multimillion-dollar property damage cases as well as fatal accidents and fires/explosions including those that resulted in injury.

### Education

MANHATTAN COLLEGE, School of Engineering, Riverdale, NY  
Master of Science in Mechanical Engineering – May 1999  
Bachelor of Engineering in Electrical Engineering – September 1987

### Professional Registration

STATE OF NEW YORK – STATE EDUCATION DEPARTMENT  
Licensed Professional Engineer – License number 083615 (February 2006)  
STATE OF CONNECTICUT – DEPARTMENT OF CONSUMER PROTECTION  
Licensed Professional Engineer – License number 25797 (February 2007)  
STATE OF NEW HAMPSHIRE-JOINT BOARD OF LICENSURE AND CERTIFICATION  
Licensed Professional Engineer – License number 14022 (January 2013)  
STATE OF FLORIDA – FLORIDA DEPARTMENT OF BUSINESS & PROFESSIONAL REG.  
Licensed Professional Engineering – License number 75343 (January 2013)  
STATE OF VERMONT – BOARD OF PROFESSIONAL ENGINEERS  
Licensed Professional Engineering – License number 018.0092342 (February 2013)  
STATE OF DELAWARE - DELAWARE ASSOCIATION OF PROFESSIONAL ENGINEERS  
Licensed Professional Engineering – License number 18503 (February 2013)  
STATE OF MARYLAND - DEPARTMENT OF LABOR, LICENSING AND REGULATION  
Licensed Professional Engineering – License number 44974 (January 2014)  
STATE OF PENNSYLVANIA - DEPARTMENT OF STATE, BUREAU OF PROFESSIONAL  
AND OCCUPATIONAL AFFAIRS  
Licensed Professional Engineering – License number PE082035 (February 2014)  
STATE OF MAINE - BOARD OF LICENSURE FOR PROFESSIONAL ENGINEERS  
Licensed Professional Engineering – License number 13636 (August 2014)

STATE OF NEW JERSEY – NJ OFFICE OF AG, DIVISION OF CONSUMER AFFAIRS  
Licensed Professional Engineer – License number 24GE05179300 (November 2014)  
DISTRICT OF COUMBIA (DC) – DEPT. OF CONSUMER AND REGULATORY AFFAIRS  
Licensed Professional Engineer – License number PE907823 (October 2014)

**Certifications**

NATIONAL ASSOCIATION OF FIRE INVESTIGATORS  
Certified Fire Investigation Instructor (CFII) 2012  
Certified Fire and Explosion Investigator (CFEI) 2010

NEW YORK STATE, DEPARTMENT OF STATE  
Basic Code Enforcement Training Certification  
Current ICC Code Certification # 0704-7662B (2004)  
*In Service Training Including:*  
Fire Alarm Systems, Inspection Procedures for School Facilities, Accessible Facilities for the  
Physically Disabled and Code Amendment Update (December 1999)  
NYS 9B Certification #1297-7531A (1997)

IVES TRAINING & COMPLIANCE GROUP  
Mobile Equipment Operator Certification (August 2003)

EXCEL TRIBOMETERS, LLC.  
Certificate # D2502-0871 CXLTL (Certified XL Tribometrist – Pedestrian Slip Tester) (May  
2002- Current)

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)  
Certificate in General Industry Standards (November 1996)  
Certificate in Construction Industry Standards (November 1995)  
30-Hour Construction Safety and Health Training Course (ISG Risk Mgmt.) (May 2014)

NEW YORK STATE, DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
Commercial Pesticide Applicator ID #C3801603 (March 1995 – January 2005)

ENVIRONMENTAL PROTECTION AGENCY  
Universal Air Conditioning and Refrigeration Technician Certificate # 224 (November 2004)

ISG RISK MANAGEMENT  
NYC DOB 40-Hour Site Safety Manager Training Course (May 2014)

