

Fred D. Rice

Collision, Reconstruction & Analysis



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CURRICULUM VITAE

Experience

- **30** years of law enforcement experience
- **26** years of accident reconstruction - expert witness.
 - * **1983** - to date, Idaho State Police
 - ♦ Manager, Idaho State Police Accident Reconstruction Program.
 - ♦ Wrote the curriculum currently being used in the instruction of all law enforcement officers in accident investigation and reconstruction in the State of Idaho.
 - ♦ Full time certified instructor for Idaho State Police Advanced Training.
 - ♦ Master Instructor of Accident Investigation
 - ♦ Master Instructor of Accident Reconstruction
 - ♦ Certified instructor of Accident Investigation and Accident Reconstruction Courses for Peace Officer Standards and Training (POST).

- ◆ Regularly assists other police agencies in investigating and reconstructing traffic accidents.
- ◆ Testimony in criminal and civil court as an expert witness in the states of: Idaho, Utah, Colorado, Nevada, Nebraska, Montana, Oregon, Arizona, Illinois, Washington, and United States Federal Court.
- ◆ Over 1000 hours of testimony in the field of accident reconstruction.
- ◆ Instructed for Boise State University, the Institute of Traffic Studies, College of Southern Idaho, and Montana Highway Patrol in the fields of Accident Investigation and/or Reconstruction.
- ◆ Organized and personally participated in an accident involving a Chevrolet pickup and a six-wheel farm truck (driver of the farm truck), for the 1996 Annual International Association of Accident Reconstruction Specialists Seminar held in Meridian Idaho.

Work Experience

- * Personally investigated over 400 fatal accidents.
- * Reconstructed over 800 commercial vehicle accidents, involving vehicles hauling hazardous materials or explosives.
- * Idaho State Polices most qualified Reconstructionist; (organizes and sets standards for the Idaho State Police Investigation and Reconstruction programs), has been involved in over 4000 reconstructions.

- * **1994** - Full time certified instructor (Idaho State Police Academy), Department's consultant in traffic accident reconstruction, also works on special problems in the field of accident reconstruction for the Idaho State Police.

Specialized Training in Accident Reconstruction

- **2007** – Charleston, South Carolina
IAARS 27th Annual Seminar and Training with SCARS
24 hours of Study on the following:
Speed Determination from Evidence Gathered at Scene
Minimum Speed, Momentum, Critical Speed Scuff,
Airborne Equations.
Validations of Drag Sleds, Field Testing and Demonstration
- **2007** – Las Vegas, Nevada
ARC – CSI Crash Conference
24 hours of Study on the following:
Field Testing & Momentum Validation
Electronic Accelerometer Testing and Validation
SUV Rollover Testing
CDR Validation Testing
- **2006** – Huston, Texas
IAARS 26th Annual Seminar and Training
24 hours of Study on the following:
Field Testing & Formula Validation.
Critical Speed Testing and Validation
Field & Classroom Comparison of Various Data Collection Devices
& Methods
Vision & Driving With Demonstrations, Involving Eye Movements,
Perception & Reaction.
- **2005** – Meridian, Idaho
IAARS 25th Annual Seminar and Training
24 hours of Study on the following:
Truck Rollover Field Testing & Formula Validation.
On and off Road Critical Speed Scuff Testing & Formula
Validation.
Anti-loss of Control & Stabilization Features.

Vision & Driving With Demonstrations, Involving Eye Movements, Perception & Reaction.
Momentum Validation Crash Testing With Multiple Departing units.
Field & Classroom Comparison of Various Data Collection Devices & Methods.
Scale diagrams & Analysis Results

- **2004** – Jacksonville, Florida
24 hours IPTM Reconstruction Special Problems
- **2003** – Kansas City, Kansas
IAARS Annual Seminar and Training
24 hours of Study on Event Data Recorder and Vehicle Rollover.
- **2002** – Minneapolis, Minnesota
IAARS Annual Seminar and Training
24 hours of study on perception/reaction timing and vehicle modular analysis.
- **2001** – Grand Rapids, Michigan
IAARS Annual Seminar and Training
24 hours of study on (black box) module analysis and vehicle crash dynamics analysis; occupant kinematics.
- **2000** - College Station, Texas
WREX 2000-World Reconstruction Exposition
40 hours of testing of crash dynamics; tire coefficients of all brands of tires; motorcycle crashes and commercial vehicles sliding on their sides
- **1998** – Boston, Massachusetts
IAARS Annual Seminar and Training
40 hours of study of biomechanics of low speed impacts; driver awareness and traffic control devices; transfer and trace evidence in traffic accident investigations; blood evidence in accident reconstruction; tire dynamics and nomenclature.
- **1997** – Vancouver, British Columbia
IAARS Annual Seminar and Training
24 hours of study on motorcycle collision; vehicle dynamics and articulated vehicle rollovers.

- **1997** - Helena, Montana
The Texas A&M University System, Texas Engineering
Extension Service, Law Enforcement & Security Training Division
Advanced Commercial Vehicle Reconstruction Course
48 hours of study, commercial vehicle reconstruction and testing.

