FORCON
INTERNATIONAL

MICHAEL L. ROMANSKY, PH.D., J.D.

EDUCATION

Duquesne University	Doctor of Jurisprudence (J.D.), Law
West Virginia University	Doctorate (Ph.D.) in Engineering: Includes Industrial Engineering, Biomechanics and Medical Physics, Accident and Injury Epidemiology, Occupational Safety and Health, Advanced Human Factors Engineering and Ergonomics, and Civil Engineering (Transportation and Traffic Systems Design); includes two (2) years of training in Basic Medical Sciences in the School of Medicine.
West Virginia University	Master of Science (M.S.) in Industrial Engineering: Human Factors Engineering, Ergonomics, Manufacturing Operations and Systems Design, Manual and Powered Materials Handling, and Accident Reconstruction and Safety Engineering.
West Virginia University	Bachelor of Science (B.S.) in Industrial Engineering.

HONORS AND AWARDS

- Tau Beta Pi, National Engineering Honorary
- Chi Epsilon, National Civil Engineering Honorary
- Sigma Xi, National Research Honorary
- President's List for Academic Superiority (Perfect 4.0 grade point averages.)
- Dean's List for Academic Excellence
- National Science Foundation Fellowship

PROFESSIONAL ORGANIZATIONS

- Human Factors Society, Member
- American Academy of Forensic Sciences, Member
- The American College of Forensic Examiners, Member
  - Diplomate of The American Board of Engineering and Technology
  - Board Certified Medical Investigator: CMI-V Certification # 20809 Level 5 (Highest Level); By Written Examination.
- National Academy of Forensic Engineers, Corresponding Member
- European Society of Biomechanics, Member
- International Research Council on the Biokinetics of Impacts, Member
- Association for the Advancement of Automotive Medicine, Member
- American Society of Mechanical Engineers, Member
- Society of Automotive Engineers, Member
- The American Society of Safety Engineers, Member
- Society of Engineering Science, Member
- National Association of Traffic Accident Reconstructionists and Investigators, Member

COURT EXPERIENCE

- Qualified as an expert witness in State Courts in Forensic Human Factors, Ergonomics, Biomechanics (Includes Injury Biomechanics), Occupational Safety and Health, Accident and Injury Epidemiology, Motor Vehicle Occupant Kinematics, Kinetics and Dynamics, Same Level Falls (slip, trip, stumble, et al.), Falls from Elevation, Stair System Falls, and Workplace and Non-Workplace Accident Reconstruction (Accident and Injury Causation, Biomechanical Loading of the Human Body, and Injury Mechanism and Mechanics.)

CONTINUING PROFESSIONAL EDUCATION COURSES AND SPECIALIZED TRAINING

- **Accidental Injury: Biomechanics and Prevention.**
  University of California, San Diego - School of Medicine, 1995.

- **Collision Reconstruction for the Medical Practitioner.**
  Low Speed (Rear End Impacts)Accident Reconstruction - Texas A&M University, Texas Engineering Extension Service, 1999

- **Biomechanics of Impact Trauma.**
  University of Maryland, School of Medicine, and The International Research Council on the Biomechanics of Impact, 1999.

- **Clinical and Biomechanical Aspects of Lower Extremity Injuries.**
  Wayne State University, School of Medicine and the College of Engineering, 2000.

- **Basic Forensic Pathology; Bodily Injury Causation, Mechanics, and Mechanisms - Tolerance of Soft Tissue and Skeletal Structures.**
  Department of Medical Education, Armed Forces Institute of Pathology, 2003.

- **Forensic Pathology for Identifying Causation, Mechanics, and Mechanisms of Injury and Subsequent Death (Accidental and Homicide.)**
  American College of Forensic Examiners, 2003.

- **Occupant and Vehicle Kinematics in Rollovers**.
  Society of Automotive Engineers, 2004.

- **Injuries, Anatomy, Biomechanics, and Federal Regulations in Accident Reconstruction.**
  Society of Automotive Engineers, 2005.

- **Forensic Analysis of Medical Records in Injury Biomechanics and Accident Reconstruction.**
  Society of Automotive Engineers, 2005.

