

CURRICULUM VITAE

JACK TIGH DENNERLEIN

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SUMMARY:

My research aims to protect and promote worker safety, health, and well-being through understanding the impact that the design of both tools and workplace policy, programs, and practices including the built environment have on health. Trained as an engineer my approach to public and occupational safety and health research uses systems-level models built in part from the theories of biomechanics, ergonomics, and organizational and industrial psychology to examine this impact.

Our workplace intervention and implementation research in construction, manufacturing and transportation sectors has led to changes in companies' thinking and practices related to the role of the conditions of work on worker safety, health, and well-being. Based on these experiences, we created guidelines and a framework for organizations to create a culture of health to protect workers. In 2020, we adapted these recommendations for workplaces with front-line workers during the Coronavirus pandemic.

My research in human movement sciences, specifically occupational biomechanics has focused on how design technology, specifically computer devices, affects upper extremity biomechanics, (forces, muscle efforts and postures) related to injury risk factors. We have examined the design of chairs, workstations (sit-to-stand), keyboard, mice, and mobile computer technology. Findings from our research have informed their design.

In exposure science, we have used wearable technology, including sensors designed and developed in our laboratory to measure physical risk factors in real work environments. We demonstrated how real-world psychosocial factors measured in the workplace increase exposure to physical risk factors for computer related musculoskeletal disorders as workers complete their day-to-day jobs. We have developed and validated wearable technology to predict spinal compression loads of workers lifting and carrying materials in the real workplaces as well as integrated data from wearable sensors with machine learning algorithms to identify and determine the different surface conditions related to slips, trips, and falls that people encounter while walking and working.

EDUCATION:

1986	Mechanical Engineering	B.S.	State University of New York	Buffalo, NY
1989	Mechanical Engineering	S.M.	M.I.T.	Cambridge, MA
1989	Advance Course in Engineering		General Electric	Lynn, MA
1996	Mechanical Engineering	Ph.D.	University of California	Berkeley, CA

POST-DOCTORAL TRAINING

1997-1998	Mechanical Engineering		Harvard University	Cambridge, MA
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ACADEMIC APPOINTMENTS

1999 - 2004 Assistant Professor of Ergonomics and Safety, Department of Environmental Health
Harvard T.H. Chan School of Public Health Boston, MA

2004 - 2010 Associate Professor of Ergonomics and Safety, Department of Environmental Health
Harvard T.H. Chan School of Public Health Boston, MA

2009 - 2014 Associate Professor of Orthopaedic Surgery, Brigham and Women's Hospital
Harvard Medical School Boston, MA

2010 - 2012 Senior Lecturer on Ergonomics and Safety, Department of Environmental Health
Harvard T.H. Chan School of Public Health Boston, MA

2012 - Adjunct Professor of Ergonomics and Safety, Department of Environmental Health,
Harvard T.H. Chan School of Public Health Boston, MA

2012 - Professor, Department of Physical Therapy, Movement, and Rehabilitation Sciences
Bouvé College of Health Sciences, Northeastern University
Boston, MA

OTHER PROFESSIONAL POSITIONS AND MAJOR VISITING APPOINTMENTS

1985 Engineering Assistant West Valley Nuclear Service West Valley, NY

1986 - 1991 Design Engineer General Electric Aircraft Engines Lynn, MA

1991 - 1996 Research Assistant University of California San Francisco, CA

2002 - 2007 Affiliated-Faculty Biomechanics at Harvard, An NSF IGERT interdisciplinary
Ph.D. program Cambridge, MA

2004 - 2009 Faculty Harvard T.H. Chan School of Public Health-Cyprus Program,
Boston, MA

2004 - 2005 Visiting Scientist Human Movement Sciences,
VU University Amsterdam, NL

2012 - 2018 Adjunct Scientist VU Medical Center, EMGO+ Institute Amsterdam, NL

2019 Visiting Scholar, Institute for Work and Employment Research, Sloane School of
Management and Social Sciences, Massachusetts Institute of Technology,
Cambridge, MA

1999 - Affiliated Faculty Harvard Injury Control Research Center Boston, MA

2011 - Full Member DFCI/Harvard Cancer Center Boston, MA

2016 - Affiliated Faculty Department of Bioengineering, Northeastern University
Boston, MA

MAJOR ADMINISTRATIVE RESPONSIBILITIES:

1994-1995 Chairperson, Berkeley Mechanical Engineering Graduate Student Council

2001 - 2018 Director and Co-Director,
Occupational Injury Prevention Research Training Program
Harvard Education and Research Center for Occupational Safety
and Health

2012 - 2016 Director of Research Department of Physical Therapy, Bouvé College of Health
Sciences, Northeastern University

2015 - 2016 Chair Faculty Council, Bouvé College of Health Sciences, Northeastern
University

2010 - Associate Director Harvard T.H. Chan School of Public Health's Center for Work,
Health, and Wellbeing

2019 - Program Director PhD program in Human Movement and Rehabilitation Sciences,
Department of Physical Therapy, Movement, and Rehabilitation
Sciences, Bouvé College of Health Sciences, Northeastern
University

AWARDS AND HONORS:

- 1985 - 1986 Zimmer Memorial Scholarship, SUNY at Buffalo
- 1985 Member Pi Tau Sigma, Mechanical Engineering honor society
- 1984 Member Tau Beta Pi, engineering honor society
- 1989 Associate member Sigma Xi, research honor society
- 1990 - 1991 GE Aircraft Engines Young Engineer Award Nomination
- 1998 Harvard University Derek Bok Distinction in Teaching Award
- 2000 - 2003 Whitaker Foundation Investigator Award
- 2003 Citation for Excellence in Teaching, Harvard T.H. Chan School of Public Health
- 2004 - 2005 Junior Faculty Sabbatical Award, Harvard T.H. Chan School of Public Health
- 2008 Occupational Medicine Residency Academic Teacher of the Year Award
Harvard T.H. Chan School of Public Health
- 2008 - 2009 Juror, International Bicycle Design Competition, Taichung, Taiwan
- 2008 - 2013 Fulbright Specialist Roster in Public Health
- 2013 Occupational Medicine Residency Academic Teacher of the Year Award
Harvard T.H. Chan School of Public Health
- 2013 Northeastern University Research Leadership Initiative Program
- 2015 Excellence in Teaching Citation, Executive and Continuing Professional Education
Harvard T.H. Chan School of Public Health
- 2016 - Fellow, Human Factors and Ergonomics Society

MAJOR PROFESSIONAL SERVICE:

National

- 2004 National Institute for Occupational Safety and Health Member Conflict Review Group (Ad hoc). Safety and Occupational Health (SOH) Study Section, U.S. Department of Health and Human Services
- 2004 - 2005 Center for Disease Control, Center for Injury Prevention and Control, Review Group (Biomechanics Study Section)
- 2004-2006 Member, ANSI/HFES 100-2007 Committee: *Human Factors Engineering for Computing Work Stations*.
- 2006 - 2010 Permanent Member, Safety and Occupational Health (SOH) Study Section, U.S. Department of Health and Human Services,
- 2009—2019 Consortium Member, Center for Construction Research and Training, Silver Springs MD
- 2011 - Ad hoc reviewer, Safety and Occupational Health (SOH) Study Section, U.S. Department of Health and Human Services
- 2011 - Advisory Board Member, Occupational Health Surveillance Program, Department of Public Health, Commonwealth of Massachusetts.
- 2012 - 2014 Hospital Ergonomics Task Force Member, Occupational Health Surveillance Program, Department of Public Health, Commonwealth of Massachusetts.
- 2013-2016 Project Panel Member, Transportation Research Board of the National Academies.
- 2014 - Co-Scientific Director, Marconi Research Conferences of the Office Ergonomics Research Committee (www.oerc.org)
- 2015 FISH Workshop Steering Committee, *Fishing Partnership Support Services*, Burlington, MA
- 2015 - Hospital Ergonomics Stake-Holders Committee Member, Occupational Health Surveillance Program, Department of Public Health, Commonwealth of Massachusetts.
- 2017 Member, Musculoskeletal Conditions and Pain Management Policy Working Group, Stay-at-Work/Return-to-Work (SAW/RTW) Policy Collaborative, U.S. Department of Labor's Office of Disability Employment Policy (ODEP)

