

LOREN C. CROOK, Ph.D.

Accident Reconstruction & Analysis
Computer Simulation
Instrumentation and Testing

Education

- **Ph.D. Purdue University**, West Lafayette, IN. Doctor of Philosophy in Mechanical Engineering, December 2009
- **B.S. University of Wyoming**, Laramie, WY. Bachelor of Science in Mechanical Engineering, magna cum laude, May 2004

Work Experience

4/2016 - Current

Advanced Sensor Development Engineer—Rolls-Royce Corporation, Advanced Systems Diagnostics University Technology Center at Virginia Tech

- Coordinated efforts to establish test assets at Virginia Tech.
- Identified and acquired test and measurement technology

6/2014 - Current

Senior Project Engineer—Injury and Crash Analysis, LLC

- Accident site field work, research, vehicle damage analysis, component failure analysis. Review reports.
- Accident reconstruction analysis
- Instrumentation and testing.

1/2011 - 4/2016

Engineer, Test Specialist—Rolls-Royce Corporation, Research Laboratories

- Aerodynamics and Combustion—Performed high pressure and high temperature combustion testing. Served as aerodynamics expert for all test cells in Research Laboratories.
- Engine Test—AMPS Turbogenerator small engine including safety compliance and daily operation. Planned and executed acceptance and design point testing.
- Atomization—Expert on fuel nozzle evaluation, using laser diagnostics, laser imaging and high speed photography.

8/2009-1/2011

Engineer, Specialist—Rolls-Royce North American Technologies (LibertyWorks®), Combustion Aerodynamics Group

- Alternative Fuels—Atomization expert for fuels testing including FAA CLEEN program and Air Force CRATCAF program.

Technical Skills:

Proficient with LabVIEW, MATLAB, EES, NX, TecPlot, Fluent, Solidworks, Microsoft Office and Microsoft Windows. Some Unix and Linux experience.

Optical diagnostics for fluids, including Malvern, schlieren, PIV and PDA/LDA.

Honors and Organizations:

- **Rolls-Royce Outstanding Innovation Award**—January 2015
- **AIAA**—Senior member
- **National Science Foundation Fellowship**, June 05 – June 08, highly selective national fellowship for promising young researchers.