- 1996** – Boise, Idaho
IAARS Annual Seminar and Training
24 hours Occupant Kinematics
Angular momentum of two vehicles.

- **1995** - Sunnyvale, California
Northwestern University Traffic Institute
Heavy Vehicle Crash Reconstruction
40 hours of heavy vehicle reconstruction and testing.

- **1995** - Columbus, Ohio
Institute of Vehicle Safety
**Instructor Level: Concept of Day/Night Visibility for Traffic
Accident Investigators.**
44 hours of study, testing and certifying.

- **1995** – Sherwood, Oregon
Forensic Accident Reconstructionists of Oregon
Validation of Collision Analysis
14 hours of study analyzing staged crashes and airborne
equations

- **1995** – Grand Rapids, Michigan
IAARS Annual Seminar and Training
24 hours of study on vehicle dynamics; physics refresher;
pedestrian and pedecyclist reconstruction and occupant
kinematics.

- **1994** - Bellevue, Washington
Northwestern University Traffic Institute
Vehicle Dynamics
40 hours of reconstruction of vehicle dynamics.

- **1993** – Portland, Maine
IAARS Annual Seminar and Training
24 hours of study on commercial vehicle collision dynamics
and testing.

1991 - International Association of Accident Reconstruction Specialists, Membership #75. Attends and organizes annual seminars and provides vital information for the membership. Participates as a speaker in the seminars. Elected to Board of Directors in 1996. Elected to Vice President of the Board of Directors 2002

- **1990** - Boise, Idaho
Institute of Traffic Studies College of Technology
Pedestrian Accident Reconstruction
24 hours of study and testing on pedestrian traffic accidents.
Determining speeds from the vehicle and pedestrian.
- **1988** - Boise, Idaho
Advanced Truck Accident Reconstruction
40 of study and testing of weight shift and speed derivations for semi, doubles and triples. Instructed by Mike Lofgren.
- **1988** - Boise, Idaho
Advanced Accident Reconstruction
40 hours of computer applications and truck accident reconstruction. Operation of Comcrash by instructor and author Tom Ravensdale.
- **1986** - Boise, Idaho
IPTM University of North Florida
Traffic Accident Reconstruction Special Problems
40 hours of study and testing of motorcycles.
- **1983** - Boise, Idaho
Traffic Accident Reconstruction
80 hours of study and testing of vehicle accident and braking/acceleration dynamics. The course included: Geometric construction; derivation of formulas for minimum speed from skids, critical speed, weight shift and twist, drag factor, acceleration, time/distance and conservation of linear momentum.

Specialized Training in Accident Investigation

- **1983** - Boise Idaho
Accident Investigation Refresher Course
80 hours.
- **1982** - Twill Falls Idaho
Advanced Accident Investigation
40 hours of advanced study of vehicle accident dynamics.
Course included: Review of general investigation, Algebra, Trigonometry and Geometric Construction; determining force/thrust from damage; review of N.U.T.I. template/calculator; radius and tangent offset equations; curve plotting and scale drawing; equations and graphs to determine minimum speed from skids, critical scuffs, falls, vaults, conservation of linear momentum and combining speeds; time and distance equations; weight shift and it's effect on braking; light bulb examination; various exercises using the above subjects
- **1981** - Pocatello, Idaho
Basic Accident Investigation
80 hours of concentrated study of Investigation and Testing Techniques, based on N.U.T.I.
- **1980** - Burley, Idaho
Introduction To Accident Investigation
32 hours of How to Investigate and Record Accidents

Education

- College: 1974 - 1976 Yuba College, Marysville, California.
- Law Enforcement Training:
 - ◆ **1993** Earned **Master Certificate** from Peace Officer Standards and Training Council, State of Idaho, Department of Law Enforcement.
 - ◆ **1991** Earned **Advanced Certificate** from Peace Officer Standards and Training Council, State of Idaho, Department of Law Enforcement.

- ◆ **1984** Earned **Intermediate Certificate** from Peace Officer Standards and Training Council, State of Idaho, Department of Law Enforcement.
- ◆ **1983** Department of Law Enforcement, Idaho State Police First Stress Academy #4.
- ◆ **1979** Police Officer Standards and Training Academy, Class #42.

OTHER

- * **1996 - 1997** Requested by the **Federal Bureau of Investigations** and the **United States District Attorneys Office** to reconstruct and testify in the United States District Court on a second degree murder by vehicle case.
- * **1997** - United States Department of Justice
Award For Public Service
Meritorious Service and Acts that have materially contributed to the attainment of the highest standards of cooperative law enforcement and justice in the United States of America.
- * Assisted the Idaho Department of Transportation in determining a braking problem with their 1989 Ford dump trucks. Organized the test skidding of these trucks in Boise and was able to determine and explain why the trucks were having braking problems and presented opinion on how to solve the problem.
- * Performed tests on semis, double and triple trailers, passenger cars and motorcycles on a test track to document their actions during accident situations.