**Professional Development (by subject)**

***Fire/Explosion Science and Investigation***

FIRE FINDINGS LABORATORY  
Investigation of Solid Fuel-Burning Appliance Fires (October 2009)  
Investigation of Residential Dryer Fires Symposium (April 2007)  
Investigation of Gas and Electric Appliance Fires 4-Day (October 2004)  
Investigation of Gas and Electric Appliance Fires 2-Day (April 2001)

NEW YORK STATE, OFFICE OF FIRE PREVENTION AND CONTROL (OFF&C)  
Advanced Instruction in Origin & Cause Determination – Academy of Fire Science (August 1999)  
Electrical Fire Cause Determination I – Academy of Fire Science (August 1999)  
Basic Arson Awareness and Identification – Academy of Fire Science (May 1999)  
Electrical Fire Cause Determination II – Academy of Fire Science (October 2004)

CENTRAL TEXAS FIRE INVESTIGATORS ASSOCIATION  
Advanced Electrical Fire Investigation Principles (December 2006)

THE INSTITUTE OF FIRE SCIENCE  
Gas/Oil Service & Appliance Course (September 2004)

NEW YORK STATE FIRE INVESTIGATORS  
State Chapter No. 23 International Association of Arson Investigators Winter Seminar (February 2003)

UNIVERSITY OF WISCONSIN – MADISON – COLLEGE OF ENGINEERING  
DEPARTMENT OF ENGINEERING PROFESSIONAL DEVELOPMENT  
Fire Investigation and Product Liability Litigation (July 2004)

NATIONAL FIRE PROTECTION ASSOCIATION  
Fall Education Conference 2003 – NFPA 921 – Fire and Explosion Investigations (November 2003)

NATIONAL CENTER FOR EXPLOSION RESISTANT DESIGN  
Explosion Effects and Structural Design For Blast (March 2008)

CONSOLIDATED EDISON CORPORATION  
Utility Hazard Awareness/Overview - Fires and Explosions (Steam, Electric & Gas) (May 2008)

INTERNATIONAL ASSOCIATION OF ARSON INVESTIGATORS  
Resource Training Program with New York City (FDNY) Fire Marshalls (May 2012)  
Forensic Fire Scene Reconstruction (June 2008)  
66<sup>th</sup> International Training Conference (May 2015)

NATIONAL ASSOCIATION OF FIRE INVESTIGATORS  
International Symposium On Fire Investigation Science and Technology (September 2014)  
International Symposium On Fire Investigation Science and Technology (October 2012)  
International Symposium On Fire Investigation Science and Technology (September 2010)  
Computer Fire Modeling (August 2010)  
Advanced Fire, Arson, and Explosion Investigation Training Program (August 2010)  
National Seminar On Fire Analysis Litigation (August 2010)  
2010 National Fire, Arson, and Explosion Investigation Training Program (March 2010)

***Building Science and Investigation***

BUILDING SCIENCE CORPORATION  
Building Science Experts' Session (December 2008)  
Building Science Advanced Course (December 2007)  
Building Science Fundamentals (December 2006)  
Summer Symposium 2013      Moisture & Building Science Topics (August 2013)  
Summer Symposium 2012      Moisture & Building Science Topics (August 2012)  
Summer Symposium 2006      Moisture & Building Science Topics (August 2006)  
Summer Symposium 2005      Moisture & Building Science Topics (August 2005)  
Summer Symposium 2004      Moisture & Building Science Topics (August 2004)

Summer Symposium 2003      Moisture & Building Science Topics (August 2003)

LORMAN EDUCATION SERVICES

Solving Water Intrusion and Mold Problems in New York (August 2002)

UNIVERSITY OF WISCONSIN – MADISON – COLLEGE OF ENGINEERING

DEPARTMENT OF ENGINEERING PROFESSIONAL DEVELOPMENT

Preventing & Solving Moisture-Related Problems in Buildings (July 2004)

JLC LIVE – LIGHT CONSTRUCTION EXHIBITION

Mold (July 2003)

SEVERN TRENT LABORATORIES – P&K MICROBIOLOGY SVC. INC.

