Dennis Mitchell, M.A.Sc. CPE

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EDUCATION:

1984 - 1987 M.A.Sc., University of Toronto, Department of Industrial Engineering, Program in Human Factors
1979 - 1984 B.A.Sc., University of Toronto, Department of Industrial Engineering

Research Interests: Industrial ergonomics, ergonomics in product design and tasks of daily living, the design and use of systems for measuring musculoskeletal, physiological and cognitive related stress, hand-arm and whole-body vibration analysis.

Certification: CPE - Certified Professional Ergonomist (#346, 1993)

Patents:

- (U.S.-#5,785,666) Portable Electronic Data Collection Apparatus for Monitoring Musculoskeletal Stresses. Issued July 28, 1998.
- (U.S.-#5,964,719) Portable Electronic Data Collection Apparatus for Monitoring Musculoskeletal Stresses. Issued October 12, 1999.
- (U.S.-#6,749,812) Automatic Pipette Detipping. Issued June 15, 2004.
- (US #10,012,549 B2) Device, system and method for determining the temperature and orientation of a medium, Issued July 3, 2018.
- (US #10,064,482 B2) Wrist and forearm support device, Issued September 4th, 2018.

Awards: 1986 University of Toronto Summer Fellowship
1985 NATO Advanced Study Institute Fellowship
1985 University of Toronto Open Fellowship
1978 Ontario Scholar

WORK EXPERIENCE:

1999 – Present ErgExperts – CEO

Provide expert consulting services to clients in support of a variety of matters related to the workplace, environment or product design

Manage group of ergonomic consultants for objective measurement projects and experimental design issues

Design and implement corporate ergonomic programs

Conduct ergonomic training

1993 - 2000 Ergonomic Technologies Corporation – Executive VP, Ergonomist
Provide general ergonomic consultation to clients
Development of specialized measurement devices related to musculoskeletal stress
Development of an expert system to predict musculoskeletal stress and recommend engineering solutions

1991- 1993 Biomechanics Corporation of America - Manager of Ergonomic Services
Responsible for staff of ergonomists
Responsible for work site analysis
General consulting in applied ergonomics
Client development and sales
Conduct ergonomic training programs
Presentations to various professional groups

1986 - 1988 HumanWorks System Consulting - President
Providing software design and consulting services for a wide variety of clientele emphasizing task automation and ease of use, custom database and software design

1985 - 1991 Humantech Inc., Vice President
Responsible for initial start up of Humantech in Ann Arbor-MI
Responsible for all aspects of running the operation from 1988 until 1991
Responsible for work site analysis
General consulting in applied ergonomics
Client development and sales
Presentations to various professional groups
Database design
Experimental design

1985 - 1986 University of Toronto, NSERC strategic grant, Department of Industrial Engineering - Project Coordinator
Develop an expert system to aid in the introduction of new technologies to manufacturing facilities
Assist project supervisor and provide assistance to numerous research projects and theses within the department related to expert systems and ergonomics

1985 NATO Advanced Study Institute (ASI), San Miniato, Italy
Participant in a two week ASI on advanced decision aids for complex process control environments

1982 - 1985 University of Toronto, Department of Industrial Engineering - Teaching Assistant
Course assistant for tutorials and laboratories
Evaluating and weighting student course material

1984 Humanchine Inc., - Research Assistant to Dr. A. Smiley
Worked for Mr. Y.I. Noy, Chief Ergonomic Officer at Transport Canada assisting in a field experiment examining the effects of alcohol on driver behavior and psycho-motor (human reaction time) skills.

PROFESSIONAL PUBLICATIONS

1987 Schnieder, M.F., Ginpil, F., and Mitchell, D.A., Comparison of the Benefits of a Cleansheet Design vs. a Retrofit Design in the Automotive Sector. In the 1987 HFAC/ACE Conference Proceedings, Montreal, Quebec.

1985 Leskowsky, Z., Mitchell, D.A., and Moray, N., Many-Instrument Visual Sampling in a Process Control Situation. In the Proceedings of the I.E.E.E. 1985 Conference on Systems, Man and Cybernetics, Tuscon, Arizona.

2008 Mitchell, D., Mercer, C., The effect of seat motion artifacts on reported WBV levels in ISO 2631-1 (1997) and ISO 2631-5 (2004) in US freight locomotives. 4th International Conference on WBV Injuries, June 2nd – 4th, Montreal, Canada.

2009 Mitchell, D., Morales, L. A comparison of 1980's and current generation locomotive seats relative to whole body vibration health effects, 3rd American Conference on Human Vibration, Iowa City, Iowa, June 1st – 4th, 2010.

