

# Colin M. Wein, P.E.

Compass Consulting Engineers P.C.  
10875 Dover St., Suite 900  
Westminster, CO 80021  
720.458.9190  
[Colin@CompassEngineer.com](mailto:Colin@CompassEngineer.com)

## EDUCATION

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### **Colorado School of Mines** – Golden, Colorado

- B.S. Mechanical Engineering, 2013 – 2014
- B.S. Mathematical and Computer Sciences, 2001 – 2005

## ACCREDITATIONS

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- Licensed Professional Engineer (PE), Colorado #56822
- Licensed Professional Engineer (PE), California #M 385765
- ACTAR Accredited Traffic Accident Reconstructionist #3482
- Heavy Vehicle Event Data Recorder Download Technician and Analyst – March 2021
- Licensed Commercial Drone Remote Pilot – March 2019
- Crash Data Retrieval (CDR) Certified Data Analyst – October 2016
- Crash Data Retrieval (CDR) Certified Download Technician – July 2014
- Engineer in Training (EIT), Colorado – 2014

## PROFESSIONAL EXPERIENCE

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### **Compass Consulting Engineers P.C.** – Westminster, Colorado Engineer, 2017 – Present

- Perform investigation, reconstruction and analysis of motor vehicle accidents, including automobiles, SUV rollovers, heavy vehicles, bicycles, motorcycles and pedestrian impacts
  - Perform scene and vehicle inspections to collect three-dimensional geometry and physical evidence using surveys, three-dimensional scans and drone footage
  - Create three-dimensional point clouds of damaged vehicles and crash sites using FARO Scene, ReCap and Pix4D
  - Utilize PhotoModeler software to perform photogrammetry to reconstruct destroyed physical evidence and damaged vehicle geometry
  - Simulate motor vehicle accidents using HVE software and simulation models such as EDCRASH, EDSMAC, SIMON
  - Create precise two- and three-dimensional drawings using the computer-aided design software AutoCAD
  - Mathematical analysis of motor vehicle accidents using Microsoft Excel and Mathcad
  - Model and reconstruct rollover accidents using 3D Studio Max animation software to match vehicle damage to roadway evidence in virtual space
  - Prepare technical reports and exhibits for litigation

### **Ponderosa Associates Ltd.** – Lafayette, Colorado Project Engineer, 2014 – 2017

- Performed investigation, reconstruction and analysis of motor vehicle accidents, including automobiles, SUV rollovers, heavy vehicles, bicycles and motorcycles and pedestrian impacts
- Designed testing and operated vehicles for full-scale dynamic testing related to ignition switch failure. Performed full-scale testing on vehicles to determine the effect on braking and steering after an unintended key off movement of the ignition switch

## **Knott Laboratory, LLC** – Centennial, Colorado

Mechanical Engineering Intern, 2013 – 2014

- Performed reconstruction and analysis of motor vehicle accidents including rollovers and low speed collisions
- Worked alongside lead engineers at all phases of the reconstruction including project scope, analysis, calculations and report drafting
- Performed simulation of rollover accident using PC-Crash
- Worked alongside lead engineers on product liability cases involving product testing and report drafting

## ADDITIONAL PROFESSIONAL ACTIVITIES

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- Interactive Driver Response Research (IDRR) Forum - 2022
- Heavy Vehicle Event Data Recorder (HVEDR) Use in Traffic Crash Investigation Course - 2021
- Human Factors for Traffic Crash Reconstruction Course – 2021
- HVE Forum by Engineering Dynamics Corporation – 2017, 2019, 2021 & 2022
- Volunteer Expert: Colorado Defense Lawyers Association, Trial Academy – 2014, 2016 & 2018
- Full scale vehicle testing of a Chevrolet Impala – 2018
- Full scale vehicle testing of a Chevrolet HHR – 2017
- HVE Simulations Training Course by Engineering Dynamics Corporation – 2015
- Bosch Crash Data Retrieval (CDR) Data Analyst Course – 2016
- Bosch Crash Data Retrieval (CDR) Technician Course – 2014

## PROFESSIONAL AFFILIATIONS

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- Society of Automotive Engineers (SAE)
- National Society of Professional Engineers (NSPE)
- National Association of Professional Accident Reconstruction Specialists, Inc. (NAPARS)

## GUEST SPEAKER

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- Colorado Criminal Defense Board – 2022

## PUBLICATIONS

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- S. Kumar, K. Schrum, D. Sicking, D. Holder, C. Wein, M. McCort: Biomechanics of Penetrating Trauma and Injury Mitigating Protective Measures in Guardrail Motor Vehicle Crashes. *Journal of Biomedical Science Instrumentation*, 57(2), 128-135, 2021.