Current Understanding and Advances in Mold Assessment, Sampling and Analysis (April 2004)

***HVAC/ R, Mechanical Engineering, Plumbing Engineering & Fire Protection Engineering***

NTT NATIONAL TECHNOLOGY TRANSFER

Air Conditioning & Refrigeration and Heating and Ventilation Hands on Workshop (November 2004)

Boiler Operator's Hands-On Workshop (September 2004)

Centrifugal Pumps Seminar (July 2004)

R.W. BECKET CORPORATION

Residential Oil Burner Training Program Certification (April 2010)

Residential Oil Burner Training Program Certification (June 1999)

PERFORMANCE TRAINING ASSOCIATES

Air Conditioning & Refrigeration I & II (July 2001)

NEW YORK STATE, BOARD OF COOPERATIVE EDUCATION SERVICES (BOCES)

Air Conditioning and Refrigeration (August 1995)

Oil Burners and Heating Systems (March 1995)

PROFESSIONAL ENGINEERING REVIEW COURSE, INC. (PERC)

Fire Protection Engineering Professional/Continuing Education Course (August 2007)

CARLIN COMBUSTION TECHNOLOGY, INC. (CARLIN UNIVERSITY)

Residential Oil & Gas Burners (August 2008)

Commercial Oil & Gas Burners (August 2008)

SWAGELOK ENERGY ADVISORS, INC.

Steam System Specialist Level 1 (September 2010)

GAS TECHNOLOGY INSTITUTE (GTI)

Understanding Natural Gas Combustion (October 2010)

Gas Distribution Engineering (June 2011)

Environmental Scene Investigation (June 2011)

LIBERTY MUTUAL INSURANCE COMPANY

Property Loss Control Institute/Fire Lab (Sprinkler Systems/ Pumps/Water Supply & Industrial Hazards (May 2013)

AMERICAN TRAINCO  
Introduction To Basic Hydraulics (September 2013)

***Electrical Engineering***

AVO INTERNATIONAL – TRAINING INSTITUTE  
Basic Electrical Troubleshooting (November 2001)  
Cable Splicing and Terminating of Medium-Voltage Cables (August 2009)

AMERICAN TRAINCO  
Electrical Troubleshooting & Maintenance Seminar (November 2003)

FRANKLIN ELECTRIC CORPORATION  
Troubleshooting, application, and installation of submersible motors (November 2002)

NEW YORK STATE, BOARD OF COOPERATIVE EDUCATION SERVICES (BOCES)  
National Electrical Code II (December 1996) & I (October 1996)

NATIONAL FIRE PROTECTION ASSOCIATION  
Electrical Safety In The Workplace NFPE 70E (February 2009)

UNIVERSITY OF WISCONSIN – MADISON – COLLEGE OF ENGINEERING  
DEPARTMENT OF ENGINEERING PROFESSIONAL DEVELOPMENT  
Understanding Power Cable Characteristics and Applications (October 2009)  
Protection Of Industrial & Commercial Electrical Power Distribution Systems (April 2009)  
Underground Electrical Distribution Systems (May 2010)  
Plumbing System Design (March 2011)

INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS  
Power System Basics – Understanding the Electrical Utility Operations inside and out (Dec. 2014)

MARZZO ENGINEERING, PLLC  
Fundamentals of Motors and Controls (Part 1 & Part 2) (March 2015)

***Safety & Human Factors Engineering***

NATIONAL RECREATION & PARK ASSOCIATION  
National Playground Safety Institute Certification Course (December 2006)

LIBERTY MUTUAL INSURANCE COMPANY  
Loss Prevention Department In-House Training Seminars (Various)  
10 Hr. OSHA Compliance Training - General Industry (November 1996)  
Intermediate Construction Safety/10 Hr. OSHA Compliance Training – Construction (March 1995)  
Decision Driving (July 1995)

