

Seth W. Bayer, P.E.

Compass Consulting Engineers P.C.
10875 Dover St., Suite 900
Westminster, CO 80021
720.458.9190
Seth@CompassEngineer.com

EDUCATION

University of Colorado – Boulder, Colorado

- B.S. Mechanical Engineering, 1986

ACCREDITATIONS

- Professional Mechanical Engineer (PE), Colorado #27803
- Professional Engineer, California #26579
- Professional Engineer, Mechanical Branch, Hawaii #8555
- Certified in Traffic Accident Reconstruction from Northwestern Traffic Institute
- American Society of Safety Engineers #010008641
- Crash Data Retrieval (CDR) Certified Data Analyst

PROFESSIONAL EXPERIENCE

Compass Consulting Engineers P.C. – Westminster, Colorado

Senior Engineer, 2017 – Present

- Vehicle Accident Reconstruction
 - Autos, pedestrian, bicycles, motorcycles, snowmobiles, ATV, tractor-trailers
 - Reconstruction of motor vehicle accidents using recognized software tools including CDR downloads, EDCRASH, EDSMAC, HVE 3D and AutoCAD
- Mechanical Failure Analysis
 - Automobile, motorcycle and general machinery components
- Product Liability
 - Design, manufacturing, material selection, guarding, warnings and code compliance evaluation
- Industrial Accidents
 - Maintenance and operations procedure evaluation
 - OSHA code compliance evaluation
- Winter Sports and Ski Area Accident Reconstruction and Ski Area Safety
 - Collisions, trajectory analysis, terrain parks, sightlines, chairlift and surface lift accidents
 - Snow tubing incidents
 - ANSI B77.1 code compliance analysis
 - Maintenance and operational procedure analysis
 - Snowmobile incidents

Ponderosa Associates Ltd. – Lafayette, Colorado

Project Engineer, 1991 – 2017

- Accident reconstruction and forensic failure analysis

Airwalk, Inc. – Carlsbad, California

Consulting Engineer, 1993 – 1999

- Invented, developed and manufactured snowboard boot binding systems and snowboards for Airwalk. Worked directly at TechnoSki factory in Colico, Italy on all production phases including concepts, engineering, industrial design, materials selection, testing, and production.

ABC Corporation – Waipahu, Hawaii

Consulting Engineer, 1994

- Pilot test design, construction, operation and data acquisition of ozone injection testing into industrial clothes washer at Up To Date Cleaners in Koloa, Kauai.

Pacific Gas and Electric Company – San Francisco, California

Engineer, 1986 – 1990

- Mechanical Design Engineer, Chemical Engineer, and Power Plant Production Engineer at geothermal power generation facilities in Napa and Sonoma, CA.

GUEST LECTURER

- CDLA presentation: Snow Sports Accident Reconstruction Basics, October 2023
- American Academy of Forensic Sciences: Seattle, February 2010
- Ski and Snowboard Accident Reconstruction Seminar
- Motor Vehicle Accident Reconstruction Seminar: Black Hills Claims Assoc., January 1993
- ASTM F27 Committee: Burlington, VT, August 1992

PATENTS

- WATER SAVING TOILET DEVICE (Dual mode flush mechanism) Patent Granted August 2007.
- US Patent Number 5,832,635 "APPARATUS FOR ADJUSTING THE FORWARD LEAN AND FLEXIBILITY OF FOOTWARE" (Snowboard boot with integrated highback)
- US Patent Number 5,890,729 "ROTATABLY ADJUSTABLE SNOWBOARD BINDING ASSEMBLY"
- US Patent Number 5,957,479 "SNOWBOARD BINDING ASSEMBLY" (Step-in binding system with self-tightening mechanism)
- US Patent Number 6,109,643 "SNOWBOARD BINDING ASSEMBLY"

PUBLICATIONS

- Snow Sports Accident Reconstruction Basics. Presented to CDLA October 2023
- "Critical Issues in Reconstructing ATV, Snowmobile and Other Off-Road Crashes" Minnesota Trial, Winter 2009
- "Safety Concerns of Modern Alpine Ski Bindings", Ski Safety News, August 1992.
- "Flex Standards in Alpine Ski Boots," presented to ASTM Committee F-27, August 1992.

PROFESSIONAL AFFILIATIONS AND INDIVIDUAL HONORS

- American Society for Testing and Materials F-27 Committee on Snow Skiing
- NCAA Division I Giant Slalom Champion: 1982
- All-American in Alpine Ski Racing: 1981, 1982, 1984
- National Corporate Ski Challenge Giant Slalom Champion: 1987, 1988, 1989, 1990
- Guinness Book of World Records 2011