2010 Mercer, C., Mitchell, D. Seat motion effects on reported WBV values in ISO 2631 (1997) and ISO 2631-5 (2004) in US freight locomotives, 45th UK Conference on Human Response to Vibration, Institute of Naval Medicine, September 6th to 8th, 2010, Gosport, UK.

OTHER ARTICLES

1992 Mitchell, D., How to tell if your ergonomic initiatives are working and why they may not be, In Johnson & Johnson's Corporate Ergonomics Program.

1989 Schnieder, M.F. and Mitchell, D.A., Look up, Look way up. OH&S Canada, Vol. 5, No. 2

1989 Schuch, L. (editor) and Mitchell, D.A. (contributor), They work hard for the money. Assembly Engineering, 4/89.

CLIENT LIST (Partial)

Complete Ergonomic Programs/OSHA abatement

Abbott Laboratories, 2-year program - worksite analysis, hazard control, training, medical management.

Alaska Airlines (Washington State L&I Ergonomic Citation) – perform worksite analyses including whole body motion capture of ramp employees in various baggage handling positions, measure heart rate and productivity related data. Review training programs as well as the evaluation of ergonomic improvement measures using whole body motion capture and force plate data.

Amazon – (Washington State L&I Ergonomic Citations) Ergonomic assessments of various process paths at fulfillment centers related to biomechanical and physiological related risk. Testify on behalf of findings related to a Washington State L&I Citations regarding alleged unsafe ergonomic work methods related to back, shoulder as well as hand and wrist related risk factors.

Chrysler Corporation, 3 year program - Complete Ergonomic Program Development (6 plants) in response to an OSHA citation, worksite analysis, hazard control, training, medical management

Compaq Computer, Development of Corporate Guidelines for World Wide Production & Productivity

GM - Allison Transmission Division, development of ergonomic engineering recommendations to address risk factors, development of a computerized ergonomic management system for engineering, safety and health, development of computerized data collection using hand held computers, providing comprehensive ergonomic training, and the development of purchase specifications based on updated anthropometric dynamic modeling

GMC, Oklahoma - ergonomic program review, worksite analysis hazard control, training

GMC, St. Therese plant wide assessment and hazard control, training

Ingersoll Rand – Review of corporate ergonomics program and selection of benchmarking criteria for a corporate cost-benefit study

Los Angeles County – MTA – Review and develop corporate standards for Office and Industrial tasks and integrate into corporate ergonomics program, worksite analysis and engineering support

Mallinckrodt Medical 1 year program - ergonomic program review

Mitsubishi Motors - worksite analysis hazard control, training

Mortin International ergonomic program review, worksite analysis, hazard control

United Airlines – perform detailed analysis of baggage handling, review and analyze OSHA evidence, heart rate analysis and detailed manual material handling analysis of postural training aids

Worksite Analysis/Hazard Control/Training

Alcan - Review of aluminum smeltering operations

Allied Signal - 8 Plants, worksite analysis and hazard control

Amazon – Review OSHA citation related records and provide consultation services.

Amtrak – Ergonomic worksite analysis to ascertain the need for specialized tools and analyze ride quality data on passenger cars as it related to on-board service employees.
Armstrong World Industries - Plant review of mixing operations, Development of Roll Handling Equipment
Avon - Review of plating operations
Best Foods Baking Group - Plant review of baking operations
Beloit Corporation - Cleansheet review of large scale paper making machine
Bendix King - Ergonomic evaluation of electronic assembly operations
Bluebird Bus - Review of assembly operations
Boston Scientific – Provide ergonomic and productivity analysis tools in support of ergonomic engineering solutions
Brooklyn Union Gas - Review of Gas Meter Repair Station
Burlington Northern Santa Fe Railway – Conduct ergonomic analysis of locomotive engineers including whole body vibration (WBV) and electromyographic data
Canada Pacific Rail - Review of cab and seat design for diesel locomotives
City of North York - Evaluation of office ergonomics in administrative operations
Coca-Cola - Evaluation and development of recommendations for route sales delivery personnel
Codman & Shertleff - Ergonomic evaluation of surgical instrument assembly
Compaq Computer - Ergonomic evaluation and design recommendations for production cells, Development of Corporate Ergonomic Guidelines for Worldwide Assembly, Setting standards for adjustable office furniture – Corporate Specifications
Consumers Power - Evaluation of office and check clearing centers
Contract Interiors - Evaluation of various office furniture installations
Caterpillar - Ergonomic evaluation of assembly operations
Cummins - Ergonomic evaluation of engine assembly operations
DeHavilland - Review of office and CAD workstation layout and traffic patterns
Department of Labor – OSHA – Testify in public hearings on the cost/benefit analysis of workplace intervention strategies and critique and review workplace interventions for the top injurious occupations on behalf of President Clinton's Ergonomic Initiative and Legislation.
Department of Labour Canada - Develop a training program & reference book for ergonomics in construction safety
Diamond Star Motors - Provide ergonomic evaluation and recommendations for vehicle assembly
Egan Visuals – Traffic flow analysis of poster board assembly operations
Electrocom Automation - Review of postal sorting automation equipment
Federal Mogul - Review of small plastic assembly operations
First USA – Review and testing of winter cleats for STF related incidents
Ford - Milan plastic plant
Ford - Ypsilanti Electronics & Fuel Handling
Ford - St. Louis Van Assembly
Ford - Chihuahua Mexico - Engine Plant
Ford - Cleveland castings facility
Fujitsu - Review of assembly operations