AMERICAN SOCIETY OF SAFETY ENGINEERS  
Professional Development Conference – Slip, Trip & Fall Accident Prevention (March 2001)

CNA INSURANCE COMPANIES  
Loss Control Department In-House Training Seminars (Various)  
LC320 – Ergonomics Program (August 1998)

CONSOLIDATED EDISON CORPORATION  
ELE-1010 Enclosed Space Entry & Rescue (April 2009)

***Failure Analysis, Materials Engineering & Product Liability***

SACHS, SALVATERRA & ASSOCIATES  
Practical Plant Failure Analysis (May 2005)

UNIVERSITY OF WISCONSIN – MADISON – COLLEGE OF ENGINEERING  
DEPARTMENT OF ENGINEERING PROFESSIONAL DEVELOPMENT  
Eighteenth Annual Product Liability Conference (November 2006)  
The Role of Warnings and Instructions (March 2006)

THE MATERIALS INFORMATION SOCIETY – MATERIALS ENGINEERING INSTITUTE  
(ASM)  
Scanning Electron Microscopy (SEM)/ Energy Dispersive Spectroscopy (EDS) (September 2011)  
Principles of Failure Analysis (December 2000)

AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME)  
Failure, Failure Prevention & Repair of Pressure Vessels, Piping, Boilers and Rotating Machinery  
(February 2000)

NEW YORK STATE COLLEGE OF CERAMICS-ALFRED UNIVERSITY  
Fracture Analysis and Failure Prevention of Glasses and Ceramics (June 2011)

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)  
A Review of Welding, Metallurgy and Forensics (April 2014)

***Construction, Building Codes, Structural, Geotechnical & Environmental Engineering***

NEW YORK STATE, DEPARTMENT OF STATE  
Residential Building Code of New York State (January 2003)  
Basic Code Enforcement Training Certification Class  
Current ICC Code (2004)

*In Service Training Including:*

Fire Alarm Systems, Inspection Procedures for School Facilities, Accessible Facilities for the  
Physically Disabled and Code Amendment Update (December 1999)  
NYS 9B (old code) (1997)

LORMAN EDUCATION SERVICES  
Construction Defect Claims (April 2006)  
Construction Claims In New York (September 2002)

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)  
Design and Installation of Buried Pipes (February 2012)  
Best Practice Guidelines for Structural Fire Resistance Design of Concrete & Steel Buildings  
(September 2010)  
Structural Condition Assessment of Existing Structures (July 1999)  
Earth Retaining Structures, Selection, Design and Construction (September 2008)

ENVIRONMENTAL ASSESSMENT ASSOCIATION (ESA)  
Performing Phase I Environmental Site Inspections (September 1997)

**BUILDING INSPECTOR'S UNIVERSITY**

Professional Inspection Techniques and Procedures (April 1997)

**NEW YORK STATE, BOARD OF COOPERATIVE EDUCATION SERVICES (BOCES)**

Construction Estimating (April 1996), Blueprint Reading (April 1996)

**THE STATE UNIVERSITY OF NEW JERSEY – RUTGERS**

Radon Measurement Operators Course (February 1996)

**ENVIRONMENTAL SERVICES INSTITUTE**

Carpenter Ant Identification & Control Course (February 1996)

Subterranean Termite Identification & Control Course (January 1996)

**HOMETECH INC.**

How to Perform Home Inspections & How to Inspect Major Residential Systems (September 1995)

**AMERICAN SOCIETY OF HOME INSPECTORS (ASHI)**

Numerous seminars, continuing education courses and professional development conferences on performing building inspections (January 1995 – September 1999)

**PAUL DAVIS SYSTEMS**

Associate Training School – Residential and Light Commercial Restoration (August 1993)

**ACADEMY OF BLASTING & EXPLOSIVE TECHNOLOGY**

Rock Blasting & Overbreak Control (September 2007)

**ATC ASSOCIATES INC.**

Asbestos Awareness and Certification (October 2007)

