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CURRICULUM VITAE

Jesse L. Wobrock, Ph.D
Forensic Biomedical/Biomechanical Engineer
and Accident Reconstructionist

FORMAL EDUCATION

UNIVERSITY OF CALIFORNIA, LOS ANGELES
Doctor of Philosophy (Ph.D.), Biomedical Engineering
Emphasis in Biomechanics, Biomaterials and Tissue Engineering
Minor field: *Injury Epidemiology*

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE
Master of Science (M.S.), Kinesiology – Graduated with Distinction
Emphasis in Biomechanics

CALIFORNIA STATE UNIVERSITY, NORTHRIDGE
Bachelor of Science (B.S.), Kinesiology – Cum Laude
Double Major in Health Science and Kinesiology

CALIFORNIA POLYTECHNIC UNIVERSITY, SAN LUIS OBISPO
Professional Certificate
Systems Integration Engineering

STANFORD UNIVERSITY
Graduate Certificate
Management Science and Engineering (in progress)

FORENSIC BIOMECHANICS AND ACCIDENT RECONSTRUCTION
CONTINUING PROFESSIONAL EDUCATION

UNIVERSITY OF CALIFORNIA, LOS ANGELES
UCLA Extension – Los Angeles, CA
Psychology coursework

CALIFORNIA POLYTECHNIC STATE UNIVERSITY - San Luis Obispo, CA
Graduate School Professional Development
Coursework: Ethics in Mechanical Engineering

TEXAS A&M UNIVERSITY - El Paso, Texas
Pedestrian and Bicycle Collision Reconstruction
Coursework: Analysis and reconstruction of pedestrian and bicycle vs. automobile collisions.

TEXAS A&M UNIVERSITY - Houston, Texas
Analysis of “Low Speed” Collisions
Coursework: Analysis, accident reconstruction, biomechanics, and injury mechanisms in low speed automobile collisions.

TEXAS A&M UNIVERSITY – Mesquite, Texas
Collision Trauma Biomechanics
Coursework: Injury mechanisms in automobile collisions.

UNIVERSITY OF CALIFORNIA, RIVERSIDE – Riverside, CA
Computer Assisted Traffic Accident Reconstruction using MathCAD
Coursework: Accident reconstruction techniques using MathCAD mathematical software.

UNIVERSITY OF CALIFORNIA, RIVERSIDE – Riverside, CA
Occupant Kinematics and Injury Mechanisms During Motor Vehicle Collisions
Coursework: Automobile collision biomechanics.

SOCIETY OF AUTOMOTIVE ENGINEERS – Davis, CA
Motor Vehicle Accident Reconstruction
Coursework: Motor vehicle accident reconstruction and cause analysis.

TNO MADYMO North America – Livonia, MI
MADYMO 6.1 Introductory Training
Coursework: Education and training regarding modeling applications using MADYMO 6.1.

TNO MADYMO North America – Livonia, MI
MADYMO 6.0 Introductory Training
Coursework: Education and training regarding modeling applications using MADYMO 6.0.

VERICOM TRAINING COURSE – Temecula, CA

Traffic Crash Investigation

Coursework: Acceleration and Vericom computer familiarization for traffic accident investigation.

ARAS 360 – Kamloops, BC, Canada

ARAS HD Upgrade: What's New in HD

Coursework: Training for ARAS 360 Software HD Upgrade

ARAS 360 – Kamloops, BC, Canada

ARAS HD for Crash Reconstruction

Coursework: Training for ARAS 360 Software Crash Reconstruction

ENGINEERING DYNAMICS CORPORATION – Northridge, CA

EDC Simulation

Coursework: Application and physics-based education and instruction for computer simulations in accident reconstruction.

ENGINEERING DYNAMICS CORPORATION – Northridge, CA

EDC Reconstruction

Coursework: Application and physics-based education and instruction for accident reconstruction.

NORTHWESTERN UNIVERSITY TRAFFIC INSTITUTE – Evanston, IL

Traffic Accident Investigation

Coursework: Instruction regarding investigation and evaluation of traffic accidents.