PUBLICATIONS

- Publications in Human Factors Engineering, Ergonomics, Psychophysiological Stress and Fatigue, Motor Vehicle Occupant Kinematics and Injury Mechanisms, and Workplace and Non-Workplace Accident Reconstructions.

RELEVANT PROFESSIONAL EXPERIENCE

Human Factors Engineering, Ergonomics, Biomechanics and Biomedical Engineering

- Performed investigations, analysis and reconstructions of workplace (industrial/manufacturing plants and construction sites) and non-workplace accidents involving, among other things, machines, machine guarding, operations and processes, slips/trips/falls from elevation and on same level, ladders, scaffolds, ramps and stairways to determine accident causation and mechanism of injury; performed impact injury and trauma analysis using principles of human factors engineering, medical physics and biomechanics.

- Performed investigations, analysis and reconstructions of motor vehicle collisions using principles of human factors engineering with respect to issues that included perception-response time interval, conspicuity, driving maneuvers, vision, and highway safety; performed investigations, analysis and reconstructions of workplace accidents using principles of human factors engineering and ergonomics with respect to issues of perception-response time, design of controls and gauges, man-machine interface and compatibility, environmental conditions, and work space layout and design.

- Performed kinematic, dynamic and biomechanic analysis (includes injury biomechanics) of restrained and unrestrained occupants in motor vehicle accidents to determine injury causation and mechanisms and threshold limits for injury, particularly when seat belt usage is at issue; analyzed and reconstructed the “second” collision (between occupant and vehicle interior) and “third” collision (between internal body organs and skeletal framework, including the brain and skull) in low and high-speed vehicular accidents; performed injury analysis and reconstructions of motorcycle and vehicle/pedestrian accidents.

- Performed reconstructions of occupant kinematics and dynamics for investigating temporomandibular joint (“TMJ”) injuries and cervical (“whiplash”), thoracic and lumbar spine injuries in low velocity rearend vehicular collisions.

- Performed investigations, analysis and reconstructions of infant and child restraint seat usage and performance (with and without inserts) in motor vehicle accidents.

- Carried out evaluations and analysis of workers and job tasks in the workplace using principles of human factors engineering, ergonomic design and biomechanics.

- Conducted employee safety behavior studies and investigations in an effort to develop more effective safety training programs for industry use.

- Conducted biomechanic and biomedical engineering studies on manual material handling lifting activities to investigate the proximate cause and prevention of lumbosacral and musculoskeletal injuries in the workplace; examined skeletal and non-skeletal (soft tissue) injuries and tolerance to loads and forces.

- Performed biomedical and human factors investigations of psychophysiological stress and fatigue in human performance functions.

- Performed investigative research into the practical problems of preventing defects and deficiencies in the design of man-machine systems, consumer products and workplace environments.

- Performed investigations and analysis of failure to warn issues and the adequacy of warnings, labels and instructions.

- Performed product liability and reliability investigations, analysis and reconstructions.

- Significant training and direct work experience in man-machine systems and design which include information transmission, display control compatibility, stimulus (perception)-response characterization, psychomotor performance, work station layout and environmental variables impacting human performance.

- Functioned as Director of the Research Laboratory for biomedical and biomechanics, ergonomics and human factors research in the Division of Safety Research at the National Institute for Occupational Safety and Health ("NIOSH.")

Occupational Safety and Health/Accident and Injury Epidemiology

- Developed, implemented and managed occupational safety and health compliance programs; conducted audit programs for OSHA compliance; performed facilities inspections, accident and injury investigations and reconstructions; developed safety training documents and accident prevention programs for industry using principles of systems safety design and safety engineering; directed the Federal (NIOSH) investigative efforts into determining proximate cause of the parabolic cooling tower structural failure and scaffolding collapse killing 79 construction workers at the Willow Island Power Plant in West Virginia.

- Performed investigations and analysis of occupational safety and health hazards in the workplace, i.e., mechanical and physical; investigated and analyzed workplace tasks (for compatibility with human performance limitations), cumulative trauma disorders (musculoskeletal diseases of the upper limbs) and manual materials handling activities along with application of NIOSH lifting guidelines to reduce the risk of workplace injuries.