- 2017 - Project Panel Member, Transportation Research Board of the National Academies of Sciences, Engineering, and Medicine.
- 2017 - 2019 Member, Committee on Functional Assessment for Adults with Disabilities, National Academies of Sciences, Engineering, and Medicine, Health and Medicine Division
- 2019 Member, Special Emphasis Panel for Occupational Safety and Health Training Project Grants (TPG).
- 2020 - Member, Writing Group, ANSI/ASSP Voluntary TWH Management Standard

International

- 2004 International Program Committee IASTED International Conference on Biomechanics
- 2004 -2007 Organizing Committee, Sixth International Scientific Conference on Prevention of Work-related Musculoskeletal Disorders, (PREMUS), Boston, MA 2007
- 2014-2016 International Scientific Committee, Ninth International Scientific Conference on Prevention of Work-related Musculoskeletal Disorders, (PREMUS), Toronto, Canada, 2016
- 2018- Scientific Advisory Board, Institute for Work and Health, Toronto, Canada.
<https://www.iwh.on.ca/scientific-advisory-committee>

PROFESSIONAL SOCIETIES:

- Member, Human Factors and Ergonomics Society (HFES)
- Member, International Commission of Occupational Health

OTHER PUBLIC SERVICE:

- 1985-1986 President, New York Nu (Buffalo) Chapter of Tau Beta Pi (Engineering Honor Society)
- 1990-1991 Board Member, Longwood Symphony Orchestra, Boston, MA
- 1988 - Member – Bass player, Longwood Symphony Orchestra
- 2003 Program Committee American Society of Biomechanics Conference
- 2006 Symposium Organizer: “Future Directions for Occupational Biomechanics” American Society of Biomechanics, Blacksburg, VA
- 2010- Founding member of Boston Cyclists’ Union, Boston, MA.

DEPARTMENT AND SCHOOL SERVICE:

- 1992-1995 Member, UC Berkeley Mechanical Engineering Graduate Student Council
- 1995-1996 Member, Chancellor’s Campus Advisor Committee, for Lesbian, Gay, Bisexual, and Transgender Concerns, University of California, Berkeley
- 2000 - 2012 Faculty Advisory Committee, Center for Continuing and Professional Education
Harvard T.H. Chan School of Public Health
- 2001 - 2004 Working Group on Woman, Gender and Health,
Harvard T.H. Chan School of Public Health
- 2002 - 2004 Assistant Professor Representative, Faculty Council,
Harvard T.H. Chan School of Public Health,
- 2005 - 2008 Great Place to Work Committee and Awards Reviewer,
Harvard T.H. Chan School of Public Health
- 2006 - 2012 Exposure, Epidemiology, and Risk Program Curriculum Committee,
Harvard T.H. Chan School of Public Health
- 2007 - 2008 Faculty Advisory Committee for Career Services Office,
Harvard T.H. Chan School of Public Health
- 2008 - 2012 Committee on Admissions and Degrees, (CAD),
Harvard T.H. Chan School of Public Health
- 2014 - 2016 Chair Search Committee, Department of Health Sciences, Northeastern University
- 2012 - 2014 Research Committee, Bouvé College of Health Sciences, Northeastern University
- 2014 - 2016 Faculty Council, Bouvé College of Health Sciences, Northeastern University

- 2014 - 2016 Provost's Advisory Committee on Tenure and Promotions, Northeastern University
- 2018-2019 Faculty Senate Agenda Committee, Northeastern University Faculty Senate
- 2016 - 2020 Co- Chair, Tenure and Promotions Committee, Department of Physical Therapy, Movement, and Rehabilitation Sciences, Northeastern University
- 2019 Search Committee, Dean Bouvé College of Health Sciences, Northeastern University
- 2009- Internal Advisory Board, Center for Work, Health, and Wellbeing
Harvard T.H. Chan School of Public Health,
- 2012 - Faculty Search Committees (Chair), Department of Physical Therapy, Movement, and Rehabilitation Sciences, Northeastern University
- 2016 - ADVANCE STRIDE Workshop Committee, Northeastern University
- 2017 Chair, Ad-Hoc Tenure and Promotions Committee, Department of Physical Therapy, Movement, and Rehabilitation Sciences, Northeastern University
- 2017-2022 Senator representing Bouvé College of Health Sciences, Northeastern University Faculty Senate.
- 2019 Appointments, Tenure, and Promotions Review Committee, Bouvé College of Health Sciences, Northeastern University

BUSINESS EXPERIENCE:

- 1999 - Consultant Clients include, Immersion, Logitech, Intuitive Surgical, WorkSafe, Myan Specialties, and Valeant Pharmaceuticals

EDITORIAL BOARDS:

- 2002 - 2019 Contributing Editor: *Journal of Applied Biomechanics*
- 2013- 2019 Editorial Board *Preventing Chronic Disease: Public Health Research, Practice, and Policy*
- 2014- 2018 Senior Associate Editor, *Ergonomics in Design*
- 2015 Guest Editor for Special Issue *Ergonomics in Design: Combatting the Sedentary Workplace*
- 2005 - Editorial Board: *Human Factors*
- 2007 - Editorial Board: *Human Movement Science*
- 2011 - Editorial Board: *IIE Transactions on Occupational Ergonomics and Human Factors*
- 2012 - International Editorial Board: *Applied Ergonomics*
- 2017 Editorial Board, *Safety Science*

Ad hoc manuscript reviewer for: *American Industrial Hygiene Association Journal, American Journal of Industrial Medicine, American Society of Mechanical Engineering (ASME) Journal of Biomechanical Engineering, American Society of Mechanical Engineering (ASME) Journal of Dynamic Systems, Measurement, and Control, Applied Ergonomics, Clinical Biomechanics, Clinical Orthopaedics and Related Research®, Ergonomics, Institute of Electronic and Electrical Engineering (IEEE) Transactions on Systems, Man and Cybernetics, Institute of Electronic and Electrical Engineering (IEEE) Transactions on Biomedical Engineering, Institute of Electronic and Electrical Engineering (IEEE) Transactions on Neural Systems & Rehabilitation Engineering Journal of Applied Physiology, Journal of Biomechanics, Journal of Electromyography and Kinesiology, Journal of Motor Behavior, Journal of Occupational and Environmental Hygiene, Journal of Occupational and Environmental Medicine, and Muscle and Nerve.*

RESEARCH SUPPORT

Past funding:

1999-2009	NIOSH	PI	R01 OH003997 Tools for exposure assessment of physical risk factors of VDT Workers
2000-2003	Whitaker Foundation	PI	Predicting the Dynamic Tension of the Finger Flexor Muscles & Tendons of VDT Workers
2004-2009	NIOSH/CPWR ⁱ	Investigator	U54OH008307 Interventions for falls from ladders in construction (CPWR, PI: Perry)
2007-2012	NIOSH	PI	R01 OH008373 Upper Extremity Dynamics during Keying
2008-2013	NIOSH	PI	R01 OH008781 Interactions of biomechanics & psychosocial stressors & MSDs in the modern office)
2009-2014	NIOSH	PI	U60OH009762-01. Safety Culture/Safety Incentives in the Construction Industry (CPWR).
2012-2013	SHIP ⁱⁱ	Co-PI	Randomized Controlled Trial of a Whole Body Vibration intervention in Truck Drivers (University of Washington)
2013-2014	Mylan Specialties	PI	Evaluating the Physical Form of Autoinjectors on the Effectiveness of Transmitting Force and Maintaining Position and Orientation of the Injector (\$114,953)
2010-2016	NSF ⁱⁱⁱ	Co-PI	0964220. A Toolkit to Evaluate the Effect of Multitouch Interaction on the Musculoskeletal System and Design Safe Multitouch Systems (Subcontract to Arizona State University, \$476,558)
2011-2016	NIOSH	Co-PI ^{iv}	Northeast Fisheries Winch Safety Improvement Project. (Subcontract from New York Center for Agricultural Disease and Injury Research, Education, and Prevention/(CDC/NIOSH) \$1,196,912)
2013-2016	Alpha Foundation	PI	Whole Body Vibration Exposure and Injury Prevention of Heavy Equipment Operators in Open Pit Coal Mine (\$617,204)
2014-2017	NIOSH	Investigator	R21OH010564. Modifying the Workplace to Decrease Sedentary Behavior and Improve Health. (PI: John)
2013-2019	NIOSH	PI	1 R01 OH010097 Randomized Controlled Trial of a Whole Body Vibration intervention in Truck Drivers (\$2,188,880)