CALIFORNIA ASSOCIATION OF ACCIDENT RECONSTRUCTION SPECIALISTS

Sixth Annual CA2RS Training Conference

Coursework: Motorcycle investigation and reconstruction.

CALIFORNIA ASSOCIATION OF ACCIDENT RECONSTRUCTION SPECIALISTS

2006 Fall Crash Training Conference – Crash Reconstruction, Start to Finish

Coursework: Accident Reconstruction Training

CALIFORNIA ASSOCIATION OF ACCIDENT RECONSTRUCTION SPECIALISTS

2010 Investigation and Analysis of Rollover Collisions

Coursework: Rollover Accident Reconstruction Training

AMERICAN BACK SOCIETY & St. MARY'S MEDICAL CENTER

Advanced Diagnosis and Treatment for Neck & Back Pain

Coursework: Medical topics in neck and back treatment and injuries

CRIME SCENE AND SHOOTING RECONSTRUCTION
CONTINUING PROFESSIONAL EDUCATION

WEST VIRGINIA UNIVERSITY – Morgantown, WV

Shooting Reconstruction

Coursework: Evaluating, interpreting, and reconstructing a shooting scene

WEST VIRGINIA UNIVERSITY – Morgantown, WV

Crime Scene Investigation

Coursework: Assessment, observation, documentation, search, collection, and analysis are all integral parts to a crime scene investigation

WEST VIRGINIA UNIVERSITY – Morgantown, WV

Introduction to Firearms and Toolmarks

Coursework: The history of firearm and ammunition development, classification of firearms and ammunition components, test firing, proper methods of evidence collection, laboratory testing, microscopic identification, and much more

WEST VIRGINIA UNIVERSITY – Morgantown, WV

Introduction to Bloodstain Pattern Analysis

Coursework: Background information and techniques necessary in performing bloodstain analyses

FORENSIC SCIENCE CONSULTANTS – San Diego, CA

Instructor Michael Haag

Shooting Scene Reconstruction

Coursework: Evaluating, interpreting, and reconstructing a shooting scene

ARAS 360 – Kamloops, BC, Canada

ARAS HD CSI for Crime Scene Reconstruction

Coursework: Training for ARAS 360 Software for Crime Scene Reconstruction

PROFESSIONAL EXPERIENCE

March '05- **Accident Reconstruction & Biomechanics**

Present Orange, CA & Truckee, CA

President

Reconstruction and biomechanical analysis of accidents, collisions, and injuries. Case retention examples include but are not limited to wrongful death, product liability, railway matters, maritime accidents, catastrophic injuries, homicide, criminal matters, slip/trip and falls, falls from heights, premises liability, human factors issues, pediatric injuries, industrial accidents, gun shots and trajectory analysis, aviation accidents, law enforcement, fireworks accidents, high and low speed vehicle collisions, pedestrian collisions, tractor-trailer collisions, motorcycle collisions, bicycle collisions, and helmet/protective equipment issues.

- October '20-
Dec '22 **Executive Strategy Council, Orange Lutheran High School**
Orange, CA
Focus on:
- Strategic challenges and opportunities, plans
 - Financials, long term growth and sustainability
 - Long term investments, capital needs
 - Special projects, growth opportunities, technology
 - Growing OLU's development efforts, endowments
- March '10-
March '17 **Arroyo Grande Community Hospital Foundation**
Arroyo Grande, CA
Hospital Foundation Board Member (Volunteer)
Our Mission: "The Promise of healthcare philanthropy is the ability to change lives and the power to saves lives. The Arroyo Grande Community Hospital Foundation Board of Directors develops the resources that help keep and expand that promise to the people by assisting the hospital in fulfilling its mission, adhering to its core values, and providing medical services to all in our community.
- March '04-
Feb '05 **Biomechanics Engineering Accident Reconstruction**
Davis, Sherman Oaks, San Diego, CA
Associate Biomechanics and Accident Reconstruction Consultant
Accident reconstruction and biomechanical engineering analysis of injury causing accidents.
- Sep '03-
Sep '04 **Society of Automotive Engineers**
Detroit, MI
Scientific Publication Reviewer (Volunteer)
Volunteer reviewer of scientific research publications pertaining to accident reconstruction and forensic biomechanics.
- Jan '03-
April '04 **Head Protection Research Laboratory**
Paramount, CA
Biomechanist/Data Analyst
Research regarding select biomechanical topics in relation to motorcycle crashes and motorcycle helmets.
- Jan '03-
Feb '04 **Roger Clark Associates**
Paramount, CA
Biomechanics and Accident Reconstruction Consultant
Accident reconstruction and biomechanical engineering analysis of injury causing accidents.

