

# Vadnais & Wood

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## Curriculum Vitae of **THOMAS H. VADNAIS, P.E.**

### *Expertise*

Consultant in the areas of commercial vehicle and passenger car accident reconstruction; human factors analysis; tire and wheel behavior and failures; commercial vehicle brakes, steering, suspensions, and wheel mounting systems; and photography.

### *Formal Education*

5/78 - Bachelor of Science - Mechanical Engineering - University of Maryland

### *Experience*

10/81 - Present As a Partner in VADNAIS & WOOD, and formerly as a Project Engineer for SEA, Inc., on behalf of truck lines, manufacturers, state and local municipalities, individuals, insurance companies, and law firms: investigated and reconstructed commercial vehicle and passenger car accidents; analyzed alleged failures or malfunctions in commercial vehicle and passenger car tires, wheels, brakes, steering, and suspensions; conducted numerous crash, skid, and vehicle dynamics tests, both for client cases and for research for SAE; created, processed, and enhanced photographs for analysis and exhibits.

5/78 - 9/81 As an Advanced Tire Development Engineer for B.F. Goodrich: designed, developed, tested, and analyzed heavy duty truck and state-of-the-art automobile high-performance tires; evaluated tire and vehicle performance as a qualified test driver; modified production equipment and techniques; provided technical support to both the road racing and field engineering programs.

### *Memberships*

Society of Automotive Engineers (SAE)  
Accident Investigation & Reconstruction Practices (AIRP) Technical Subcommittee  
AIRP Heavy Truck Forum Group Chairman  
Technical Paper Peer Reviewer  
Atlanta Chapter Chairman 1987/88  
Atlanta Chapter Outstanding Younger Member 1986/87  
Technology and Maintenance Council (TMC) of the American Trucking Association (ATA)  
Institute of Transportation Engineers (ITE)  
American Society for Testing and Materials (ASTM)  
American Society of Mechanical Engineers (ASME)  
National Society of Professional Engineers (NSPE)  
National Association of Professional Accident Reconstruction Specialists (NAPARS)  
Commercial Driver's License (CDL) w/Doubles, Triples, & Tanker Endorsements  
Tire Industry Association (TIA)

***Continuing Education***

- 2/87 - 3-D Occupant Simulation, SAE, Detroit, MI
- 2/87 - SAE International Congress & AIP Meetings, Detroit, MI
- 8/87 - Product Safety & Liability Prevention, University of Wisconsin, Madison, WI
- 2/88 - SAE International Congress & AIP Meetings, Detroit, MI
- 10/88 - STAPP Conference, Atlanta, GA
- 10/88 - SAE AIP Meetings, Atlanta, GA
- 2/89 - SAE International Congress & AIP Meetings, Detroit, MI
- 9/89 - SAE AIP Meetings & Technical Paper Presentations, Detroit, MI
- 2/90 - SAE International Congress & AIP Meetings, Detroit, MI
- 6/90 - Mechanics Of Heavy-Duty Trucks, University of Michigan, Ann Arbor, MI
- 9/90 - Photogrammetry Workshop, SAE, Dearborn, MI
- 9/90 - SAE AIP Meetings & Technical Paper Presentations, Dearborn, MI
- 10/90 - Low Speed Crash Test, TRC, East Liberty, OH
- 2/91 - Tire Mechanics, SAE, Detroit, MI
- 2/91 - Brakes: Design & Safety, SAE, Detroit, MI
- 2/91 - SAE International Congress & AIP Meetings, Detroit, MI
- 10/91 - Accident Reconstruction Conference, IATAI, Normal, IL
- 11/91 - SAE Truck & Bus Meeting, Chicago, IL
- 11/91 - SAE AIP Meetings & Technical Paper Presentations, Chicago, IL
- 2/92 - SAE International Congress & AIP Meetings, Detroit, MI
- 3/92 - Pre- & Post-Crash Vehicle Dynamics, SAE, Dearborn, MI
- 6/92 - Commercial Vehicle Accident Reconstruction, Arkansas State University, Jonesboro, AR
- 8/92 - Crash Tests & Seminar, BH2VK Engineering, San Bernardino, CA
- 8/92 - SAE AIP Meetings, San Bernardino, CA
- 9/92 - Vehicle Dynamics, SAE, Dearborn, MI
- 3/93 - SAE International Congress & AIP Meetings, Detroit, MI
- 4/93 - Heavy Truck Rollovers, SAE, Atlanta, GA
- 5/93 - Biomechanics Of Impact, AAAM & IRCOBI, Atlanta, GA
- 3/94 - Tire Failure Workshop, SAE, Detroit, MI
- 3/94 - SAE International Congress & AIP Meetings, Detroit, MI
- 9/94 - Tractor Trailer Conference & Workshop, TAARS, College Station, TX
- 10/94 - Brake Colloquium, SAE, Atlanta, GA
- 11/94 - Crush Measurement Workshop, SAE, Charlottesville, VA
- 11/94 - SAE AIP Meetings, Charlottesville, VA
- 2/95 - SAE International Congress & AIP Meetings, Detroit, MI
- 10/95 - Crash Tests & Trajectory Analyses, SAE, East Liberty, OH
- 10/95 - Heavy Truck Skid Testing & Seminar, SAE, East Liberty, OH
- 10/95 - SAE AIP Meetings, East Liberty, OH
- 2/96 - SAE International Congress & AIP Meetings, Detroit, MI
- 9/96 to 11/96 - CDL Training, Daly's Truck Driving School, Atlanta, GA
- 4/97 - Motorcycle RiderCourse, Motorcycle Safety Foundation, Roswell, GA
- 11/97 - Perception, Reaction, & Conspicuity, University of Iowa, Iowa City, IA
- 11/97 - SAE AIP Meetings, Iowa City, IA