ⁱ Center for Construction Research and Training, formally the Center for the Protection of Workers' Rights

ⁱⁱ Safety and Health Investment Projects (SHIP) Washington State Department of Labor & Industries

ⁱⁱⁱ National Science Foundation

^{iv} PI during submission and year 1 at Harvard T.H. Chan School of Public Health, but relinquished PI when appointed at Northeastern

2014-2019	NIOSH	Investigator	U60OH009762. Enhancing Safety Climate through OSHA 30 Transformational Leadership Training (CPWR PI: Goldenhar).
2014-2020	NIOSH/CPWR ⁱⁱⁱ	PI	U60OH009762. Development and Evaluation of Contractor Safety Pre-Qualification Tool (Subcontract to CPWR, \$986,000).
2017-2020	Alpha Foundation	Investigator	Systematic Evaluation of Multi-axial Suspension to Reduce Whole Body Vibration Exposures in Heavy Equipment Mining Vehicle Operators (\$480,818 PI: Kim)

Current Funding

2007-2021	NIOSH	Co-PI	U19 OH008861 Harvard T.H. Chan School of Public Health, Center for Work, Health, and Wellbeing (PI – Sorensen G.) Project B: Integrated Approaches to Health and Safety in the Dynamic Construction Work Environment (\$1,300,000 Total Cost per year)
2018 – 2021	La Superintendencia de Seguridad Social (SUSESO), Chile	Co-PI	“Integrated Approaches for Driver and Crew Health and Safety in a National Transportation Company” (\$100,000 Total cost: Sorensen)

TRAINING

2001-2018	NIOSH	Program-Director	T42 OH008416 Training Program in Occupational Injury Prevention Research (Part of the Harvard Education and Research Center for Occupational Safety and Health)
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INTERNAL RESEARCH SUPPORT

2000	Changes in the EMG signal power spectrum during repetitive tasks (Liberty Mutual Harvard Pilot Projects PI: Jack Dennerlein)
2001	Occupational injuries among bicycle messengers (CDC Harvard Injury Center Pilot Projects PI: Jack Dennerlein)
2001	Postural Stability Measurement of a clinical population (Liberty Mutual Harvard Pilot Projects PI: Maura Iversen)
2004	Effects of keyboard horizontal position within the workstation (NIOSH Harvard ERC Pilot Projects PI: Jack Dennerlein)
2006	Cellular responses of muscle cells to mechanical stretch (Department of Environmental Health Jr. Faculty Initiative PI: Jack Dennerlein)
2006	Physical exposure assessment for epidemiological research of musculoskeletal disorders (NIOSH Harvard ERC Pilot Projects PI: Jack Dennerlein)
2010	Upper Extremity Kinematics and Kinetics among Computer Workers with Hand Osteoarthritis (NIOSH Harvard ERC Pilot Projects PI: Jack Dennerlein)
2011	Biomechanics of the thumb during tablet use (NIOSH Harvard ERC Pilot Projects PI: Jack Dennerlein)

2012	Development and Validation of an Ergonomic Survey Instrument among New England Construction Workers (NIOSH Harvard ERC Pilot Projects PI: Jack Dennerlein)
2012	Protecting Every Construction worker's Knee (PECK) Pilot Study (NIOSH Harvard ERC Pilot Projects PI: Jack Dennerlein)
2012	Examining Safety Climate Perceptions and Health Outcomes (NIOSH Harvard ERC Pilot Projects PI: Jack Dennerlein)
2013	'Standing Up' Against Sedentary Behavior: A Pilot Study in Office Workers (PI Jack Dennerlein with Denish John) (HSPH Center for Work, Health, and Well-being Pilot Project)
2013	Simulation modeling of construction workers to estimate and mitigate the effects of the dynamic construction worksite. (PI Jack Dennerlein with Justin Manjourides) (HSPH Center for Work, Health, and Well-being Pilot Project)
2014	The relationship between musculoskeletal pain and length of time spent working on commercial construction sites – the workers' perspective. (NIOSH Harvard ERC Pilot Project PI: Jack Dennerlein with Emily Sparer)
2016	Mental health and wellbeing in Construction Workers (PI: Jack Dennerlein) Northeastern Tier 1 Interdisciplinary Grants
2019	Opioid Crisis Among Construction Workers Construction Workers (PI: Jack Dennerlein) Northeastern Tier 1 Interdisciplinary Grants

INDUSTRIAL RESEARCH GIFTS

2001	Office Ergonomics Research Committee
2004	Microsoft
2005	Office Ergonomics Research Committee
2006	Microsoft
2006	Intuitive Surgical
2008	Microsoft
2010	Office Ergonomics Research Committee
2011	Microsoft
2010	Office Ergonomics Research Committee
2012	Contour
2012	Office Ergonomics Research Committee
2015	MicroSoft
2016	Office Ergonomics Research Committee
2017	MicroSoft
2018	Oculus (Facebook)
2020	Office Ergonomics Research Committee

REPORT of TEACHING

SEMESTER COURSES

1985	University at Buffalo FORTRAN Teaching Assistant Supervised ~30 Undergraduate engineering students once a week in a computer laboratory
1993	University of California, Berkeley Controls and System Dynamics

Teaching Assistant, supervised ~30 undergraduate students in one-hour recitations that met once per week.

- 1997 Harvard John A. Paulson School of Engineering and Applied Sciences
Robotics (ES 178)
Teaching Fellow, 12 undergraduate and graduate students.
- 1999 Harvard John A. Paulson School of Engineering and Applied Sciences
System Analysis with Physiologic Applications (ES145)
Course Instructor, 30 undergraduate and graduate engineering students
- 2001 Harvard John A. Paulson School of Engineering and Applied Sciences
Muscles, Reflexes and Locomotion (DEAS ES148)
Instructor, 18 undergraduate and graduate bioengineering students
- 1999-2014 Harvard T.H. Chan School of Public Health
Ergonomics and Human Factors (EH243)
Course Instructor; ~15 graduate students and medicine residents in occupational health
- 2001-2015 Harvard T.H. Chan School of Public Health
Occupational Safety and Injury Prevention (EH241)
Course Instructor; ~10 graduate students in occupational health
- 2001-2012 Harvard T.H. Chan School of Public Health
Occupational Biomechanics (EH296)
Course Instructor; ~5 graduate students in occupational health
- 2001-2012 Harvard T.H. Chan School of Public Health
Industrial Hygiene/Ergonomic Internship & Environmental Sciences Research Seminar
(EH 267)
Co-Instructor; ~1 graduate student per year
- 2000 - 2012 Harvard T.H. Chan School of Public Health
Industrial Hygiene/Ergonomics Internship (EH273)
Co-instructor: ~ 1 graduate student per year
- 2003 Harvard T.H. Chan School of Public Health
Field Methods in Environmental Health (EH280)
Co-instructor: ~10 graduate students in occupational and environmental health.
- 2008 - 2012 Harvard T.H. Chan School of Public Health
Bicycle Environments (ID539)
Co-instructor: ~8 graduate students in public health and design.
- 2012 Harvard T.H. Chan School of Public Health
Transdisciplinary Research in the Study of Occupational Health and Safety (EH528)
Grading Instructor: ~ 5 graduate students in public health.
- 2012 - 2018 Northeastern University
PT Capstone Project (PT5000)
Course Instructor, ~3 Doctoral of Physical Therapy Students

- 2015- 2017 Northeastern University
Ergonomics and the Work Environment (PT5600)
Course Instructor, ~5 Doctoral of Physical Therapy Students
- 2017 -2018 Northeastern University
Research (HLTH 5450)
Course Instructor, ~110 1st year Doctoral of Physical Therapy Students.
- 2019 - Northeastern University
Interdisciplinary Seminar on Human Movement and Rehabilitation Sciences (PT7030)
Course Instructor, 6 PhD students.
- 2021- Northeastern University
Technologies in Movement and Rehabilitation Science (PT7020)
Course Instructor, 2 PhD students

