

PO Box 34 Schererville, IN 46375 Tel (219) 322-7639 smneese@neese-assoc.com www.neese-assoc.com

Stephan M. Neese Accident Reconstruction Specialist

ACTAR Certified since 1997, certification # 563- ACTAR is the national comprehensive program of accreditation and certification in Accident Reconstruction (Accreditation Commission for Traffic Accident Reconstruction)

Attended the Traffic Institute at Northwestern University, Evanston, Illinois-Successfully passed and completed all the crash investigation and reconstruction courses (1978-1990)

Collision Analysis Consultant, self-employed since 1986, incorporated 1992- President of Stephan M. Neese & Associates Accident Reconstruction, Inc

Certified Data Retrieval Specialist in downloading automobiles' event data recorder and analysis of data provided by the software to assist in the understanding of and analyzing a traffic collision

Expert Testimony given in more than one-hundred trials and two-hundred-fifty depositions-including Federal, Civil and Criminal Courts for civil plaintiffs and defendants, criminal prosecution and criminal defense

Reconstructed over fourteen-hundred collisions that included automobiles, sport utility vehicles, commercial trucks and busses, trains, motorcycle and pedestrians

Retired Police Officer, twenty years continuous service with the Schererville Police Department, Schererville, Indiana, (1976-1996); with Accident Investigation specialty; Created and supervised the departmental accident reconstruction team and accident training

As a Police Officer Investigated Over 1000 Collisions since 1976 as primary investigator; minor property damage collisions, serious bodily injuries and fatality crashes; including pedestrian, automobile, commercial vehicle, motorcycle, bicycle and train collisions

As a Police Officer Assisted in More Than 2500 Police Crash Investigations- at scene and follow-up investigations as a first responder, supervisor and/or consultant

Completed over 2200 Specialized Hours of instruction in accident investigation, reconstruction procedures and scientific principles used in the reconstruction process including physics, mechanics, kinematics

Stephan M. Neese

Accident Reconstruction Specialist (cont.)

Mapped & Measured Hundreds of Crash Scenes- road dimension, grade profiles, skid marks, gouges and other crash related evidence

Inspected and Analyzed Thousands of Vehicles and damage to determine impact configuration, vehicle defects, lamp illumination and specific crush measurements

Photographed Hundreds of Crash Scenes and Vehicles for collision analysis, scene preservation, photogrammetry and court proceedings

Attended Indiana Law Enforcement Academy (1976), Plainfield, Indiana- Completed and passed the Indiana Police Officer's Basic Training Course

As a Certified Instructor by State of Indiana Law Enforcement Training Board developed and taught the Crash Investigation and Photography curriculum for Northwest Indiana Law Enforcement Training Council

Guest Speaker/Instructor at Institute of Police Technology and Management Special Problems, Illinois Association of Technical Accident Investigators, Indiana Prosecutor's Conference, and the Indiana Association of Certified Accident Investigators

Graduated Griffith High School, Griffith, Indiana (1972); Math, Science and Business majors

Developed and Operate the Highway Control Driving School, a defensive driving program for local city and county courts and company fleet managers

Principal Partner with The Visual Courtroom, LLC- trial exhibits and 3-D computer animations for all types of litigation 1992-2012

Adjunct Instructor REC-TEC Computer Program for Michigan State University at the Minnesota Highway Patrol Jan, 2020

Memberships

Indiana Association of Certified Accident Investigators (1990-2020)
Illinois Association of Technical Accident Investigators (1990-2022, secretary 2002-2008)
International Network of Collision Reconstruction (since 2000)
Society of Automotive Engineers Affiliate Member (2002-2020)

In recognition of demonstrated academic achievement, completion of accident specific training, applied experience in the field, and in view of the successful completion of the ACTAR Full Accreditation

Written and Practical Examination, the ACTAR Governing Board of Directors hereby awards the level of

Full Accreditation as a Traffic Accident Reconstructionist

to

Stephan M Neese

Issued this 15th Day of September 2020

Ron Sanders Chair, ACTAR

David Benn Secretary, ACTAR

Expiration date: September 15, 2025

Registration Number: 563

ACCIDENT INVESTIGATION

The Traffic Institute, Northwestern University
Evanston, Illinois November 1978

Course Topics Include:

Analysis of Accident Data

Events of an Accident

Human Elements and Factors

Mapping and Measuring

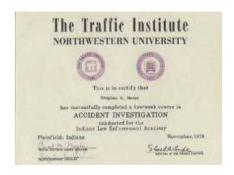
Physical Facts From the Road

Physical Facts From the Vehicle

Speed Estimates From Road Markings

The Investigation Process

The Enforcement Process



TECHNICAL ACCIDENT INVESTIGATION

The Traffic Institute, Northwestern University Evanston, Illinois October 1986

Course Topics Include:

Accident Data Analysis

Lamp Examination

Legal Aspects of Technical Accident Investigation

Mapping and Measuring

Perspective Grid Mapping

Qualitative Vehicle Dynamics

Road Information

Technical Preparation vs. At-Scene Investigation

Tire Damage

Vehicle Damage Evaluation



VEHICLE DYNAMICS WORKSHOP

The Traffic Institute, Northwestern University
Evanston, Illinois October 1986

Course Topics Include:

Articulated Vehicles Energy Applications Momentum Applications Vehicle Dynamics



TRAFFIC ACCIDENT RECONSTRUCTION I

The Traffic Institute, Northwestern University Evanston, Illinois June 1988

Course Topics Include:

Articulated Vehicles

Conservation of Momentum

Driving Strategy and Tactics

Mechanics

Microcomputer Applications

Reconstruction Process

Vehicle Behavior in Collisions



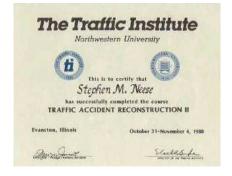
TRAFFIC ACCIDENT RECONSTRUCTION II

The Traffic Institute, Northwestern University
Evanston, Illinois November 1988

Course Topics Include:

Conservation of Momentum Motorcycles Occupant Kinetics

Pedestrian Accidents



MICRO-COMPUTER ASSISTED TRAFFIC ACCIDENT RECONSTRUCTION

The Traffic Institute, Northwestern University
Evanston, Illinois September 1990

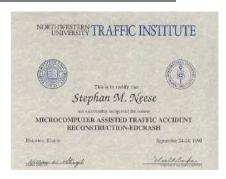
Course Topics Include:

Crush Profile Measurements Damage Classifications

EDCRASH

Photogrammetry

Vehicle Fixed Coordinate Systems



iN-PUT ACE Video Interrogation Operator's Class

iN-PUT

Virtual Classroom August 2021

Course Topics Include:

The File List

The Interrogation Tab
The Workflow Tab



IA OPERATOR CERTIFICATION

iN-PUT ACE Video Interrogation Examiner's Class

iN-PUT

Virtual Classroom October 2021

Course Topics Include:

Frame Rate

Narrative Report

Synchronizing Canvas Video Clips



Optics, Lighting and Visibility for the Forensic Investigator

Clearly Visible Presentations, LLC.

Fishers, Indiana August 2013

Course Topics Include:

The Physics of Light

Photometry (principles and units)

Basic Optics: Transmission, Transmission &

Absorption

The Human Vision System

Light Sources

Atmospheric/Weather Influences

Object Reflectance

Retro-reflective Materials

Headlights- principles and Optics

Photography

Documenting Night Scenes

Low-Light Photography

Forensic Photography Review



ARAS 360 ADVANCED 3D COMPUTER DIAGRAMING

Aras 360Technologies, Inc.

Fishers, Indiana December 2010

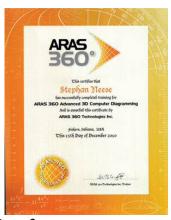
Course Topics Include:

CAD Basics

Downloading Total Station Mapping Data

Animations

Calculations Using ARAS 360



ADVANCED PHYSICS & ANIMATION- REC-TEC & FORENSIC 3D SOFTWARE

REC-TEC LLC

Jekyll Island, Georgia

December 2007

Course Topics Include:

Physics Review

Advanced Physics and Reconstruction

REC-TEC Software Usage

Animation Basics

Use of Forensic 3-D Software with REC-TEC



CRASH DATA RETRIEVAL (CDR) CERTIFICATION SYSTEM OPERATOR

Collision Safety Institute,

Bloomington, Illinois

September 2007

Course Topics Includes:

Event Data Technology

CDR Terminology

Airbag Deployments

GM and Ford Downloading Procedures

Certification Process



PHOTOMODELER PRO5 COLLISION INVESTIGATION

EOS Systems, Inc.