**AIA CENTER FOR ARCHITECTURE**

Best Practice Guidelines for Structural Fire Resistance Design of Concrete and Steel Buildings (Sept. 2010)

**HALF MOON, LLC.**

Structural Forensic Engineering (September 2012)

The Subsurface Utility Engineering Process (April 2011)

**THE NEW YORK STATE SOCIETY OF PROFESSIONAL ENGINEERS (NYSPE)**

Masonry Restoration (April 2014)

**INSTITUTE FOR DESIGN PROFESSIONALS**

Analyzing Delays and Inefficiencies Using Real Examples & Case Studies (May 2014)

***Consulting, Ethics & Expert Witnessing***

**SEAK**

Annual Expert Witness Conference (June 2000, 2001, 2002, 2003, 2012)

**AMERICAN SOCIETY OF SAFETY ENGINEERS (ASSE)**

Law School for Safety, Health, & Environmental Professionals (November 1999)

**HALF MOON, LLC**

Legal And Ethical Issues For New York Engineers (April 2012)

INSTITUTE FOR DESIGN PROFESSIONALS  
Forensic Engineering & Expert Witness Services (May 2012)

**Professional Experience**

LGI Forensic Engineering, P.C., North White Plains, NY 1999 to present  
President & CEO/Forensic Engineer

- Provide engineering services to insurance companies, Utility Companies, and attorneys throughout the Northeast and Mid Atlantic states. Consultant on defense and plaintiff litigation including involvement in property loss subrogation, property damage, product liability/warnings, construction defects, and personal injury cases including slips/trips/falls, construction accidents, sports/recreational accidents, equipment accidents, and machine accidents
- Conduct site inspections to evaluate HVAC, plumbing, electrical, fire protection and boiler systems, gas and oil burners, appliances, machinery, mold, indoor air quality, underground fuel storage tanks, structural and construction issues. Provide opinions regarding fire, accident and loss cause. Perform accident reconstruction services on cases. Determine compliance with OSHA, ASME, ASTM, ASHRAE, ANSI, NFPA and building codes.
- Perform forensic engineering and prepare detailed expert opinions on findings with accompanying photographs. Conduct destructive and non-destructive laboratory analyses. Test mechanical, plumbing and electrical systems to determine defects. Examine construction for failures and defects in workmanship and product quality. Expert testimony on cases.

PFI ASSOCIATES, Carmel, NY 1995 to 1999  
Engineering Consultant/Building Inspector

- Co-founded and directed a firm providing building inspections for residential and commercial real estate transactions throughout the tri-state area. Conducted inspections, formulated recommendations and prepared reports of findings.
- In addition performed environmental Phase I inspections, termite inspections and environmental testing including radon and water testing through independent laboratories. Served as construction consultant/owners' representative on construction projects, performing periodic inspections to determine conformance with design specifications

CNA INSURANCE COMPANIES, Melville, NY 1997 to 1999

LIBERTY MUTUAL INSURANCE COMPANY, Lynbrook, NY 1994 to 1997  
Loss Control/Loss Prevention Consultant

- Evaluated potential clients to determine risk levels prior to assessment by Underwriting Department. Prepared detailed descriptions of prospective clients' operations and analyzed potential risks. Formulated recommendations to minimize risk exposure for firm.
- Provided worker safety, premises liability, and fire protection engineering consultation services to existing clientele including construction companies, manufacturers, and a broad range of corporations through the metropolitan area. Collaborated with clients to devise methods to improve operations and reduce loss ratio. Provided guidance and training to clients in implementation of loss control recommendations.
- Recommended controls involving issues related to human factors, ergonomics, machine guarding, trips and falls, material handling, fire protection, and transportation/driver safety.
- Customers included large retail establishments, construction companies, transportation companies, multi-family residences, international manufacturers, and distributors.
- Conducted accident and large property damage investigations and provided recommendations to prevent future occurrences.