EXECUTIVE AND CONTINUING PROFESSIONAL EDUCATION

- 2000- Executive and Continuing and Professional Education, Harvard T.H. Chan School of Public Health
Ergonomics and Human Factors: Strategic Solutions for Workplace Safety and Health
Course Director: ~45 health and safety professionals from the US and abroad per year
- 2002-2015 Executive and Continuing and Professional Education, Harvard T.H. Chan School of Public Health
Comprehensive Industrial Design
Course Faculty: ~50 health and safety professionals from the US and abroad
- 2006 Cyprus International Institute, Nicosia, The Republic of Cyprus
Occupational Ergonomics and Safety (3-day class)
Course Director: ~30 health and safety professionals from South Eastern Europe
- 2006-2015 Executive and Continuing and Professional Education, Harvard T.H. Chan School of Public Health
Guidelines for Laboratory Design
Course Faculty: ~50 architects, engineers and health and safety professionals from the US and abroad
- 2007 Department of Continuing Education, Harvard Medical School
The Global Clinic 2007: Healthcare Management for Physician Executives
Guest Faculty: ~100 Healthcare managers and physicians.
- 2008 Centro de Education Continua, Universidad Javeriana
Electromyography and applications in occupational health.
Course Faculty (Fulbright Senior Specialist): ~15 Occupational health students, physicians, and practitioners.
- 2009 - 2013 Executive and Continuing and Professional Education, Harvard T.H. Chan School of Public Health
Safety in Design & Construction
Course Co-Director: ~35 architects, engineers and health and safety professionals from the US and abroad

2012- Executive and Continuing and Professional Education, Harvard T.H Chan School of Public Health
 Work, Health, and Wellbeing: Strategic Solutions for Integrating Wellness and Occupational Safety and Health in the Workplace
 Course Faculty – 50 Health and Safety Professionals from the US and abroad.
 Course Co-Director for 2015
 Course Co-Director 2020 –

GUEST LECTURES

Year	Institution	#Lectures/year	#Students	Class Name
1999-2012	Harvard Chan	1	~50	Intro to Environmental Health (EH201)
2000-2006	Harvard Chan	1	~50	Environmental and Occupational Epidemiology (EPI 215)
2000-2012	Harvard Chan	3	~20	Practice of Occupational Health (ID263)
2000-2009	Harvard Chan	1	~12	Analytical Methods and Exposure Assessment (EH 263)
2000-2004	Harvard Chan	1	~18	Epi of Environmental and Occupational Regulations (EH236)
2000-2003	Harvard Paulson	4	~30	System Analysis with Physiologic Applications (ES145)
2001-2011	Harvard Chan	1	~15	Exposure Assessment for Epidemiology (EH269)
2003-2018	Harvard Chan	1	~40	Women and Gender Health, Introductory Perspectives (WGH 211)
2004-2013	BU SPH	1	~15	Exposure Assessment
2009 -	Harvard Chan	1	~16	Bicycle and Urban Designs.
2015-2018	Northeastern	1	~19	Introduction to Public Health

STUDENTS, POST-DOC FELLOWS, AND EARLY CAREER ADVISEES

Early Career Investigators and K-grant trainees

		<u>Position</u>
2005-2009	Judith Gold (K)	Assistant Professor, Temple University
2012-	Steven Yen	Assistant Professor, Northeastern University
2012-	Justin Manjorides	Assistant Professor, Northeastern University
2013-2016	Alberto Caban-Martinez (K)	Assistant Professor, University of Miami
2013-2018	Dennis Anderson (K)	Instructor in Orthopedic Surgery, Harvard Medical School
2012-2014	Amee Seitz (K)	Assistant Professor, Northwestern University
2014-2017	Erika Sabbath (K)	Assistant Professor, Boston College
2015-2018	Jennifer Cavalari (K)	Assistant Professor, University of Connecticut Medical Center
2016-	Lauren Murphy	Assistant Clinical Professor, Northeastern University
2017 - 2019	Emily Sparer (K)	Research Fellow, Harvard University
2019 -	Susan E. Peters	Research Fellow, Harvard University

Post-Doctoral Fellows (*co-mentorship)

		<u>Current Position</u>
1999-2000	Yanhong Zhou, Ph.D.	Faculty, Huazhong University, China
1999-2000	Peter Johnson, Ph.D.	Faculty, University of Washington
1999-2001	Kirsty Bennie Kerin, Ph.D.	Private Industry
2001-2003	Devlin Jindrlich, Ph.D.	Faculty, California State University, San Marcos
2002-2004	Ernst Lee, MD	Private Practice

2002-2004	Erik Won, MD	Private Practice
2005-2007	Ramaswamy Krishnan*	Instructor, Harvard University
2007-2007	Lope Barerro, Sc.D.	Associate Professor, Javeriana University, Bogota
2008-2009	Che-Hsu Chang, Sc.D.	Consultant, Private Industry
2008-2009	Robert Catena, Ph.D.	Assistant Professor, Washington State University
2007-2010	Krishna Asundi, Ph.D.	Private Industry (Apple)
2008-2010	Xu Xu, Ph.D.	Assistant Professor, NC State University
2010-2012	Gert Faber, Ph.D.	Assistant Professor, VU University
2010-2012	Justin Young	Assistant Professor, Kittering University
2011-2013	Alberto Cabán-Martinez*, DO, PhD, MPH	Associate Professor, University of Miami
2011-2014	Lauren Murphy, Ph.D.	User Interface Design, Soptify
2012-2013	Sohit Karol, Ph.D.	Private Industry (MicroSoft)
2013-2014	Ana Barbir, Ph.D.	Private Industry
2013-2015	Shu-Ling Chiu, Ph.D.	Post-doctoral Fellow, Harvard University.
2014-2016	Erin Teeple, MD, MOH	Post-doctoral Fellow, Harvard University
2015-2018	Philip Dixon, Ph.D.	Post-doctoral Fellow, Harvard University, Northeastern U.
2016-2018	Boyi Hu, Ph.D.	Faculty, University of Florida
2017-2019	Susan Peters, Ph.D.	Post-doctoral Fellow, Harvard University

Doctoral Student Advisor (12 total)

2004-2007	Lope Barerro, Sc.D	Professor and Dean, Javeriana University, Bogota
2003-2007	David Lee, Sc.D.	Design Ergonomist, Google, Sunnyvale, CA
2003-2008	Joe Chang Sc.D.	Consultant, Private Industry
2005-2010	Jin Qin	National Institute for Occupational Safety and Health
2008-2013	Jennifer Bruno Garza	Faculty, University of Connecticut
2009-2010	Karen Hopcia	Occupational Health, Partners, Chicago
2009-2013	Matthieu Trudeau	Product Development and Testing, Private Industry
2009-2014	Oscar Arias	Associate Director, UCLA, ERC
2011-2015	Emily H. Sparer	Director, Occupational Health Surveillance Program Department of Public Health, Commonwealth of Massachusetts
2013-2015	Michael Lin	Usability and Product Developer, Sunnyvale, CA
2013-2016	Michael Grant	Fellow, National Institute for Occupational Safety and Health
2015-2019	Sara Coppola	Teaching Faculty, University of Washington

Current PositionMaster Student Advisor (16 total)

1999-2001	Korrie Mapp, SM	CEO of Organic Ergonomics
2001-2003	Antonio Chemor-Ruiz, SM	Manager, Mexico Regional Government
2001-2003	Maria-Helena DiMarino	Harvard University (Deceased 2003)
2002-2004	Lope Barerro, Sc.D	Assistant Professor, Javeriana University, Bogota
2003-2004	Sara Mortenson, MBA/SM	Private Industry
2007	Karen Oude Hengel, MSc	Researcher, VU University Amsterdam
2007	Annemeik Houwink, MSc	Researcher, Radboud University Nijmegen
2008-2010	Hua Chen	Private Industry
2008-2010	Tawan Udtamadilok	Private Industry
2009-2010	Julia Roos	Private Industry
2009-2011	Emily Sparer	Doctoral Student, Harvard University
2010-2012	Lynn Onyebeke	University Research Assistant
2011-2013	Michael Lin	Graduate Student, Harvard University
2011-2013	Torey Jerauld	Private Industry
2011-2013	Michael Grant	Graduate Student, Harvard University