GM - Oshawa RIM fabrication
GM - Cadillac Assembly Plant
GM - Drayton Plains SPO - Ergonomic review & development of recommendations for warehousing distribution systems
GM - Lansing SPO - Ergonomic review & development of recommendations for warehousing distribution systems GM - Pontiac SPO - Ergonomic review and development of recommendations for part distribution systems
GM - Flint - Ergonomic Evaluation of Packaging lines
GM/Delphi - Ergonomic Assessment and development of recommendations for battery making operations
General Motors de Mexico – Setup full biomechanics lab, including segmental and whole body vibration monitoring equipment, lumbar motion monitors, multi-channel surface electromyography (SEMG) and electro-goniometric systems.
GM Truck & Bus - Janesville WI - Development of engineering recommendations to reduce ergonomic risk factors
Google – Provide ergonomic checklist forms to assist in the evaluation of office workstations
Hewlett-Packard - Design of ergonomic criteria for a touch sensitive display
Hoffmann La Roche – Provide ergonomic recommendations and risk factor analysis for production and office workstations
Hyster-Yale – design and testing of a new control , seat and pedal placement for fork lift trucks
Ingersoll-Rand – conduct ergonomic tool testing for prototypes and work with Industrial Design staff to incorporate ergonomic principles in the design of new tools
Johnson & Johnson - Provide a chapter for J&J's Corporate Ergonomics Program
John Deere - Review of front end loader assembly
Kellogg Foods - Review of baking operations
Komatsu - Review of assembly operations
Knoll - Assessing Chair Comfort, Ergonomic evaluation of chair plant
Long Island Lighting Company - Ergonomic evaluation of construction and maintenance workers
Long Island Railroad - Ergonomic review of wheelchair ramp for platform boarding
Los Angeles County MTA – Write corporate ergonomics program and review workstation and provide engineering support for controls
MacMillan Bloedel - Development of an automated catalog system using an intelligent database
M&M Mars Corp - Assessment and redesign of various packaging and food preparation lines
Nabisco Biscuit Company - Food handling line evaluation, training
Navistar - Indianapolis - New line design for Diesel Engines
Navistar - Melrose Park - Engine line retrofit
New Jersey Transit – Review of various transportation related crafts
North American Waste Management - Design of recycling trucks for plastic and paper
OK Industries – review of wire wrapping and punch down tools for the telecommunications industry

Otis - Review of Assembly operations
Pan Pacific Hotels - Ergonomic review of housekeeping operations
Peterbilt - Denton TX, Ergonomic program review
Pitney Bowes – Danbury, CT, Ergonomic review of mail handling systems
Port of Portland – Evaluate whole body vibration levels for seated and standing work on barges.
Procter and Gamble - Review of Ivory Soap making operations
Prosig – Aid in the design of various software reports concerning whole body vibration (WBV) and International Standards Organization (ISO) 2631 Part 1 (1997) and Part 5, European Union (EU) Directive 2002/44/EC and British Standard 6841 (1987)
Royal Saudi Arabian Air Force - Design of living conditions in an underground weapon command and control center to reduce the psychological distance to the surface
Rockwell International - Review of airbag assembly operations
Salt River Project - Ergonomic evaluation of vehicle mechanics
Schneider Meat Processing - Clean sheet design of a hog processing facility
Scott Paper - Evaluation of paper making operations/training
Sikorsky Helicopter - Evaluation of bonding operations
Simmons Mattress - Ergonomic evaluation of mattress making
Solvay Automation - Ergonomic evaluation of blow molding operations
Sony Music - Review of CD packaging lines
Steelcase - Development of a Corporate Training Program for Employees on Videotape and a review of chair building operations
Sun Microsystems – Provide ergonomic checklists for use in Sun's corporate ergonomics program and work from home initiative
Symbol Technologies – design and testing of a wearable bar code scanner for warehouse employees and the design and testing of POS bar code scanners
Taylor Corporation - Review of soft ice cream vending machine line
Tecumseh - Review of small engine assembly operations
Thermoking Corporation – Provide assembly line analysis to determine proper work heights and production line transport methods for a new facility and provide manual material handling recommendations for warehousing operations
Tokio Marine - Servicing all clients west coast region clients - over 100 various clients
Topps Corporation - Ergonomic evaluation of card processing and candy making operations
Transport Canada - Evaluation of technologies for the intelligent highway system
Trimet – Evaluation of light rail cab configuration and design review. Ergonomic evaluation of various diameter steering wheels in buses. Ergonomic evaluation of foot plantar forces and lower extremity postures while braking and accelerating. Ergonomic testing of motoring drum handle, dead-man and switch design
Tur Pak Foods - Redesign of a turkey processing line
Tyco International – Provide ergonomic and productivity impact tools
United Technologies Automotive - Review wire harness assemble operations
USG Interiors - Review of floor tile operations
U.S. Precision Lens - Redesign of lens coating line

