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EDUCATION

- Ph.D. Mechanical Engineering
West Virginia University, August 1973
- M.S.M.E. Mechanical Engineering
Drexel University, PA. June 1967
- B.S.M.E. Mechanical Engineering
West Virginia University, WV, 1963

EXPERIENCE

- Registered Professional Engineer
West Virginia University since 1971
- Associate Professor
West Virginia University (1991-Present)
- Chief Engineer
LD Schmdit &son, Inc., HVAC Consultant (1973-1981)
Fairmont, WV
- Graduate Research Assistant and Instructor
West Virginia University (1969-1971)
- Senior Engineer
Westinghouse Electric CO, Aero Space Division (1967-1969)
Aircraft Design, Baltimore MD
- Engineer
Martin-Marietta Co., Aero Space Division (1963-1967)
Structures Design-Aircraft and Missiles, Baltimore, MD

HONORS AND AWARDS

- ❖ Outstanding Teacher Award, College of Engineering 2011,2004, 1999, 1994, 1993, 1992, 1985
- ❖ Outstanding Mechanism Paper – Proctor & Gamble Award 1985
- ❖ Outstanding ASME Mechanism Paper – Proctor & Gamble Award 1988
- ❖ SAE Ralph Teetor Award for Research & Education
- ❖ SAE Faculty Advisor Awards 1987, 1990 & 1995
- ❖ Appointed by three Governors to the West Virginia State board of Registration for Professional Engineers 1981 – 1996
- ❖ Selected by the Advisory Committee to MAE for the Lifetime Teaching Award for 2000
- ❖ Appointed by Governor Wise to the West Virginia Energy Task Force in 2001 to formulate an energy plan for West Virginia
- ❖ Excellence in Technology Transfer for work in NIOSH 2002 from the Federal Laboratory Consortium
- ❖ Selected as the Outstanding Teacher for the College of Engineering and Mineral Resources for 2004
- ❖ Projects with Industry Senior Capstone Design Class selected as one of the best for inclusion with the National Academy of Engineering top 28 programs for Real World Engineering Education in 2012

ACTIVITIES RELATIVE TO DESIGN AND DEVELOPMENT

- ❖ Taught the Senior Capstone Design Class for 26 years in the MAE Department
- ❖ Engineer for Martin-Marietta Corporation and worked on the Titan II Launch Vehicle, F-4 Aircraft modifications
- ❖ Senior Engineer for Westinghouse Electric Company – Aerospace Division and worked on AWACS structural design and various external pod systems for military aircraft
- ❖ Design and development of a high-pressure coal feeder – US Department of Energy
- ❖ Development and modeling of pneumatic transport and erosive wear of abrasive substances including sand, coal, coal ash
- ❖ Modeling of Friction, Lubrication, and Wear of Materials
- ❖ Design of Controllable Circuit Breakers
- ❖ Finite element modeling of machines, structures with metals and composites
- ❖ Dynamic and vibration modeling of machines and structures.
- ❖ Design, development and testing of automatic rollover protection systems for large equipment - NIOSH
- ❖ Research on the dynamics of external stores for the F-18 aircraft with Naval Air systems Command – PAX River
- ❖ Research on novel fastener systems for Textron Corporation
- ❖ Research and design of jam alert systems for large trash compactors for NIOSH
- ❖ Design of deployable instrumentation pallets for C-130 aircraft

- ❖ Expert witness on numerous cases involving the design and analysis of machines and components including fasteners and joints
- ❖ Design of all-terrain vehicles and safety systems including rollover and guarding.
- ❖ Design of Large Inflatable Tunnel Plug Systems

ACTIVITIES RELATIVE TO HVAC AND THERMAL DESIGN





- ❖ HVAC Consultant to the National Energy Technology Laboratory in Morgantown, West Virginia since 1993.
- ❖ Consultant on Indoor Air Quality Problems for West Virginia Public Schools and the WV Legislative Subcommittee on Air Quality.
- ❖ Performed Optimization Studies on Ductwork, Machines and Processes, sponsored by NSF, DOE and DOD.
- ❖ Developed Sensitive Environmental Test Chambers for Accurate Microgram Weight Measurements, sponsored by DOE.
- ❖ Developer of HVAC questions for the Engineering Registration Exam for the National Council of Examiners for Engineering and Surveying
- ❖ Teaching HVAC courses at West Virginia University since 1983
- ❖ Industrial Energy Assessments on a Variety of Industries

PARTIAL LIST OF PROJECTS RELATING TO HVAC DESIGN

- ❖ National Energy Technology Laboratory- Lab Building HVAC Systems, steam and condensate piping including district steam supply, air quality studies, humidifier installation, chilled water studies, Day Care Center, over 40 total projects.
- ❖ Braxton County Memorial Hospital
- ❖ Canaan Valley State Park Lodge and Recreation Facilities
- ❖ Public Health Centers for Regions VII and IX
- ❖ Consolidation Coal Company Corporate Office Building
- ❖ Holiday Plaza Mall
- ❖ North Marion High School
- ❖ Morgantown Unity Manor High Rise Apartments
- ❖ Veterans Administration Hospital Additions
- ❖ Backwater Falls State Park Lodge
- ❖ Marion County Elementary Schools
- ❖ Randolph County Elementary Schools Air Quality Study
- ❖ Fibair Corporation Humidification System
- ❖ Various Doctor Offices and Medical Centers
- ❖ Fairmont State College Buildings
- ❖ West Virginia University Buildings
- ❖ Air Quality and Sick Building Expert Witness Cases

- ❖ Product Liability Expert Witness Cases
- ❖ Expert System Software Development for the Use of Wood as an Energy Source
- ❖ Expert System Software Development for Energy Use in K-12 Schools

PROFESSIONAL SOCIETIES

-  Member- American Society of Mechanical Engineers (ASME)
-  Member- American Society of Heating , Refrigeration and Air Conditioning Engineers (ASHRAE)
-  Member- Society of Automotive Engineers (SAE)
-  Member- Sigma Xi Scientific Research Society

REFERENCES

Available upon request