Current or Subsequent Position

2013-2015	Emily Eshleman	Medical Student, University of Maine
2014-2016	John Schilkowsky	Graduate Student, Northeastern University
2015-2016	Rory Steward	Graduate Student, Harvard University
2020-2021	Harrison Grogan	Graduate Student, Harvard University
2020-2022	Amanda Astrologo	Bioengineering, Northeastern University

Doctoral Student Committee Member or Mentor*

1999	Maria Yang*, Ph.D.	Faculty, MIT
1999	Paris Wellman, Ph.D.	Private Industry
2000	Allison Okamura*, Ph.D.	Faculty, Stanford University
2000	Fuji Lai, S.M.	Private Industry
2002	J.C. Chen, Sc.D.	Faculty, University of Southern California
2004	Solomon Diamond, Ph.D.	Faculty, Dartmouth
2006	Christopher Wagner, Ph.D.	Private Industry
2006	Monica Daley, Ph.D.	Professor, University of California, Irvine
2007	Camie Chaumont Menéndez, Ph.D.	Epidemiologist, Center for Disease Control
2005-2009	Chris Richards, Ph.D.	Instructor, Royal Veterinary College, London
2009-2010	Christopher Ronk	Private Industry
2012-2014	Jorge Andrés Alvarado	Assistant Professor, Javeriana University, Bogotá
2013-2015	Jean Alexander Pulido	Student, Javeriana University, Bogotá (Deceased 2015)
2015-2017	Adina Elena Draghici	Student, Bioengineering, Northeastern, University
2018-	Patrick Williamson	Student, Bioengineering, Boston University
2020-	Samanth Meeker	Student, Population Health Sciences, Northeastern University

Doctoral Student Defense Opponent

		<u>Institution</u>
2004	Bart Visser, Ph.D.	VU University, Amsterdam
2010	Gert Faber, Ph.D.	VU University, Amsterdam
2011	John Collins, Ph.D.	University of Limerick, Ireland
2013	Pieter Coenen, Ph.D.	VU University, Amsterdam
2014	Kaitlin Gallagher	University of Waterloo, Ontario Canada
2016	Morten Villumsen	Aalbor University, Denmark
2016	Tessy Luger	VU University, Amsterdam
2020	Lidewij Renald	VU University, Amsterdam

Undergraduates and DPT Students.

1997-1998	Jay Kimmelman	Harvard: Founding Principal at New Globe Partners
1997-1999	Ken Ihara	Harvard: Past Vice President at Citigroup
1999	David Martin	Dartmouth
1999-2001	Michael Brody	Harvard
1999-2000	Thomas J. Withrow	Harvard: Faculty, Vanderbilt University
2000-2001	Silas Wang	Harvard: M.D., Private Practice
2001-2003	Aruna Balakrishnan	Harvard: Google User Experience
2008	Karen Lin	University of British Columbia
2009	Arun Saigal	M.I.T.
2012	Erik Iversen	Northeastern University
2012-2013	Brian Conlon:	Northeastern University
2012-2013	Shannon Harrington	Northeastern University
2012-2013	Linnea Peterson	Northeastern University
2013	Kaylin Mai	University of Massachusetts, Boston

2013-2014	Vanessa Peck	Northeastern University
2013-2014	Eric Heath	Northeastern University
2013-2014	Dewang Chauhan	Northeastern University
2014-2015	Mark Janelli	Northeastern University
2015-2016	Kelsey Jonas	Northeastern University
2015-2016	Nickolas Ing	Northeastern University
2016-2017	Jessica L Orpen	Northeastern University
2016-2017	Marin Kitamura	Northeastern University
2017	Kyle Nameth	Northeastern University
2017-2018	Tavia Allen	Northeastern University
2017-2018	Kayla Wegener	Northeastern University
2017-2018	Meghan McPhee	Northeastern University
2019-2020	Gesele Henderson	Northeastern University: University of Maine, Medical School
2020-2021	Sara Nano	Northeastern University
2021-	Eiizabeth Khelm	Northeastern University

INVITED TALKS and GUEST LECTURES

NATIONAL & INTERNATIONAL:

- 1994 Fingertip Kinematics and Forces During Typing.
Marconi Conference, Office Ergonomics Research Committee, Marshall CA.
- 1996 Force Transmission of the Fingertip Pulp During Keyboard Like Work.
Marconi Conference, Office Ergonomics Research Committee, Marshall CA
- 1996 In Vivo Measures of Finger Flexor Tendons Force.
Occupational Medicine Research in Progress Forum, University of California, San Francisco
- 1996 Determining Tissue Dosage: In Vivo Finger Flexor Tendon Force.
MPH Seminar Series, Department of Public Health, University of California, Berkeley
- 1996 The Biomechanics and Control of Human Finger Movement During Computer Keyboard Work: The Forces of the extrinsic finger muscles.
The Occupational and Industrial Orthopaedic Center, Hospital for Joint Diseases and New York University.
- 1997 Tendon Force during a Keystroke.
Marconi Conference, Office Ergonomics Research Committee, Marshall CA, 1997.
- 2001 The biomechanics and exposure assessment of computer interface designs
Robens Centre for Health Ergonomics, University of Surrey, United Kingdom
- 2002 Haptic Technologies for Computer Pointing Devices.
Marconi Conference, Office Ergonomics Research Committee, Marshall CA.
- 2002 Exposure assessment of computer interface designs: from biomechanics to human factors.
Department of Industrial Engineering Seminar Series, University at Buffalo, State University of New York

- 2002 Aspects of finger biomechanics during touch typing.
Center for Ergonomics Seminar Series, University of Michigan, Ann Arbor, MI
- 2003 Work-related musculoskeletal disorders and injuries: From office workers to bicycle messengers
ENVH 580 Department of Environmental Health, University of Washington, Seattle, WA.
- 2004 Dynamical aspects of the finger during typing and tapping
Rehabilitation Institute of Chicago, Northwestern University, Chicago, IL
- 2004 Dynamical aspects of the finger during typing and tapping
Department of Biomedical Engineering, Marquette University Milwaukee, WI
- 2004 Occupational Ergonomics and Injury Prevention
Jishou University, Jishou, China
- 2004 Finger biomechanics during typing and tapping
Faculty of Human Movement Sciences, VU University, Amsterdam, The Netherlands
- 2005 Relating Worker Fatigue with Keyboard Forces and Typing Performance.
Marconi at Marigold Conference, Office Ergonomics Research Committee, Marigold, MI
- 2005 The Office Environment and Health.
IIDEX (International Interior Design Exhibition), Toronto, Ontario
- 2006 Measuring biomechanics in the field for ergonomic studies. Athens University Medical School, Greece
- 2006 The Contribution of the Wrist, Elbow and Shoulder Joints to fingertip tapping. Center for Ergonomics Seminar Series, University of Michigan, Ann Arbor, MI, 2006.
- 2007 Validating Computer Usage Monitors,
Marconi at Marigold Conference, Office Ergonomics Research Committee, Marigold, MI
- 2008 Urban design for biking: Removing environmental impediments around safety in the United States
Cycling and Health Tech Industry R&D Center, Taichung, Taiwan
- 2009 Estimating Computer Exposures ,
Marconi Conference, Office Ergonomics Research Committee, Marshall, CA
- 2009 Injury rates on cycle tracks: the myth that bike lanes are unsafe
Cycling and Health Tech Industry R&D Center, Taichung, Taiwan
- 2009 Biomechanical Exposures: Determining Injury and Disorder Mechanisms **Keynote Speaker**: X2009 Sixth International Conference on Innovations in Exposure Assessment, Boston, MA
- 2010 Linking Research to Reality - Prevention of Upper Extremity Musculoskeletal Injury: **Keynote Speaker**. Association of Canadian Ergonomists 41st Annual Conference, Kelowna, BC October, 2010
- 2010 Fatigue of the forearm muscles associated with repetitive wrist movements.