- Jan '03-
April '03 **University of California, Los Angeles**
Los Angeles, CA
Graduate Student Researcher
Researcher in the department of Biomedical Engineering with emphasis on biomechanical topics.
- Jan '00 –
Dec '02 **Accident Research and Biomechanics**
Valencia, CA
Research Associate
Accident reconstruction and biomechanical engineering analysis of injury causing accidents.
- Jan '01-
Dec '01 **California State University, Northridge**
Northridge, CA
Part-time Faculty – Graduate Teaching Assistant
Instructor of biomechanics laboratory, which is an undergraduate upper division course.
- Aug '98-
Jan '00 **Los Robles Regional Medical Center**
Thousand Oaks, CA
Physical Therapy Technician
Application of therapeutic modalities, assisted and observed patient assessments and evaluations, coached patients through exercise programs, wound care, patient education, and patient ambulation assistance.

TESTIMONY VENUE EXAMPLES

Qualified and testified as an accident reconstructionist and/or forensic biomechanical engineering expert in civil, criminal, and federal venues.

Approximately 600 trial, arbitration, and deposition testimonies.

- Los Angeles County Superior Court, CA
- Fresno County Superior Court, CA
- Tulare County Superior Court, CA
- San Francisco County Superior Court, CA
- Orange County Superior Court, CA
- Sonoma County Superior Court, CA
- Butte County Superior Court, CA
- Merced County Superior Court, CA
- Solano County Superior Court, CA
- Santa Barbara County Superior Court, CA
- San Luis Obispo County Superior Court, CA
- Stanislaus County Superior Court, CA
- Riverside County Superior Court, CA
- San Bernardino County Superior Court, CA

- Kern County Superior Court, CA
- Alameda County Superior Court, CA
- Santa Clara County Superior Court, CA
- Ventura County Superior Court, CA
- Shasta County Superior Court, CA
- San Diego County Superior Court, CA
- Sacramento County Superior Court, CA
- El Dorado County Superior Court, CA
- Sutter County Superior Court, CA
- San Joaquin County Superior Court, CA
- Multnomah County District Court, OR
- Wake County Superior Court, NC
- Clark County Superior Court, NV
- Washoe County Superior Court, NV
- Maricopa County Superior Court, AZ
- Waukesha County Superior Court, WI
- Cook County Superior Court, Ill
- Darlington County Superior Court, SC
- Broward County Judicial Circuit Court, FL
- Monmouth County Superior Court, NJ
- Ector County 161st Judicial District, TX
- Third Judicial District, Superior Court for the State of Alaska
- Edmund D. Edelman Children's Court, Monterey Park, CA
- United States District Court for the Eastern District of California, Fresno, CA
- United States District Court for the Eastern District of California, Sacramento, CA
- United States District Court for the Central District of California, Los Angeles, CA
- United States District Court for the Central District of California, Riverside, CA
- United States District Court for the District of South Dakota, Pierre, SD
- United States District Court for the District of Oregon, Portland, OR
- Internal Affairs Board of Rights of the City of Los Angeles Police Department (LAPD)
- California DMV Hearings

Previously retained as an expert in California, Alaska, North Carolina, Nevada, Washington, Oregon, Arizona, Florida, Texas, Michigan, Wisconsin, South Carolina, Indiana, Missouri, South Dakota, and British Columbia (Canada), Mexico, among others.

