

## **Douglas E. Longman, P.E.**

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### **Professional Experience**

- **1998-Present.** Principal Investigator (PI) as well as facility and building manager for the Electro-Motive Diesel, Inc. locomotive engine program, a Work-for-Others program with EMD. Developed biofuel testing capability and led a multi-disciplined team of Argonne scientists and engineers to co-design biofuels and engines. Established engine CFD modeling capability at Argonne, focused on fuel spray model development.
- **1991-1998.** Managed diesel engine related projects including diesel engine emissions research, American Society for Testing and Materials engine testing of lubricating oils, original equipment manufacturer performance and durability testing at AutoResearch Laboratories, Incorporated; Chicago, Illinois.
- **1979-1991.** Sr. Test Engineer and engineering cooperative education and college graduate training programs at Caterpillar Incorporated in Peoria, Illinois. Responsibilities included program coordination and communication with design, analysis and manufacturing groups.

### **Education**

- BS Agricultural Engineering, University of Illinois Urbana-Champaign, 1982.
- MS Mechanical Engineering, University of Illinois Chicago, 2006.

### **Professional License**

- Registered Professional Engineer (Mechanical) – State of Illinois

### **Career Highlights**

- Develop & direct programs in applied engine combustion research for performance and emissions.
- Program direction, primary communication with industry sponsors, Department of Energy (DOE) sponsor communication and coordination, develop engine modeling capability, and meeting Laboratory Environment, Safety and Health requirements at Argonne.
- Design and construction coordination in the Building 371 expansion of the Transportation Research, Building 362 distributed energy research center, and expansion of Building 376 locomotive engine research facilities.
- Extensive diesel engine fuel injection system experience for truck and large engines.

- Lead engineer at Caterpillar in the test and development of a hydraulically actuated, electronically controlled unit injector for light truck diesel engine application.

### **Professional Society Activities**

- Active participation in SAE
- Served on ASTM committees while employed by AutoResearch Laboratories, Incorporated

### **Publications & Patents**

- Publications: Four technical papers in SAE and ASME conferences
- Patents: Two in the field of diesel engine fuel injection system