- Ergonomic Interventions and Research: Preventing Musculoskeletal Fatigue and Injury Conference, University of Michigan and University of California, Oakland, CA, December 2010
- 2011 Using a Work Systems Analysis to Redesign Computer Task Exposures in Radiologists. Marconi Conference, Office Ergonomics Research Committee, Marshall CA. January 2011
- 2012 Tablet computer use and upper extremity postures and muscle load, Marconi at Marigold Conference, Office Ergonomics Research Committee, Holland, MI, June 2012
- 2012 Preventing work-related musculoskeletal disorders in the modern office. Lawrence Berkeley National Laboratory Ergonomics Distinguished Lecture Series, Berkeley, CA. July 2012
- 2012 Evidence-based Ergonomics in Computer Use. **Keynote Speaker**. Twenty-Fifth Annual Occupational Safety and Health Institute, University of California, Center for Occupational and Environmental Health, Oakland, CA July 2012
- 2014 How mobile technology is changing the paradigm of office ergonomics. **Featured Speaker**, Applied Ergonomics Conference, Orlando, FL 26 March 2014
- 2014 Occupational physical activity in health care and construction: work's contribution to workers' weekly recommended levels of physical activity. Chevron Global Wellness Network Meeting. 20 May 2014
- 2014 Physical Ergonomics Biomechanics and Ergonomics of the Modern Office: Identifying Injury Pathways. **Keynote Speaker**. HFES Inter-University Workshop, University of Buffalo, Buffalo NY, 15 November 2014.
- 2015 Improving Safety Culture through Workplace Programs. National Perspectives on Ergonomics, Workplace Design, and Health, 2015 Center for Occupational and Environmental Health Lela Morris Symposium, Berkeley, California. 22 May 2015
- 2015 Demystifying ergonomics for the modern office. Ergo-X (Human Factors and Ergonomics Society), **Featured Speaker**. Anaheim, CA 18 June 2015
- 2015 Safety management and culture. **Keynote Speaker** Working on Safety 2015, www.wos2015.net, University of Minho, Porto, Portugal, 24 September 2015
- 2016 The effects of systems and design on employee health and safety from the office to the construction site: identifying causal pathways through modern ergonomics and human factors. ERC Weekly Seminar, School of Public Health, University of Michigan, 8 January 2016
- 2016 Building-SAFE: Safety Incentives and Safety Climate in Construction. Webinar, The Center for Construction Research and Training – CPWR, 20 January 2016
- 2016 Reflecting on experiences and lessons learned in integrated approaches for worker health and safety. **Keynote/Closing Session Speaker**. Mutual Summit 2016, Santiago, Chile, 27 May 2016

- 2016 Safety Incentives, Safety Climate, and Total Worker Health® in the Dynamic Environment of Commercial Construction. The Summer Institute, Oregon Health State University and Portland State University, Portland Oregon, 17 July 2016
- 2017 Demystifying ergonomics in the Modern Office. **Hallman Lecture**, Applied Health Sciences, University of Waterloo, Ontario, Canada. 26 October 2017
- 2017 The effects of systems and design on employee health and safety from the office to the construction site: identifying causal pathways through modern ergonomics and human factors. Student Chapter of the Human Factors and Ergonomics Society, Virginia Tech, Blacksburg, VA 16 November 2017
- 2018 Ergonomics and the surgeon: Ideas to optimize performance and improve wellbeing. American Society for Reconstructive MicroSurgery Annual Meeting, Phoenix AZ 14 January 2018
- 2018 Making the Business Case for Total Worker Health® Workers' Compensation Educational Conference and Safety & Health Conference, Orlando FL, 16 August 2018
- 2018 A Total Worker Health® Intervention on Commercial Construction Sites. Work Wellness and Disability Prevention Institute (WWDPI) and Centre of Research Expertise for the Prevention of Musculoskeletal Disorders (CRE-MSD) Webinar 18 September 2018
- 2018 Assessment of contractor safety (ACES) through prequalification organizational surveys. The Center for Construction Research and Training (CPWR) Webinar, 26 September 2018
- 2018 Moving from wellness to well-being with sit-stand desks. Human Factors and Ergonomics Society Webinar 22 October 2018
- 2018 Sent from my phone, please excuse the new functional challenges for thumbs. **Keynote Speaker**, 3rd International Thumb Osteoarthritis Workshop (ITOW 2018), Palo Alto, CA 9 November 2018
- 2019 Applying Total Worker Health®: Key Characteristics to Build a Culture of Health, **Plenary Speaker** The Danish Working Environment Authority and The National Research Centre for the Working Environment, 12 March 2019
- 2019 Worker safety, health, and wellbeing: Applying Ergonomics within a Total Worker Health® framework. Program in Public Health, Oregon State University, Corvallis, OR, 23 April 2019
- 2019 Total Worker Health® : Evidence for integrating workplace policies, programs, and practices. **Keynote Speaker** Central New York Healthy Workforce Business Conference, Hamilton New York, October 15, 2019
- 2019 Design of Head Mounted Displays & Cervical Spine Loading, Ergo X 2019, Seattle, Washington, 28 October 2019
- 2020 Expanding ergonomics to improve human wellbeing: From Job Rotation to Total Worker Health, WOSH Meeting ORCHSE Strategies, Sonoma, California 25 February 2020

2020 Total Worker Health® approaches to foster worker & organizational resilience during a pandemic. BSR HealthCare Working Group Meeting, Remote Presentation, 18 November 2020

REGIONAL (New England)

- 1997 Sensing the Forces of the Human Hand during Touch-Typing.
Harvard Robotics Seminar Series, Cambridge, MA
- 1998 Finger flexor tendon forces and the control of finger movements during typing.
Boston University Neuromuscular Research Center Seminar Series, Boston MA
- 1999 Forces of a finger flexor tendon during keyboard-work: They're higher than you think.
University of Massachusetts, Lowell, Lowell MA
- 1999 Biomechanics of the Hand and Finger: An Ergonomic Question.
Sargent College of Physical Therapy, Boston University, Boston MA
- 2000 Adding Vibrotactile Feedback to Real-World Telerobots
Quarterly Biomedical Engineering and Minimally Invasive Surgery Symposium,
University of Massachusetts, Worcester, MA.
- 2000 The Role of Passive & Active Muscle Force During Touch-Typing
Biodynamics and Ergonomics: Improving Health and Human Performance and
Identifying Opportunities for Technology Transfer Symposium, Department of Medicine,
University of Connecticut, Farmington, CT..
- 2001 The Ergonomics of a Force-Feedback Mouse,
Media Lab, Massachusetts Institute of Technology, Cambridge, MA
- 2002 Office Ergonomics Workshop Lecture, **Keynote Speaker**
Eighth Annual Millender Occupational Medicine Conference, New England Baptist
Hospital, Boston, MA.
- 2002 Musculoskeletal Disorders and the Computer Workstation: Research Supporting
Ergonomic Interventions.
NECOEM/MaAOHN Annual Conference, Bedford, MA
- 2003 Office Ergonomics Workshop Lecture
Ninth Annual Millender Occupational Medicine Conference, New England Baptist
Hospital, Boston, MA
- 2003 Exposure Assessment of Computer Work: From Design to Usability.
Dept of Work Environment, University of Massachusetts, Lowell, MA
- 2003 Bicycle Messenger Injuries: Lessons from Urban Cyclists
Moving Together 2003: Massachusetts Statewide Bicycle and Pedestrian Conference,
Worcester, MA

- 2004 Occupational Bicycle Injuries
Department of Environmental and Occupational Medicine, Yale University New Haven, CT
- 2004 Ergonomics for the operating room nurse
Association of periOperative Registered Nurses (AORN), Massachusetts Chapter 1, Boston, MA
- 2005 - Exposure Assessment for Work-Related Injury and Musculoskeletal Disorders, Boston University
- 2006 Ergonomics and Musculoskeletal Disorders
Workplace Theory and Policy seminar, Yale Law School
- 2006 The Contribution of the Wrist, Elbow and Shoulder Joints to fingertip tapping.
Kinesiology Department Seminar, University of Massachusetts, Amherst.
- 2007 The dynamics of the finger and upper extremity during repetitive occupational tasks
Department of Mechanical Engineering, Cornell University
- 2008 Upper extremity dynamics during keying.
Department of Mechanical Engineering, Tufts University
- 2008 Ergonomics and Injury Prevention in Health Care
Grand Rounds, Department of Radiology, Beth Israel Deaconess Medical Center, Boston MA
- 2008 Ergonomics and Upper Extremity Disorders Among Computer Users.
NECOEM/MAAOHN Annual Conference, Bedford, MA
- 2009 Work-related musculoskeletal disorders: identifying injury pathways through biomechanics. Grand Rounds to the Harvard Combined Orthopaedic Surgery Residency Program, Boston, MA
- 2010 Applying ergonomics in health care: The challenges and successes for radiology.
Grand Rounds, Department of Radiology, Beth Israel Deaconess Medical Center, Boston MA
- 2011 Motor Control in Ergonomics: Applications in Human Computer Interfaces. The Boston Action Club, Northeastern University.
- 2012 Prevention of Work and Computer Related Musculoskeletal Disorders<
Department of Occupational Therapy Student Seminar Series, Boston University, Boston, MA
- 2012 Fundamental ergonomics in design.
Rhode Island School of Design, Providence, RI, October
- 2013 Upper extremity biomechanics in environmental and public health, from design to behavior. Rhode Island Hospital, Lifespan. February 2013