2/98 - SAE International Congress & AIRP Meetings, Detroit, MI  
11/98 - SAE Truck & Bus Meeting, Indianapolis, IN  
11/98 - SAE AIRP Meetings, Indianapolis, IN  
1/99 - HVE Users Seminar, Engineering Dynamics Corp., Atlanta, GA  
11/99 - EDC Simulations, Engineering Dynamics Corp., Coral Gables, FL  
12/99 - Accident Reconstruction TOPTEC: State of the Art, SAE, Costa Mesa, CA  
12/99 - SAE AIRP Meetings, Costa Mesa, CA  
2/00 - Human Factors in Automobile Accidents, L&J Publishing, Las Vegas, NV  
2/00 - Biomechanics & Accident Reconstruction, AAFS Annual Meeting, Reno, NV  
5/00 - HVE Forum, Engineering Dynamics Corp., San Diego, CA  
3/01 - SAE International Congress & AIRP Meetings, Detroit, MI  
4/01 - Bendix Air Brake Systems Product School, Atlanta, GA  
5/01 - HVE Forum, Engineering Dynamics Corp., Santa Fe, NM  
5/01 - Accident Reconstruction TOPTEC: Special Topics, SAE, Tempe, AZ  
5/01 - Fundamentals, Bob Bondurant School of High Performance Driving, Phoenix, AZ  
5/01 - SAE AIRP Meetings, Tempe, AZ  
10/01 - The Tire as a Vehicle Component, SAE, Greenville, SC  
10/01 - Tire & Wheel Safety Issues, SAE, Greenville, SC  
3/02 - SAE International Congress & AIRP Meetings, Detroit, MI  
3/02 - Heavy Truck Brake Testing, Phoenix, AZ  
3/03 - SAE International Congress & AIRP Meetings, Detroit, MI  
4/03 - Commercial Vehicle Braking Systems, SAE, Troy, MI  
5/03 - HVE Forum, Engineering Dynamics Corp., Las Vegas, NV  
9/03 - 6<sup>th</sup> International Conference, ITAI, Stratford-upon-Avon, Warwickshire, England  
3/04 - SAE International Congress & AIRP Meetings, Detroit, MI  
5/04 - HVE Forum, Engineering Dynamics Corp., San Francisco, CA  
6/04 - SAE EDR Symposium, George Washington University, Ashburn, VA  
8/04 - Heavy Truck Brake Testing, HTTG, East Liberty, OH  
10/04 - DDEC Reports & Data Extraction, Detroit Diesel, Detroit, MI  
2/05 - HVE Forum, Engineering Dynamics Corp., Coconut Grove, FL  
11/05 - Accident Reconstruction Symposium, SAE, Ventura, CA  
2/06 - HVE Forum, Engineering Dynamics Corp., Mesa, AZ  
4/06 - SAE International Congress & AIRP Meeting, Detroit, MI  
08/08 - Human Factors in Traffic Crash Reconstruction, Spartanburg, SC

### ***Presentations***

9/98 - Speaker & panel discussion participant, ATA Litigation Conference, Scottsdale, AZ  
9/99 - Speaker & panel discussion participant, ATA Litigation Conference, Beaver Creek, CO  
2/00 - Speaker, Accident Reconstruction Scientific Session, AAFS, Reno, NV  
5/01 - Speaker, Accident Reconstruction TOPTEC: Special Topics, SAE, Tempe, AZ  
2/05 - White Paper Presentation, HVE Forum, Coconut Grove, FL  
11/05 - Speaker, Accident Reconstruction Symposium, SAE, Ventura, CA

### ***Technical Papers***

2/05 - *Heavy Truck Brake Designer Validation Testing*, HVE Forum (co-author)  
4/06 - *Extracting Tire Modal Parameters from Test Data*, SAE (co-author)