PROFESSIONAL CERTIFICATIONS (PAST AND PRESENT)

- Accreditation Commission for Traffic Accident Reconstruction (ACTAR #1594)
- CXLT Certification (Excel Tribometers, LLC)

RECONSTRUCTION SOFTWARE PROGRAM EXPERIENCE

- MADYMO (MATHematical DYnamic MOdels)
- PC-CRASH
- AutoCAD
- MAYA
- Photomodeler
- HVE (Human, Vehicle, Environment)
- ARAS HD
- ARAS Blitz
- ARAS Genius
- Fotex

PROFESSIONAL ASSOCIATIONS (PAST AND PRESENT)

- American Mensa
- UCLA Alumni Association
- American Society for Testing and Materials (ASTM)
- Institute of Transportation Engineers (ITE)
- Accreditation Commission for Traffic Accident Reconstruction (ACTAR)
- California Association of Accident Reconstruction Specialists (CAARS)
- American Society of Mechanical Engineers (ASME)
- National Association of Traffic Accident Reconstructionists and Investigators (NATARI)
- Association for the Advancement of Automotive Medicine (AAAM)
- Society of Automotive Engineers (SAE)
- American Society of Biomechanics (ASB)
- International Society of Biomechanics (ISB)
- National Association of Railroad Safety Consultants and Investigators (NARSCI)

PROFESSIONAL ACTIVITIES AND PRESENTATIONS

Professional and educational (MCLE) presentation to law firms (plaintiff and defense), insurance companies, national organizations, and international organizations.

Colleges of Law

Santa Barbara and Ventura, CA – June 2016

Guest Lecturer re: Expert Witnesses in Accident Reconstruction and Biomechanics

ASME Joint Rail Conference (JRC)

Pueblo, Colorado – March 2011

ASTM International

Meeting on Sports Equipment and Facilities

San Antonio, TX – November 2010

CAARS Quarterly Training Conference
Roseville, CA – May 2010
Speaker - Accident Reconstruction and Biomechanical Analysis of Pedestrian Collisions

CAARS Quarterly Training Conference
Riverside, CA – May 2010
Speaker - Accident Reconstruction and Biomechanical Analysis of Pedestrian Collisions

Crashteam Nation Conference
Las Vegas, NV – March 2010
Speaker – Injury Mechanisms and Injury Severity

American Board of Trial Advocates (ABOTA) – California Coast Chapter
Masters in Cross Examination Seminar – October 2009
Speaker – Accident Reconstruction Expert

27th Annual Injuries in Baseball Course
American Sports Medicine Institute
Houston, Texas – January 2009

American Back Society & St. Mary's Medical Center
Advanced Diagnosis and Treatment for Neck & Back Pain
Speaker – Las Vegas, Nevada – June 2007

2006 International IRCOBI Conference on the Biomechanics of Impact
Sponsored by International Research Council on the Biomechanics of Impact
Speaker-Madrid, Spain – September 2006

31st International Workshop on Human Subjects for Biomechanical Research
Sponsored by NHTSA
San Diego, CA – October 2003

47th Stapp Car Crash Conference
Sponsored by the Stapp Organization
San Diego, CA – October 2003

International Whiplash Trauma Congress
Sponsored by Spinal Injury Foundation
Denver, Colorado – October 2003

2003 International IRCOBI Conference on the Biomechanics of Impact
Sponsored by International Research Council on the Biomechanics of Impact
Lisbon, Portugal – September 2003

47th AAAM Annual Scientific Conference
Sponsored by the Association for the Advancement of Automotive Medicine
Speaker - Lisbon, Portugal – September 2003

Southern California Conference on Biomechanics
Sponsored by Pepperdine University
Speaker - Malibu, CA – March 2003

CSUN Student Research and Creative Works Symposium
Sponsored by CSUN
Speaker - Los Angeles, CA – November 2002

Technologies Shaping the Future
Sponsored by UCLA
Los Angeles, CA – October 2002

Southern California Tissue Engineering Symposium
Sponsored by UCLA Biomedical Engineering Society
Los Angeles, CA – September 2002

TRB 81st Annual Meeting
Sponsored by Transportation Research Board
Speaker - Washington, D.C. – January 2002

American Society of Biomechanics Annual Conference
Sponsored by American Society of Biomechanics
San Diego, CA – August 2001

SAE World Congress
Sponsored by Society of Automotive Engineers
Speaker - Detroit, MI – March 2001

Clinical Seminar in Sports Medicine, “New Approaches to Disorders of the Spine”
Sponsored by California State University, Northridge.
Northridge, CA - March 2000

Motorsports Safety – Presented by John Melvin, Ph.D.
Sponsored by the Society of Automotive Engineers
San Luis Obispo, CA – February 2000

SWACSM Annual Conference
Sponsored by Southwest American College of Sports Medicine
San Jose, CA – November 1999

Participant and/or human volunteer in “low speed” rear, lateral, frontal, and underride/override impact crash tests.