- 2014 Occupational physical activity in health care and construction: work's contribution to workers' weekly recommended levels of physical activity. Massachusetts Department of Public Health, Occupational Health Surveillance Seminar. 20 March 2014
- 2014 Ergonomics of the modern office: mobile technology to dynamic workstations: Harvard Club and the Massachusetts Chapter of the Fulbright Association. 18 November 2014
- 2017 Safety Culture and Climate: Construction Worker Safety and Health. New England Chapter of American Industrial Hygiene Meeting, Norwood, MA, 1 November 2017
- 2017 Improving Conditions of Work: What Impacts Worker Health? Massachusetts Working on Wellness Webinar Series, 6 December 2017
- 2018 Safety Culture and Climate: Construction Worker Safety and Health. OSHA Summer Summit, Amherst, MA, 14 June 2018
- 2018 Ergonomics – Design and Systems for Human Wellbeing. Northeastern University STEM summer program for high school students. <https://stem.neu.edu/summer/ysp/>
- 2019 Building a culture of safety, health, and wellbeing for construction workers: Overcoming (or not) the organizational challenges. MIT Sloan School of Management and Social Sciences, February 8, 2019
- 2019 Construction Worker Safety, Health and Well-being: Ten years of research in New England Commercial Construction Industry. OSHA District 1 Construction Safety Round Table, Boston, MA 11 June 2019
- 2019 The three domains of modern ergonomics in worker health and safety research. Department of Environmental Safety and Health, Massachusetts Institute of Technology, Cambridge, MA, June 20, 2019

Selected Citations in the General Media

- Boston Globe** Goldberg D. (2002) Dicey deliveries survey finds risk runs high for Boston's bike couriers. 21 November 2002.
<http://www.messarchives.com/articles/articles2002/bostonglobe211102.html>
- Seattle Times.** Sanders E (2003). Keeping Downtown Rolling: Flouting the system and serving it, messengers deliver. <http://old.seattletimes.com/pacificnw/2003/0831/cover.html>
- Boston Globe** Lewis E. (2004) Lab aims to cut rate of injuries on the job. 28 June 2004
- Slate** Perlstein L (2010) Rethinking the School Desk: Is the best way to fix the American classroom to improve the furniture? 26 October 2010
http://www.slate.com/articles/news_and_politics/the_hive/2010/10/rethinking_the_school_desk.html
- Boston Globe** (2011) Health Answers. 14 March 2011
- Los Angeles Times** (2012) Harvard study finds the iPad can be a pain in the neck. 25 January 2012
<http://latimesblogs.latimes.com/technology/2012/01/harvard-researchers-ergonomics-ipad.html>

- Boston Globe** Kotz, D. (2012) 3 ways to avoid iPad neck strain. 6 February 2012
<https://www.bostonglobe.com/lifestyle/health-wellness/2012/01/30/ways-avoid-ipad-neck-strain/iAnSo2Y84p6kOzAqg09p1O/story.html>
- Boston Globe** Pierce K. (2012) Many employees abandon sitting while working 31 May 2012
<https://www.bostonglobe.com/business/2012/03/25/employees-take-stand/GWtLOR2tUKRoeuB9ymEU2I/story.html>
- New York Times Magazine**
Kennedy P (2012) Who Made That Escape Key? 5 October 2012
http://www.nytimes.com/2012/10/07/magazine/who-made-that-escape-key.html?_r=0
- New York Times** Parker-Pope T (2013) Ask Well: Help for the Deskbound. 15 January 2013
<http://well.blogs.nytimes.com/2013/01/15/ask-well-help-for-the-deskbound/>
- Cook's Illustrated** (2013) Chef's Knives. September 2013
https://www.cooksillustrated.com/equipment_reviews/1433-chefs-knives
- The Wall Street Journal**
Fowler G. (2014) Find the Best Phone-Screen Size for you. 26 March 2014
<http://www.wsj.com/articles/how-to-find-the-phone-that-fits-your-hand-1395795606>
- Wired** Bonnington C (2014) A Bigger iPhone May Not Be Better, But It Makes Sense for Apple. 8 August 2014. <http://www.wired.com/2014/08/a-bigger-iphone/>
- Cook's Illustrated** (2016) Sauciers. February 2016
https://www.cooksillustrated.com/equipment_reviews/1661-sauciers
- Forbes** Chamary JV (2016) Was Steve Jobs Right About Apple's Small iPhone SE? 23 March 2016 <http://www.forbes.com/sites/jvchamary/2016/03/23/small-phone-ergonomics/#6d3d53b336ff>
- The Wall Street Journal**
Johannes L (2016) A Cure for Digital Addicts' 'Text Neck'? 23 March 2016
<http://www.wsj.com/articles/a-cure-for-digital-addicts-text-neck-1464019660>
- Business Insurance** Gonzalez G (2016) OSHA puts incentive plans under scrutiny 27 March 2016
<http://www.businessinsurance.com/article/20160327/NEWS08/303279982/osha-puts-workplace-safety-incentive-plans-under-scrutiny?tags=%7C80%7C304>
- Boston Magazine** Ducharme J (2016) Six Tips for Using Standing Desks Correctly 10 May 2016
<http://www.bostonmagazine.com/health/blog/2016/05/10/standing-desks/print/>
- The Washington Post**
Cavanaugh Simpson, J. (2016) Digital disabilities – text neck, cellphone elbow – are painful and growing. 13 June 2016
https://www.washingtonpost.com/national/health-science/digital-disabilities--text-neck-cellphone-elbow--are-painful-and-growing/2016/06/13/df070c7c-0afd-11e6-a6b6-2e6de3695b0e_story.html
- Wired** Rhodes, M (2016) You'll Miss the Escape Key Even Less Than Your Headphone Jack. 27 October 2016. <https://www.wired.com/2016/10/youll-miss-escape-key-even-less-headphone-jack/>
- Reuters** Rapaport, L. (2016) Safe patient handling linked to fewer worker injuries. 4 November 2016 <http://www.reuters.com/article/us-health-safety-patient-handling-idUSKBN12Z25G>