U.S. Surgical Corp. - Ergonomic evaluation of assembly lines, training, surgical instrument evaluation & design
Verizon – evaluate the efficacy of utility cover handling devices through instrumented j-hooks and whole-body motion capture systems. Evaluation of ladder racks for vehicle transport.
Vistalab Medical – provide ergonomic risk factor identification and hazard control for microscopy work stations as well as design guidelines and testing for a new pipette
Westinghouse Furniture - Development of a database for facility management
Westvaco - Ergonomic Assessment of Pulp and Paper Operations
W.L. Gore & Associates - Ergonomic evaluation of wire harness assembly
Yahama Musical Instruments - Review of brass instrument assembly

Legal/Expert Testimony Work - detail provided for years from Oct 1st, 2022-2026

Amazon Com Services LLC

- Regarding Citations and Notices (317961850, 317964648, 317965157, 317965723) and Docket #s (21 W0156, 21 W0000, 22 W0056, 22 W0121) Deposition August 29th, 2023, taken before the Board of Industrial Insurance Appeals, State of Washington. Trial Testimony September 18, 19 and 20th, 2023.
- Regarding OSHRC Docket Nos. (23-0298, 23-0295, 23-0376, 23-0292, 23-0761, 23-0227, 23-0195, 23-0229, 23-1182, & 23-1172) Deposition November 13th, 2024, Julie A. Su, Acting Secretary of Labor, USDOL v Amazon.com Services LLC.
- Regarding Docket # (23 W141) Deposition, July 28th, 2025, taken before the Board of Industrial Insurance Appeals of the State of Washington.

Burlington Northern Santa Fe (BNSF) Railway Co.

- Dane Anthony v BNSF, Montana Thirteenth Judicial District Court Yellowstone County, Cause No. DV-22-1264-PI, Judge Pardy, Trial Testimony, March 31st, 2025.

Norfolk & Southern Railroad Company

- Seal v NSRC, Trial Testimony, October 13th, 2024, U.S District Court for the Eastern District of Tennessee, No.:3:20-CV-00462, Judge T.A. Varlan.
- Singleton, R.J., v NSRC, Deposition Testimony, May 25th, 2022, Northern District of Georgia Atlanta Division. Civil Action # 1:19-CV-02133-TWT.

Conferences

August 2017, ErgoExpo – Participant, Las Vegas, NV.
June 2014, 5th American Conference on Human Vibration, Guelph ON – Participant.
June 2013, 16th Applied Ergonomics Conference, Dallas Texas – Participant and Speaker. Hand-Arm Vibration Solution Evaluation.
June 2009, 4th international Conference on Whole Body Vibration and Health, Montreal, Canada – Participant and Speaker. The effects of seat motion artifacts on reported WBV values in ISO 2631-1 (1997) and ISO 2631-5 (2004) in US freight locomotives.
October 2007, Human vibration – Effects on Health, Performance, Comfort, Dresden, Germany – Participant.
September 2006 – 41st UK Conference on Human Response to Vibration - Participant

June 2006 – The 1st American Conference on Human Vibration, Morgantown WV.
September 2005 – Humanscale's ErgoForum – : The "Ergonomic" Label – What Does It Really Mean? - Panelist.
July 2005 – 3rd International Conference on Whole Body Vibration and Health, Nancy France – Participant.
June 2005 – Eastern Ergonomics Conference, New York City, NY – Exhibitor
March 2005 – Applied Ergonomics Conference, New Orleans, LA – Participant & Exhibitor.