

CURRICULUM VITAE

Areas of Specialization

Water and moisture intrusion, construction claims, construction accidents, slip and fall accidents, heating, ventilation and air conditioning systems, life safety systems, plumbing systems, fire protection systems, electrical systems, lighting systems, explosions, building fires, and code compliance. Perform life safety studies and condition assessments for residential, commercial, institutional and resort buildings.

Professional Registrations

P.E. – State of Florida
P.E. – State of Michigan
P.E. – State of Virginia
P.E. – State of Kentucky
P.E. – State of Tennessee
P.E. – State of Louisiana
P.E. - State of Indiana
P.E. - State of Illinois
P.E. - State of North Carolina
P.E. - State of Maryland
P.E. - State of Utah
P.E. - State of Texas
P.E. - State of New York
P.E. - State of Mississippi
P.E. - State of West Virginia
P.E. - State of New Jersey
P.E. - State of Ohio
P.E. - State of Pennsylvania

- LEED Accredited Professional
- Certified as a Fire and Explosion Investigator
- Certified as a Fire and Explosion Instructor
- Master Electrician and HVAC Contractor (inactive licenses)
- EPA 608 Certified for servicing small appliances (Type I)
- EPA 608 Certified for servicing or disposing of high or very high-pressure appliances, except small appliances and MVACs (Type II)
- FAA Small Unmanned Aircraft System (Drone) Licensed

- AHIT (American Home Inspection Training) in the areas listed below:
 - Interiors, Insulation & Ventilation
 - Heating and Cooling
 - Electrical
 - Plumbing
 - Exteriors
 - Roofs
 - Structure

Educational Background

2002	Ph.D. - Carnegie Mellon University
1992	M.S.C.E. - Carnegie Mellon University
1986	B.S.M.E. - Carnegie Mellon University
1981	B.S. - General Science - University of Pittsburgh

Employment History

1992 to present	Principal at Romualdi, Davidson & Associates
1990 to present	Principal of BDA Engineering, Inc.
1990 to 2003	Principal of Hyde Group, Inc. (Mechanical/Electrical Contractors)
1989	Established a MEPSP consulting business (Bert Davis & Associates).
1989-1990	Engineering Group Leader, Ross Bianco Architects
1988	Promoted to Senior Project Engineer at Carnegie Mellon University. Duties included electrical, mechanical, fire protection, and plumbing design, as well as project management and energy conservation.
1986	Mechanical/Electrical Project Engineer for Carnegie Mellon University.
1985	Energy Coordinator for Carnegie Mellon University. Also served as energy consultant to Action Housing, Inc.
1982	Performed HVAC/Electrical system energy audits of large industrial, institutional, apartment, and office buildings under contract with the Pennsylvania Governor's Energy Council.

Professional Affiliations

ASHRAE	Am. Society of Heating, Refrigeration, and Air Conditioning Engineers
ASPE	American Society of Plumbing Engineers
ASCE	American Society of Civil Engineers
CBO	Commonwealth Building Officials
ICC	International Code Council
USGBC	Member and LEED Accredited
GBA	Green Building Alliance
IESNA	Illuminating Engineering Society of North America
IAAI	International Association of Arson Investigators
NFPA	National Fire Protection Association
NAFI	National Association of Fire and Explosion Investigators

PSPE
PAAI

Pennsylvania Society of Professional Engineers
Pennsylvania Association of Arson Investigators

Honors

Tau Beta Pi Honorary Engineering Society, Carnegie Mellon University
President, Life Science Society, University of Pittsburgh
University Scholar, University of Pittsburgh

Research

Director of a design and development project for the U.S. Department of Energy (DOE). Project involved designing a unique building photovoltaic system and analyzing the system. My research involved predicting building integrated photovoltaic system market potential in the year 2010, 2020, 2030 and modeling of photovoltaic systems effective load carrying capacity (power output) for distributed electricity power production.