Participant in pedestrian dummy and bicycle vs. automobile crash tests.

AWARDS

- Young Investigator Award - Association for the Advancement of Automotive Medicine (AAAM) 47th Annual Scientific Conference
- CSUN Student Research and Creative Works Symposium - 1st Place Award for College of Health and Human Development
- American Society of Biomechanics - 2002 Student Travel Award
- Graduate Student Researcher Award - Winter Quarter 2002, UCLA

PATENTS

January 9, 2018: Wobrock 9,866,741

February 25, 2020: Wobrock 10,574,873

July 13, 2021: Wobrock 11,064,101

October 3, 2023: Wobrock 11,778,303

PUBLICATIONS

Many professional and educational (MCLE) presentations to large law firms, insurance companies, national organizations, and international organizations.

UCLA Graduate Quarterly, Spring 2005. *Graduate Student Profile - Jesse Wobrock, Biomedical Engineering*. Written by Jacqueline Tasch.

Motorcycle Consumer News, July 2006. *Dangerous Design? Read this and you'll never look at a motorcycle the same way again*. Written by Wendy Moon.

Wobrock, JL, Mal, A, Kraus, J, and Wu, B (2006). Pelvic Injury Potential and Motorcycle Gas Tanks. 2006 International IRCOBI Conference on the Biomechanics of Impact.

Wobrock, JL (2005). MADYMO Simulation, Reconstruction, and Biomechanical Analysis of Motorcycle Crashes. University of California, Los Angeles – Ph.D. Dissertation.

Wobrock, JL (2002). Head Impacts and Injury Potential in Motorcycle Collisions. California State University, Northridge - Master Thesis.

Wobrock, J., Fugger, T., Randles, B. and Vrongistinos, K (2002). Vibrations Experienced by Wheelchair Users While Traversing Decorative Crosswalks. World Congress of Biomechanics, 2002 Annual Conference Proceedings, 2002.

Wobrock, JL, Smith, T, Kasantikul, V, and Whiting, B (2003). Effectiveness of Collision-Involved Motorcycle Helmets in Thailand. 47th Annual Conference Proceedings for Association for the Advancement of Automotive Medicine.

Fugger, TF, Wobrock, JL, Randles, BC, Stein, AC, and Whiting, WC (2001). Driver Characteristics at Signal-Controlled Intersections. Society of Automotive Engineers, Paper No. 2001-01-0045

Fugger, TF, Randles, BC, Wobrock, JL, Welcher, JB, Voss, DP, and Eubanks, JJ (2002). Human Occupant Kinematics in Low Speed Side Impacts. Society of Automotive Engineers, Paper No. 2002-01-0020.

Fugger, TF, Randles, BC, Wobrock, JL, and Eubanks, JJ (2002). Pedestrian Throw Kinematics in Forward Projection Collisions. Society of Automotive Engineers, Paper No. 2002-01-0019.

Fugger, TF, Randles, BC, Wobrock, JL, Stein, AC, and Whiting, WC (2001). Pedestrian Behavior at Signal-Controlled Crosswalks. Society of Automotive Engineers, Paper No. 2001-01-0896.

Fugger, TF, Randles, BC, Wobrock, JL, and Eubanks, JJ (2001). An Analysis of Pedestrian Dummy Throw Characteristics for Forward Projection Pedestrian Collisions (published abstract). International Research Council on the Biomechanics of Impact (IRCOBI).

Fugger, TF, Randles, BC, Wobrock, JL, Stein, AC, Whiting, WC, and Gallagher, B (2001). Analysis of Elderly Pedestrian Gait and Perception/Reaction at Signal-Controlled Crosswalk Intersections. Transportation Research Board Annual Conference Proceedings.