- Possess extensive working knowledge of Federal Occupational Safety and Health Administration ("OSHA") standards and regulations, i.e., General Industry Standards (29CFR1910), Construction Standards (29CFR1926), Shipyard Employment (29CFR1915),

Marine Terminals (29CFR1917) and Longshoring (29CFR1918); and the application of national consensus standards and code compliance, i.e., ANSI, ASME, Life Safety, ADA, ASTM, ASSE, SAE, and CPSC.

- Developed, implemented and managed safety training and risk management programs.
- Developed risk preventative techniques based upon investigation and documentation of potential liability claims.
- Extensive training and work experience performing hazard recognition, analysis and control activities.
- Directed the research and development of technical standards and prepared draft specifications and proposed statutory language for OSHA regulations.
- Developed, initiated, managed and administered technical research projects and litigation support work involving issues of workplace accident and injury epidemiology, personal injury mechanisms, human factors engineering, ergonomics, biomechanics, medical physics and safety engineering.

Litigation Support: Forensic Science and Engineering

- Analyzed depositions for technical merit and validity of contained statements; prepared questions and areas of inquiry for deposing party opponents; prepared challenges to limit or exclude expert testimony (motion *in limine*) based on the respective court holdings in *Frye, Daubert* and *Kumho Tire*.
- Performed analysis and investigations of casualty and property claims to determine causation based on forensic analysis and evaluation of evidence.
- Drafted and evaluated interrogatories and motions for summary judgment in personal injury claims.

RELATED / RELEVANT WORK HISTORY

Forcon International Corporation, Atlanta, Georgia - Consultant

Southern Polytechnic State University, Marietta, Georgia (Formerly an extension of Georgia Tech) - Adjunct Assistant Professor - Occupational Safety and Health that focused on Forensic Human Factors Engineering, Ergonomics, Forensic Biomechanics, Accident and Injury Causation, Injury Mechanism and Mechanics, Human Injury Tolerance, and OSHA regulations. (Included same level falls, falls from elevation, and stair system falls.)

ED-E Development Company, Inc., Morgantown, West Virginia - Corporate Engineer - Operations (Construction, Coal Mining, Quarrying and Oil/Gas Development), and Safety and Risk Management.

Verna Engineering, Inc., Pittsburgh, Pennsylvania - Forensic Consultant - Occupational Safety and Health, Accident Reconstruction and Injury Causation, Injury Mechanism and Mechanics, and Human Factors Engineering, and Biomechanics.

National Institute for Occupational Safety and Health (NIOSH), Morgantown, West Virginia - Research Safety Engineer and Forensic Scientist in Accident and Injury Epidemiology, Accident Reconstruction, Biomechanics, Accident and Injury Causation, Injury Mechanism and Mechanics, Human Injury Tolerance (of soft tissue and skeletal structures), and Human Factors Engineering and Ergonomics. (Areas of research included, among others, same level falls, falls on stair systems, falls from elevation, manual materials handling and lifting tasks, and forklift operations analysis.)

Frederic R. Harris, Inc. - Sanford, Connecticut and Morgantown, West Virginia - Consulting Engineering and Construction; Construction Inspector (Building and Trades, Excavations, Trenching and Foundations, and Heavy Construction.)

Wheeling-Pittsburgh Steel Company, Monessen and Allenport, Pennsylvania - Plant Industrial Engineer

McGinley and McGinley, Morgantown, West Virginia - Law Clerk

West Virginia University, Morgantown, West Virginia - Graduate Assistant, Research Assistant and Adjunct Assistant Professor in the College of Engineering; disciplines included: Human Factors Engineering and Ergonomics, Biomechanics, Accident and Injury Epidemiology, Accident Reconstruction, Human Injury Tolerance, and Safety Engineering.

MILITARY SERVICE

Lt. Cmdr., O4, Commissioned Corps Officer, U.S.P.H.S., Centers for Disease Control, NIOSH, Researcher, Accident and Injury Epidemiology and Reconstruction, 1978-1981; Reserves 1981-present.