Raleigh, North Carolina,

March 2005

Course Topics Include:

Photogrammetry Process

PhotoModeler Pro 5 Software

Camera Calibration

Referencing Photographs

Creating 3-D Models

Scene and Evidence Photogrammetry

Inverse Camera Process



MAPSCENES PRO

Mount Vernon, Illinois

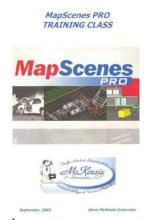
September 2003

Course Topics Include:

CAD Software Overview

Getting Started in MapScenes Pro

Field Exercise With Total Stations



CRASH DATA RETRIEVAL (CDR) CERTIFICATION SYSTEM OPERATOR

Collision Safety Institute,

Arlington Heights, Illinois

September 2002

Course Topics Include:

Event Data Technology CDR Terminology

Airbag Deployments

GM Downloading Procedures

Certification Process



ANALYSIS OF LOW SPEED COLLISIONS

Texas A & M University Engineering Extension Service Houston, Texas April 1997

Course Topics Include:

Anatomy Piomocho

Biomechanics- Physical Parameters Damage & Delta V Applications Force, Momentum, PDOF, Energy

Occupant Motion & Tolerances

Vehicle Safety



PEDESTRIAN CRASH INVESTIGATION

Canadian Police College

Ottawa, Ontario August 1991

Course Topics Include:

Bicycle Collision Analysis Car/ Bicycle Nomenclature Human Anatomy Pedestrian Collision Analysis

Tire Marks



LAW ENFORCEMENT VIDEO I

Indiana Law Enforcement Academy
Plainfield, Indiana
August

Course Topics Include:

Basic Video Terminology Video Tape Mechanics Scene Video Tape Principles



1991

LAW ENFORCEMENT VIDEO II

Indiana Law Enforcement Academy

Plainfield, Indiana August 1991

Course Topics Include:

Close-up Videography Lighting Techniques Video Tape Editing



HEAVY VEHICLE CRASH INVESTIGATION

University of Indianapolis

Indianapolis, Indiana June 1989

Course Topics Include:

Air Brakes

Articulated Vehicles Investigation Federal Motor Carrier Regulations

Vehicle Dynamics



SEATBELT ACCIDENT INVESTIGATION

Institute of Police Technology and Management Jacksonville, Florida 1988

Course Topics Include:

Child Restraint and Seatbelt Injuries Frontal, Side, and Rear Impacts Restraint Hardware

Rollovers

Unrestrained Injuries

Vehicle and Occupant Dynamics



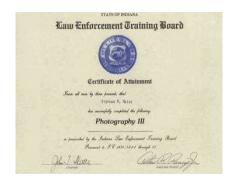
VEHICLE CRASH PHOTOGRAPHY III

Indiana Law Enforcement Academy Plainfield, Indiana

December 1981

Course Topics Include:

Color Theory Crash Photography **Lighting Techniques Process Controls**



EMERGENCY VEHICLE OPERATOR'S COURSE

United States Department of Interior Lake/Suburban Safety Training Council

Gary, Indiana October 1981

Course Topics Include:

Controlled Braking Evasive Maneuvers Highway Response Vehicle Dynamics



ADVANCED INTERVIEW TECHNIQUES

Lake/Suburban Public Safety Training Council
Gary, Indiana October 1981

Course Topics Include:

Critical Question Technique Human Behavior Verbal & Non-verbal Communications



LAW ENFORCEMENT PHOTOGRAPHY II

Indiana Law Enforcement Academy
Plainfield, Indiana June 1981

Course Topics Include:

Macro Photography Nighttime Photography Scene Photography Technique



EVIDENCE TECHNICIAN TRAINING

Lake/Suburban Public Safety Training Council Gary, Indiana April 1981

Course Topics Include:

Data Collection
Diagraming Scene
Scene Management



LAW ENFORCEMENT PHOTOGRAPHY I

Indiana Law Enforcement Academy

Plainfield, Indiana April 1979

Course Topics Include:

Basic Camera Mechanics

Film Principles

Photography Techniques



TRAFFIC SUPERVISION

Indiana Law Enforcement Academy

Plainfield, Indiana

December 1978

Course Topics Include:

Human Behavior & Motivation

Problem Analysis

Supervisory Leadership

Traffic Safety Program



DEATH INVESTIGATION

Indiana Law Enforcement Academy

Plainfield, Indiana August 1977

Course Topics Include:

Alcohol/Drug Deaths

Injury Patterns

Role of Pathologist

Scene Management

Traffic Deaths

Vehicle Safety



CHEMICAL TESTS FOR INTOXICATION

Indiana University, School of Medicine

Indianapolis, Indiana March 1977

Course Topics Include:

Blood Alcohol Calculations

Breath Alcohol Methods

Breathalyzer Theory & Operation

Pharmacology & Toxicology

Procedure

Stages of Alcoholic Intoxication



GRADUATE INDIANA LAW OFFICER BASIC COURSE

Indiana Law Enforcement Academy

Plainfield, Indiana

March

1977

Course Topics Include:

Basic Police Functions

Basic Scene Investigation

Crash Elements

Mapping & Measuring

Report Writing

Vehicle Safety Overview



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Springfield, Illinois

October 2021

Seminar Topics Include:

Accurate Timing From Video

Airborne Validation

CDR Technician Update

Excel for Crash Reconstruction

Expert Witness Presentation

Heavy Vehicle Crash Investigation

Hyundai & Kia Crash Data

Infotainment Investigations

Tesla Presentation

Translational and Rotational Drag Factors

Crash Tests



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Springfield, Illinois

October 2019

Seminar Topics Include:

Courtroom Testimony

Unmanned Aircraft System Mapping

Tesla Case Study

Event Data Recorders 2019Update

Hyundai & Kia Crash Data

Toyota Vehicle Control History

Identifying Mechanical Deficiencies

Practical Human Factors

Delta-V Calculations

Video Evidence

Crash Tests



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Springfield, Illinois

September 2018

Seminar Topics Include:

A Judge's Perspective

Heavy Trucks

Autonomous Vehicle- Who's Responsible?

Critical Speed vs. Spin

Event Data Recorders 2018Update

Trailer Stability, Hitches and Towing

UAW Technologies

Simultaneous Equations

Motorcycle Case Study

Crash Tests



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Springfield, Illinois

September 2017

Seminar Topics Include:

The Acquisition and Analysis of Infotainment and Telematics/ Berla iVe System

Post-Crash Vehicle Inspections

Motorcycle Vehicle Headlights- Future

ABS Testing

Event Data Recorders 2017 Update

UAW Technologies

Modern Motorcycle Technologies/Techniques

Animation Validation

Adaptive Intersections and Light Timing

UAS Program

Occupant Kinematics and Crash Reconstruction

Crash Tests



WREX 2016 WORLD RECONSTRUCTION EXPOSITION

Orlando, Florida

May, 2016

Seminar Topics Include:

Autonomous Driving

Applied Statistics for Reconstruction

Biomechanic Injury Assessment

Bridgestone Tires

Commercial Vehicle Air Brakes

Digital Forensics & Heavy Vehicle Post Crash Inspections

Distracted Driving

EDR Anomalies

EDR Update

Forensic Investigation Injury/Death

Emergency Vehicle Reconstruction

Heavy Vehicles

Injury Analysis- Listening to Injuries

Marijuana and Crashes

Motorcycle Crash Investigations

Motorcycle Speed From Deformation

NTSB Accident Investigations

Pedestrian Collisions

Rollover Crashes

SDM Survivability

Speedometers and Collision Reconstruction

UAVs (Unmanned

Video Analysis

Visual Amodal Perception

Crash Tests

ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

East Peoria, Illinois

September 2015

Seminar Topics Include:

Event Data Recorders 2015 Update

Forensic Trace Evidence from Traffic Crashes

Medical Marijuana and Crash Investigation

The Importance of Autopsy Data in Occupants

Traffic Emerging Technologies

Using EDR Delta-V to Calculate Closing Speed

Using Simultaneous Equations to Solve Crash

Vehicle Inspection and Nomenclature and Equipment

Crash Tests



MIDWEST ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Wisconsin Dells, Wisconsin

June 2013

Seminar Topics Include:

Advanced Energy Analysis with Force Balance

Conservation of Momentum with CDR Applications

Crash Data Retrieval System Update

Heavy Truck Crash Reconstruction

Heavy Vehicle EDR Analysis

Human Factors, IDRR Software Analysis

Monte Carlo Analysis

Motorcycle Crash Reconstruction

Pedestrian Crash Reconstruction



ARC-CSI CRASH

Accident Reconstruction Network-Collision Safety Institute Las Vegas, Nevada June 2012

Seminar Topics Include:

Closing Speed Workshop

Drug Recognition Training

Establishing Safe and Realistic Speed Limits

Highway Design- Safety Appurtenances

Low Speed Collisions- Reconstruction Applications

Low Speed Collisions- Biomechanical Analysis

Measuring Yaw Marks from Digital Maps

Overview of GM Hybrid and Electric Vehicle

Seat Belt Analysis

Technology-Its Relationship to EDR Data

Tread Separation Crashes Involving Axle Tramp

Using ECM Diagnostic Data in Crash Reconstruction

Crash Tests - 7 Crash Tests and Reviews



SPECIAL PROBLEMS IN TRAFFIC ACCIDENT RECONSTRUCTION

Institute of Police Technology and Management

Orlando, Florida April 2011

Seminar Topics Include:

An Introduction to Energy Concepts in Reconstruction

Basics Physics for Crash Reconstruction

Bicycle Crash Investigation

CDR-Crash Data Collection Guide for GM Airbag Unit

EDR Data in Reconstruction Real World Studies

Event Data Recorders- What's New

Introduction to Microsoft Excel for Reconstruction

NASCAR Safety Innovations

Police Fleet & Vehicle Crash Concerns

Portable GPS Usage in Reconstruction

Safe Following Distances Nighttime Commercial Vehicles

Simulation 101

Tires, Tire Forces and Stability

Traffic Signal Timing Essentials

Working with Crush and Momentum- Motorcycle-car

Crash Tests



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Bloomington, Illinois

September 2010

Seminar Topics Include:

Crush and Restitution

Drag Sled Testing

EBS, KEES and Delta-V

ECM Field Guide

Excel for Reconstruction

Pedestrian and Cycles Crashes

Tires, Forces and Stability

Trailer Crash Analysis

Crash Tests



SPECIAL PROBLEMS IN TRAFFIC ACCIDENT RECONSTRUCTION

Institute of Police Technology and Management

Orlando, Florida April 2010

Seminar Topics Include:

Commercial Motor Vehicle Drive Train Analysis Advanced Pedestrian/Bicycle Crash Investigation

Research Stiffness/Calculate Stiffness Values

Planning and Bullet Proofing Your Reconstruction

Validation of On-going Drag Sled Studies

Case Preparation and Courtroom Presentation

History & Application of EDCRASH in Reconstruction

Digital Photography for Traffic Crash Investigators

Occupant Kinematics

Instrumentation and Testing for Crash Reconstruction



SPECIAL PROBLEMS IN TRAFFIC ACCIDENT RECONSTRUCTION

Institute of Police Technology and Management

Orlando, Florida April 2010

Crash Data Retrieval Update 2010

Heavy Truck Electronic Control Module(ECM)





ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Bloomington, Illinois

September 2009

Seminar Topics Include:

Momentum Considerations

Rollover, Occupant Kinematics and Ejection Issues Digital Photography/Video in Crash Investigation

C.V. Stability and Bendix ESP Systems

Pedestrian Crash- Issues of Concern

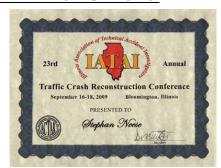
Airborne Trajectory Analysis

The Dramatic Impact of Courtroom Visual Aids

From Call-out to Court

Crash Tests

Crash Test Review



SPECIAL PROBLEMS IN TRAFFIC ACCIDENT RECONSTRUCTION

Institute of Police Technology and Management Orlando, Florida April 2009

Seminar Topics Include:

Validation for the Use of Drag Sled for Friction

Application of Throw Distance

Damage Profile Analysis

Using Microsoft Excel in Graphing ACM/PCM Data

Commercial Motor Vehicle Foundation Brakes

Hybrid Vehicles- Challenge for Investigators

Modern Technology for Measuring Friction

Using Simulation to Reconstruct and Visualize Crashes

Single Image Planar Rectification and Photogrammetry

Drag Sled Protocol

CDR Release 3.1

Airborne Trajectories and Analysis

Lamp Analysis

Motorcycle Lateral Acceleration and Lean Angles

REC-TEC Update

Crash Tests



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Bloomington, Illinois

September 2008

Seminar Topics Include:

Determining Occupant Seating Positions

Vehicle Rollover Dynamics

A Comparison of ABS Braking Systems

Preparing For Trial

Reconstruction hardware

Energy Analysis Workshop

Crash Testing and Analysis

Trucks-Second Division vehicles

Danger of Hybrid Vehicles

CDR Retrieval Updates

Human Factors

Spin Analysis



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Bloomington, Illinois

September 2007

Seminar Topics Include:

Fraudulent Crash Reporting

Truck Technology

m-SMAC

Crush Measuring Protocol

Crash Scene Documentation

Eve Witness Testimony

Investigating truck Crashes

Scan Tool and CDR

CDR Retrieval Updates

Pedestrian vaults

Reconstruction Formulas

Modeling ABS Brake Forces

Airbag Control Modules



SPECIAL PROBLEMS IN TRAFFIC ACCIDENT RECONSTRUCTION

Institute of Police Technology and Management

Jacksonville, Florida April 2007

Seminar Topics Include:

Digital Photography for the Crash Investigator

Interviewing Techniques

Spin Analysis

Forensic Animation

Tire Failure

From Scene to Courtroom

Traffic Homicide and DUI

NHTSA Crash Investigation Program Overview

360-degree Momentum and GM Module

Drag Coefficients in Yaws and Skids

Balancing Forces in Crush

Case Preparation and Courtroom Testimony

Pedestrian and Bicycle Reconstruction

Crash Tests



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Bloomington, Illinois

September 2006

Seminar Topics Include:

ABS Braking Systems

Accelerometers

Airbag Control Modules

Animations & Simulations

Commercial Brake New Technology

Crash Data Retrieval

Forensic Evidence

Pedestrian Vaults

Reconstruction Formulas



CDR USER'S

Collision Safety Institute/ Accident Reconstruction Network Dallas, Texas February 2006

Seminar Topics Include:

Vetronix New Cables and Coverage

Practical Aspects of CDR in Crash Investigation

Implementing CDR Policy

CDR Data and Human Factor Issues

Various Types of ACM modules and Data Recorded

Motorcycle Collision Involving Vehicles with CDR

CDR Validation and Legal Proceedings

Analysis of CDR Data in 360 Linear Momentum Collisions

CDR Data Comparison to Flight Data Recorders

Durability of ACMs

Quantifying Uncertainties in CDR Data

Accuracy of Speeds Recorded by SDM

GM Modules Overview

Practical Applications of CDR Usage



REC-TEC ADVANCED PHYSICS USING MICROCOMPUTERS

Orlando, Florida

January 2006

Seminar Topics Include:

360-degree Momentum

Delta-V From Damage

Pedestrian Vaults

Basic Photogrammetry



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Springfield, Illinois

September 2005

Seminar Topics Include:

Crash Data Retrieval

Heavy Truck ECM's

Pedestrian Crash Reconstruction

Pedestrian Statistical Surveys

Pedestrian Crash Tests

ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

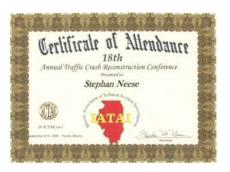
Peoria, Illinois

September 2004

Seminar Topics Include:

B.A.C. Evidence Crash Tests The Forensic Pathologist Injuries in the ER Roll-over Crash Investigations

Roll-over Dynamics



SOUTHEASTERN COLLISION RECONSTRUCTION

Biloxi, Mississippi

July 2004

Seminar Topics Include:

Accident Reconstruction Review Using Excel in Reconstruction



ACCELERATION AND VERICOM FAMILIARIZATION

Vericom Computers

Arlington Heights, Illinois

November 2003

September 2003

Seminar Topics Include:

Road and Friction Values

Accelerometers

Vericom Field Testing



REC-TEC ADVANCED PHYSICS USING MICROCOMPUTERS

New Orleans, Louisiana

Seminar Topics Include:

AASHTO Sight Triangle

Air Brake Chambers

Off-Tracking

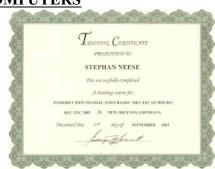
Weight Shift

Quadratic Solver

The Problems With Turns

Train Crash Investigation

SMAC & CRASH III



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Mount Vernon, Illinois

September 2003

Seminar Topics Include:

Crash Tests

Forensic Mapping

Motion & Airborne Applications



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Aurora, Illinois

September 2002

Seminar Topics Include:

Crash Tests

Evidence Collection

Breakaway Fracture

Perception & Response

Pole & Tree Impacts



REC-TEC ADVANCED PHYSICS USING MICROCOMPUTERS

Cocoa Beach, Florida

August 2002

Seminar Topics Include:

Time & Distance

Critical Turn-away

Crush

Momentum

Conservation of Energy

Photogrammetry



<u>SPECIAL PROBLEMS IN TRAFFIC ACCIDENT RECONSTRUCTION</u>

Institute of Police Technology and Management

Jacksonville, Florida April 2002

Seminar Topics Include:

Case Law Updates

Commercial Vehicle ABS

Commercial Vehicle Rollover Data

Drag Sleds Study

Energy Methods in Collisions

Error Analysis in Reconstruction

Human Factors

Motorcycle Momentum

Motorcycle Crashes

Pole Impacts

Rotational Mechanics

Trains

Truck Instrumentation



TIPS ANNUAL 2002

Traffic Institute for Police Services

Champion, Pennsylvania April 2002

Seminar Topics Include:

Advanced Occupant Protection Systems

Event Data Recorders

Driver Visibility and Response Time

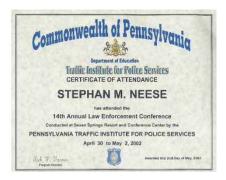
Commercial Vehicle Brake/Engine Reconstruction

Pedestrian Accident Reconstruction Update

Computer Animation

Rotational Mechanics in Collision Reconstruction

Crush Analysis



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Danville, Illinois

September 2001

2001

Seminar Topics Include:

Barrier Crash Tests

Crash Tests

Eyewitness Reliability

Grade Crossing Trains

Human Factors- Perception

Pedestrian Crash Reconstruction

Traffic Signal Basics

Vehicle Forensics



REC-TEC ADVANCED PHYSICS USING MICROCOMPUTERS

June

Cocoa Beach, Florida

Seminar Topics Include:

Time & Distance

Critical Turn-away

Crush

Momentum

Conservation of Energy

Photogrammetry



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Peoria, Illinois

September 2000

Seminar Topics Include:

Air Bags

Crash Event Recorders

Crash Photography

Crash Tests

Injury Patterns

Witness Statements



WREX 2000

College Station, Texas

September 2000

Seminar Topics Include:

Alcohol Involvement

Basics of Crush

Crash Data Recorders

Crash Tests

Critical Speed

Estimating Uncertainty

Event Recorders

Factors in Detection and Response

Forensic Mapping

Hands on Testing

Highway Liability

Laser Measuring

Photogrammetry

Role of Weather Expert

Traffic Signal Timing

Trailer Underride

Vehicle Considerations Investigator

Vehicle Restitution



SPECIAL PROBLEMS IN TRAFFIC ACCIDENT RECONSTRUCTION

Institute of Police Technology and Management

Jacksonville, Florida May 2000

Seminar Topics Include:

Accuracy & Precision Reconstruction

Blood Stain Patterns

Co-Axial Impact Theory

Collection of Crash Evidence

Commercial Vehicle Crash Update

Crash Worthiness Safety

Data Recorders

Forensic Lighting

Forensic Meteorology

Head-on Collision Speed Calculation

Heavy Truck Rollovers

Impaired Driving Collisions

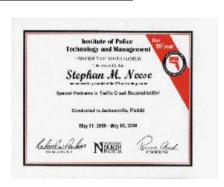
Measure/Computer Diagraming

Momentum and Physics

Pedestrian Injury Patterns

Photography

Pitfalls in Reconstruction Testimony



SPECIAL PROBLEMS IN TRAFFIC ACCIDENT RECONSTRUCTION

Institute of Police Technology and Management

Jacksonville, Florida April 1999

Seminar Topics Include:

Accelerometers

Blood Evidence & Reconstruction

Car Tires

Damage Analysis

DNA and Trace Evidence

Energy Methods Applications

Inspection of Car Seats

Low Speed Collisions

Momentum Applications

Pedestrian/Bicycle Investigation

Railroad Accident Investigation

Sport Utility Vehicles

Trailer Brakes

Trial Preparation



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Springfield, Illinois

September 1998

Seminar Topics Include:

Articulated Vehicles

Crash Tests

Federal Trucking Regulations

Night Time Visibility



SPECIAL PROBLEMS IN TRAFFIC ACCIDENT RECONSTRUCTION

Institute of Police Technology and Management

Jacksonville, Florida April 1998

Seminar Topics Include:

Commercial Vehicle Investigation

Crash Diagraming

Dauber & Forensic Animation

In-Car Video

Linear Momentum

Math and Physics

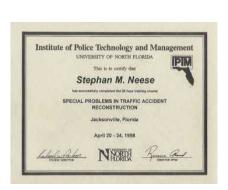
Occupant Protection Systems

Occupant Seating Positions

Occupant Kinematics

Reconstructionalist-Expert

Trailer Swing-Out



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Arlington Heights, Illinois

September 1997

Seminar Topics Include:

Barrier Equivalent Velocity

Collection of Forensic Evidence

Coordinate Method Vector Analysis

Crash Tests

Forensic Mapping

Mathematical Methods

Momentum Revisited

Simultaneous Equations

Rear-end Collisions



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

September 1996

Collinsville, Illinois

Seminar Topics Include:

Aerodynamics

Civil & Criminal Law

Crash Tests

Low Speed Collisions

Measuring Techniques- Laser

Pedestrian Crash

Photography Technology



SPECIAL PROBLEMS IN TRAFFIC ACCIDENT RECONSTRUCTION

Institute of Police Technology and Management

Jacksonville, Florida April 1996

Seminar Topics Include:

Acceleration & Deceleration

Computer Analysis Projections

DUI Prosecutions

Effects of Aerodynamics

Human Factors-Perception/Reaction

Hydroplaning

Low Speed Impact Analysis

Pedestrians

Police Product Liability

Tire Retread Technology

Underground Rail Accidents

Vehicle Mechanical Analysis



SPECIAL PROBLEMS IN TRAFFIC ACCIDENT RECONSTRUCTION

Institute of Police Technology and Management Jacksonville, Florida April 1995

Seminar Topics Include:

Animation & Simulation

Bus Accident Reconstruction

Commercial Vehicle Analysis

Demonstrative Evidence

Friction & Tire Forces

Headlight Pattern Analysis

Motorcycle Reconstruction

Night Visibility

Occupant Kinematics

Physical Evidence vs. Eye Witness

Tire Forensics

Vector Analysis



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Collinsville, Illinois

August 1994

Seminar Topics Include:

3-D Video Animation

Crash tests

Forensic Lab Analysis

Friction & Energy Speed Computations

Photography

Reports

Trailer Underride

Vehicle Damage Inspection

Vehicle Dynamics



SPECIAL PROBLEMS IN TRAFFIC ACCIDENT RECONSTRUCTION

Institute of Police Technology and Management

Jacksonville, Florida April 1994

Seminar Topics Include:

Aerial Crush Photography

Airbag Technology

AutoStats

Body Works Computer Program

Commercial Vehicle Paper Trail

Radial Tires

Restraint Systems

Total Station

Truck Rollovers

Truck Brake Failure

Underride Accidents

Windows Software



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Mundelein, Illinois

October

1993

Seminar Topics Include:

Crash Tests

Friction and Energy Methods

Mathematical and Vector Analysis



SPECIAL PROBLEMS IN TRAFFIC ACCIDENT RECONSTRUCTION

Institute of Police Technology and Management Jacksonville, Florida April 1993

Seminar Topics Include:

Accident Fraud

Airborne Accidents

Analyzing Nighttime Accidents

Computer Programs

Computerized Accident Drawing

Deceleration/ Accelerometers

Friction & Energy

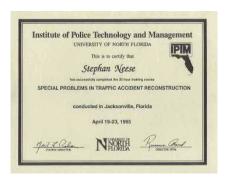
Lamps

Mechanical Vehicle Inspection

Occupant, Pedestrian Injuries

Rollovers

Truck-trailer Jack-knifing



ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Illinois State University

October 1992



MIDWEST ASSOCIATION \mathbf{OF} **TECHNICAL** ACCIDENT INVESTIGATORS

West Des Moines. Iowa May

Seminar Topics Include:

NTSB- Federal Motor Carrier Laws Railroad Crossing Crash investigation

Occupant Restraints Vehicle Dynamics

1992

ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Illinois State University

October 1991

Seminar Topics Include:

Articulated Vehicles

Bumper Standards

Crash Tests

Heavy Truck Deceleration Rates

Low Speed Impacts

The Expert's Role



INDIANA ASSOCIATION OF CERTIFIED ACCIDENT INVESTIGATORS

Indianapolis, Indiana

June

1991

Seminar Topics Include:

Anti-Locking Braking Systems

ILLINOIS ASSOCIATION OF TECHNICAL ACCIDENT INVESTIGATORS

Illinois State University

October

1990

Seminar Topics Include:

Anti-Locking Brake Systems

Articulated Vehicles

Basic Speed Formula

Crash Tests

Critical Speed Yaw Analysis

Injury Pattern

Pedestrian Investigations



INDIANA ASSOCIATION OF CERTIFIED ACCIDENT INVESTIGATORS

Indianapolis, Indiana

June

1990

Seminar Topics Include:

Mapping & Measuring

SPECIAL PROBLEMS IN TRAFFIC ACCIDENT RECONSTRUCTION

Institute of Police Technology and Management

Jacksonville, Florida April 1990

Seminar Topics Include:

Hazardous Materials

Injury Patterns

Legal Issues

Motorcycle Dynamics

Motorcycle Stopping

Photogrammetry

Photography

Railroad Crossings

Tire & Pavement Frictions

Trailer Stability

Video Animation

Weight Shift



Statement of Policy

My goal is to provide you with a thorough and accurate account of how the accident happened. I will make every effort to find the evidence that will support your case. I realize that when you hire me, you are primarily interested in the results that best support you and/or your client's version. However, if the evidence does not support this view, I will rely on the evidence for my conclusion. It is my practice to provide you with all the information that supports your case, as well as any that may be detrimental.

Stepha M. Neces