- Boston Globe** Ruckstuhl L (2018) Is your device giving you 'iPad neck,' 'i-hunch,' or 'text neck'? 28 June 2018 <https://www.bostonglobe.com/metro/2018/06/28/your-device-giving-you-ipad-neck-hunch-text-neck/5MWkMc9O7ZS8HR3UDugHaN/story.html>
- Washington Post** Fowler GA (2018) Review: Apple's new iPad Pro still isn't a laptop 10 November 2018 <https://www.dailyherald.com/business/20181110/review-apples-new-ipad-pro-still-isnt-a-laptop>
- New York Times:** Murphy H (2019) Here's How to Type Faster on Your Phone Get those index fingers off your screen. October 4, 2019 <https://www.nytimes.com/2019/10/04/technology/phone-typing.html>
- WHYY** Radio Times with Marty Moss-Coane: Office Space Episode Panelist <https://whyy.org/episodes/office-space/> November 7, 2019
- New York Times** Haag, M. (2020) Virus Rules Let Construction Workers Keep Building Luxury Towers. New York Times, <https://www.nytimes.com/2020/03/25/nyregion/coronavirus-nyc-construction.html>. March 25, 2020
- Wall Street Journal** Smith, J. (2020) Wearable Devices Take Ergonomics to a New High-Tech Place The technology—which uses sensors to let warehouse workers know when their posture is off—could reduce injuries from repetitive tasks. <https://www.wsj.com/articles/wearable-devices-take-ergonomics-to-a-new-high-tech-place-11583267614> 5 March 2020
- USC** Giles Bruce (2020) University of Southern California Center for Health Journalism How can reporters stay safe while getting the story during COVID-19? <https://www.centerforhealthjournalism.org/2020/04/19/how-can-reporters-stay-safe-while-getting-story-during-covid-19> April 21, 2020
- Columbia Spector** Stephanie Lai (2020), Columbia Daily Spector Columbia construction workers ordered to return to sites as COVID cases peak in NYC <https://www.columbiaspectator.com/news/2020/04/21/columbia-construction-workers-ordered-to-return-to-sites-as-covid-cases-peak-in-nyc/> April 21, 2020
- Los Angeles Times** Nathan Fenno, Andrew Khouri, Roger Vincent (2020) Los Angeles Times L.A. hunkered down. But it hasn't stopped building mansions, stadiums and apartments. <https://www.latimes.com/business/story/2020-04-24/coronavirus-construction-jobs> April 24, 2020
- BIM Today** BIMToday (2020) Reclaiming innovation: How to manage change amid industry tech growth. Embracing the impact of new and disruptive building technology in the construction industry means also managing the organisational change that comes with it. <https://www.pbctoday.co.uk/news/bim-news/building-technology-growth/84633/> 26 October 2020
- Construction Dive** Joe Bousqin (2020) Construction's COVID-19 record might be worse than you think: Academic studies and local health authorities find more outbreaks in construction than commonly thought. <https://www.constructiondive.com/news/constructions-covid-19-record-might-be-worse-than-you-think/589258/> 19 November 2020

BIBLIOGRAPHY

My bibliography on PubMed <https://www.ncbi.nlm.nih.gov/myncbi/jack.dennerlein.1/bibliography/public/>
 Google Scholar: <https://scholar.google.com/citations?user=MQP2PRUAAAAJ&hl=en>

PEER-REVIEWED JOURNAL ARTICLES:

1. Rempel D, **Dennerlein J**, Mote CD, Jr., Armstrong T. A method of measuring fingertip loading during keyboard use. *J Biomech* 1994; 27:1101-4. PMID: 8089165
2. **Dennerlein JT**, Miller JM, Mote CD, Jr., Rempel DM. A low profile human tendon force transducer: the influence of tendon thickness on calibration. *J Biomech* 1997; 30:395-7. PMID: 9075009
3. **Dennerlein JT**, Diao E, Mote CD, Jr., Rempel DM. Tensions of the flexor digitorum superficialis are higher than a current model predicts. *J Biomech* 1998; 31:295-301. PMID: 9672082
4. **Dennerlein JT**, Mote CD, Jr., Rempel DM. Control strategies for finger movement during touch-typing. The role of the extrinsic muscles during a keystroke. *Exp Brain Res* 1998; 121:1-6. PMID: 9698184
5. **Dennerlein JT**, Diao E, Mote CD, Jr., Rempel DM. In vivo finger flexor tendon force while tapping on a keyswitch. *J Orthop Res* 1999; 17:178-84. PMID: 10221833
6. **Dennerlein JT**, Yang MC. Haptic force-feedback devices for the office computer: performance and musculoskeletal loading issues. *Hum Factors* 2001; 43:278-86. PMID: 11592668
7. Okamura AT, Cutkosky MR, **Dennerlein JT**. Reality-Based Models for Vibration Feedback in Virtual Environments. *ASME/IEEE Transactions on Mechatronics* 2001; 6:245-253.
8. Ciriello VM, Bennie KJ, Johnson PW, **Dennerlein JT**. Comparison of Three Psychophysical Techniques to Establish Maximum Acceptable Torques of Repetitive Ulnar Deviation. *Theoretical Issues in Ergonomics Science* 2002; 3:274-284
9. **Dennerlein JT**, Soumekh FS, Fossel AH, Amick BC, 3rd, Keller RB, Katz JN. Longer distal motor latency predicts better outcomes of carpal tunnel release. *J Occup Environ Med* 2002; 44:176-83. PMID: 11851219
10. Bennie KJ, Ciriello VM, Johnson PW, **Dennerlein JT**. Electromyographic activity of the human extensor carpi ulnaris muscle changes with exposure to repetitive ulnar deviation. *Eur J Appl Physiol* 2002; 88:5-12. PMID: 12436265
11. **Dennerlein JT**, Meeker JD. Occupational injuries among Boston bicycle messengers. *Am J Ind Med* 2002; 42:519-25. PMID: 12439875
12. Jindrich DL, Zhou Y, Becker T, **Dennerlein JT**. Non-linear viscoelastic models predict fingertip pulp force-displacement characteristics during voluntary tapping. *J Biomech* 2003; 36:497-503. PMID: 12600340
13. Chen JC, Chang WR, Shih TS, Chen CJ, Chang WP, **Dennerlein JT**, Ryan LM, Christiani DC. Predictors of whole-body vibration levels among urban taxi drivers. *Ergonomics* 2003; 46:1075-90. PMID: 12850932
14. **Dennerlein JT**, Ciriello VM, Kerin KJ, Johnson PW. Fatigue in the forearm resulting from low-level repetitive ulnar deviation. *AIHA J (Fairfax, Va)* 2003; 64:799-805. PMID: 14674796
15. Chen JC, **Dennerlein JT**, Shih TS, Chen CJ, Cheng Y, Chang WP, Ryan LM, Christiani DC. Knee pain and driving duration: a secondary analysis of the Taxi Drivers' Health Study. *Am J Public Health* 2004; 94:575-81. PMID: 15054008

16. Chen JC, Chang WR, Shih TS, Chen CJ, Chang WP, **Dennerlein JT**, Ryan LM, Christiani DC. Using exposure prediction rules for exposure assessment: an example on whole-body vibration in taxi drivers. *Epidemiology* 2004; 15:293-9. PMID: 15097009
17. Jindrich DL, Balakrishnan AD, **Dennerlein JT**. Effects of keyswitch design and finger posture on finger joint kinematics and dynamics during tapping on computer keyswitches. *Clin Biomech* (Bristol, Avon) 2004; 19:600-8. PMID: 15234484
18. Jindrich DL, Balakrishnan AD, **Dennerlein JT**. Finger joint impedance during tapping on a computer keyswitch. *J Biomech* 2004; 37:1589-96. PMID: 15336934
19. **Dennerlein JT**. Finger flexor tendon forces are a complex function of finger joint motions and fingertip forces. *J Hand Ther* 2005; 18:120-7. PMID: 15891970
20. Lee EC, Rafiq A, Merrell R, Ackerman R, **Dennerlein JT**. Ergonomics and human factors in endoscopic surgery: a comparison of manual vs telerobotic simulation systems. *Surg Endosc* 2005. PMID: 16021368
21. Chen JC, **Dennerlein JT**, Chang CC, Chang WR, Christiani DC. Seat inclination, use of lumbar support and low-back pain of taxi drivers. *Scand J Work Environ Health* 2005; 31:258-65. PMID: 16161708
22. Kuo PL, Lee DL, Jindrich DL, **Dennerlein JT**. Finger joint coordination during tapping. *J Biomech* 2006; 39:2934-42. PMID: 16161708
23. **Dennerlein JT**, Johnson PW. Different computer tasks affect the exposure of the upper extremity to biomechanical risk factors. *Ergonomics* 2006; 49:45-61. PMID: 16393803
24. Balakrishnan AD, Jindrich DL, **Dennerlein JT**. Keyswitch orientation can reduce finger joint torques during tapping on a computer keyswitch. *Hum Factors* 2006; 48:121-9. PMID: 16696262
25. **Dennerlein JT**, DiMarino MH. Forearm electromyographic changes with the use of a haptic force-feedback computer mouse. *Hum Factors* 2006; 48:130-41. PMID: 16696263
26. **Dennerlein JT**, Johnson PW. Changes in upper extremity biomechanics across different mouse positions in a computer workstation. *Ergonomics* 2006; 49:1456-69. PMID: 17028089
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