PDS RESTORATION, New Canaan, CT 1993 to 1994  
Associate

- Conducted site inspections and provided project management to clients of an independent national insurance restoration company. Performed property damage inspections. Prepared estimates for commercial and residential repair projects. Solicited insureds for construction contracts. Hired subcontractors scheduled work and inspected progress and quality of workmanship throughout all phases of project.
- Established relationships with numerous insurance adjusters leading to a significant increase in business for this newly launched franchise operation. Ensured clients' satisfaction and maintained an excellent rapport with over 20 major insurance carriers.

LIBERTY MUTUAL INSURANCE COMPANY, Scarsdale, NY 1991 to 1993  
Property Loss Adjuster

- Employed knowledge of insurance policies and coverage options to determine insurance company's liability for damages. Inspected insureds' property to ascertain extent of damages and causes of loss. Utilized network of independent consultants. Negotiated and settled claims with insureds.

TDX CONSTRUCTION COMPANY, New York, NY 1989 to 1991  
Assistant Project Engineer

- On-site assistant to the mechanical project engineer responsible for HVAC, plumbing, electrical and fire sprinklers on a Dormitory Authority of New York State project (\$40+ million construction of an auditorium/theater, gymnasium complex and athletic fields for York College, Queens, New York). Coordinated change proposals and inspected progress of project. Evaluated and approved payment requisitions.

J.A. VALENTI ELECTRIC CO., INC., New Rochelle, NY 1987 to 1989  
Estimating Engineer

- Prepared estimates for an electrical contractor specializing in new construction, renovation and tenant work for major commercial properties in Westchester and lower Connecticut. Revised engineering designs to provide cost-effective solutions and maintain the integrity of projects. Reviewed project code requirements. Performed field inspections.

### **Lecturer and Speaker Engagements**

- Lecturer - New York City Fire Department (FDNY) Bureau of Fire Investigations – Fire Marshall Training Center - *Electrical Fire Investigations*.
- Lecturer Claims Department – *Electrical Investigation Techniques & Technical Information for the Claims Professional – Understanding the electrical stressors that result in catastrophic losses. Focusing on Overvoltage and Lightning*.
- Lecturer Claims Department – *Characteristics of Collapse for the Insurance Professional*.
- Lecturer Claims Department – *Cause & Origin: Understanding Fundamental Principles Associated with Determining the Origin and Cause of a Claim and When a Forensic Consultant Should Be Utilized*.
- Lecturer –Legal CLE presentation on *Litigating Construction Accidents*.

**Professional Affiliations**

American Society of Safety Engineers (ASSE)  
National Fire Protection Association (NFPA)  
Society of Fire Protection Engineers (SFPE)  
International Association of Arson Investigators (IAAI)  
International Society of Explosive Engineers (ISEE)  
Diplomate (DABFET) American College of Forensic Examiners (ACFE)  
American Academy of Forensic Sciences (AAFS)  
American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)  
American Society of Mechanical Engineers (ASME)  
American Society of Plumbing Engineers (ASPE)  
Materials Information Society (ASM)  
American Society for Testing and Materials (ASTM) Member, E58 Committee on Forensic Engineering and E30 Committee on Forensic Sciences  
International Association of Electrical Inspectors (IAEI)  
Institute of Electrical and Electronics Engineers (IEEE)  
American National Standards Institute (ANSI)  
American Society of Civil Engineers (ASCE)  
National Society of Professional Engineers (NSPE)  
National Recreation and Parks Association (NRPA)  
National Wood Flooring Association (NWFA)  
National Safety Council (NSC)  
National Association of Fire Investigators (NAFI)  
American Concrete Institute (ACI)  
International Code Council (ICC)  
National Academy Of Forensic Engineers (NAFE)  
Society Of Plastic Engineers (SPE)  
National Association Of Amusement Ride Safety Officials (NAARSO)  
National Chimney Sweep Guild (NCSG)  
American Society of Gas Engineers (ASGE)  
Building Enclosure, Roofing and Waterproofing (RCI)  
American Fire Sprinkler Association (AFSA)

**References Available Upon Request**