Publications

Analysis and design of building integrated photovoltaic systems (DOE).

A technical and policy analysis of building integrated photovoltaic systems. (EPP-Engineering & Public Policy 2002).

Teaching

Carnegie Mellon University - Teaching completed during the 1998 and 1999 spring semesters. Course was titled EPP 19-101. The first semester reviewed automobile physics, environmental issues and safety issues. The second semester reviewed computer systems and statistical analysis of system reliability.

Carnegie Mellon University 2003 Seminar

An Engineering and Economic Analysis of Solar Photovoltaic Power Systems

ASHRAE Region III CRC Technical Sessions, Pittsburgh, PA, August 2006

Presenter - Renewable Energy - LEED Related Credits

Instructor for Gas/Oil Burner Class at the New England Fire Cause and Origin (NEFCO)

Rochester, NH – June 2007

Rochester, NH – October 2008

Presenter at Mother Earth New Fair - Seven Springs Mountain Resort, 2010

Green Mechanical/Electrical/Plumbing system features

Instructor at the Pennsylvania Association of Arson Investigation Training January 2011

Appliance Related Fire Investigation

Instructor at the Pennsylvania Association of Arson Investigation Training January 2012
Gas and Oil Fire and Explosion Course

Instructor at the National Association of Subrogation Professionals March 2012
Sprinkler Systems

Instructor at the Eaton Corporation Power Systems Learning Center, Warrendale, PA, July 2012
Electricity and Overcurrent Protection

Instructor at the Pennsylvania Association of Arson Investigation Training January 2013
Explosion Investigation and Review and Analysis of CSST Gas Line Failures

Instructor at the National Association of Subrogation Professionals February 2013
Electrical Systems, Causes of Electrical Fires and Arcing

Instructor at the Nationwide Insurance Large Loss Conference June 2014
Building Codes, Building Construction Documents, Mechanical and Electrical Systems and repairs from Fire and other Damage

Instructor at State Auto Insurance Company Conference January 2015
Moisture Damage, Existing Building Codes, Building Codes, the IMC and LEED

Instructor at the Pennsylvania Association of Arson Investigation Training June 2015
PV Codes, Installation, Investigation of Fires and System Design

Instructor at the Allegheny County Fire Marshall Training November 2015
Basic Electricity, Utility Systems and Electrical Failures

Instructor at the National Association of Subrogation Professionals April 2016
Fire Scene Investigation: C&O Analysis and Fire Spread Theory

Instructor for the Pennsylvania State Police September 13 & 14, 2016
Electrical Evidence in Fire Investigation and Live Burn Demonstration

Instructor at White and Williams June 22, 2017
Electrical Fire Investigation Basics

Instructor at Fire Fighters November 10, 2017
Pennsylvania 2009 IMC and Kitchen Hood Fire Suppression Systems

Instructor at Peoples Gas Company December 20, 2017
Natural Gas 101 and Appliance Overview

Instructor at the Pennsylvania Association of Arson Investigation Training June 2018
Grounding/Bonding and Appliance Failures and Malfunctions

Instructor at the WV IAAI Fire Investigation Seminar October 22, 2018
WV Building Codes and Electrical Systems

Instructor at Peoples Gas Company December 13, 2021
Gas 101/Appliance Class for the Allegheny County Fire Marshall's Office, for Fire Investigators and the City of Pittsburgh Fire Investigation Division

Instructor for NASP Webinar January 4, 2024
Investigating Residential Fires - Introduction to Residential Electrical Systems - Part 1

Instructor for NASP Webinar March 25, 2024
Investigating Residential Elec. Fires – Part 2

Instructor at the Pennsylvania Association of Arson Investigation Training April 2024
Fuel Gas Appliance Fires & Explosions

Instructor at the Pennsylvania Association of Arson Investigation Training October 2024
Kitchen Fire Suppression Systems and related Codes/Standards