

# Curriculum Vitae

---

**Jennifer Garza, ScD**  
**UConn Health**  
**Garza@uchc.edu**  
**W: (860) 679-5418**  
**C: (774) 240-0960**

## Education and Training

2004-2008 Undergraduate Student, Biomedical Engineering, University of Connecticut at Storrs  
2008-2013 Doctoral Student, Ergonomics and Safety, Harvard School of Public Health

## Positions and Employment

2006 Summer Intern, University of Cincinnati  
2007 Summer Intern, NINDS @ National Institute of Health  
2012 Visiting Researcher, Department of Kinesiology, University of Connecticut  
2008-2013 Graduate Student Researcher, Environmental Health Dept @ HSPH  
2013 Postdoctoral Fellow, Environmental Health, Harvard School of Public Health  
2013-2016 Postdoctoral Fellow, Occupational Medicine, UConn Health  
2014 Visiting Researcher, Department of Occupational and Public Health, University of Gavle  
2016-present Ergonomist, UConn Health

## Teaching Experience

2010-2013 Teaching Fellow: Human Organism, Harvard College  
*Lead a weekly hour-long review of course material, lead two two-hour laboratory sessions per semester, and grade assignments and exams for ~15 undergraduate students*

2010-2011 Teaching Assistant: Human Pathophysiology, Harvard University Extension School  
*Led a weekly hour-long review of course material and graded assignments and exams for ~45 undergraduate and graduate students*

2010 Teaching Assistant: Ergonomics and Human Factors, Harvard School of Public Health  
*Led occasional review sessions and graded assignments for ~15 graduate students*

2011 Teaching Assistant: Injury Epidemiology, Harvard School of Public Health  
*Graded assignments for ~15 graduate students*

2011-present Guest Lecturer: Ergonomics and Human Factors, Harvard School of Public Health  
*Present a two hour lecture on psychosocial stress and biomechanical loading in ergonomics*

2011-2013 Head Teaching Fellow: Human Organism, Harvard College  
*Scheduling and logistics coordinator for ~60 student undergraduate course*

2011 Teaching Assistant: Human Physiology, Harvard School of Public Health  
*Led a weekly hour-long review of course material and graded assignments and exams for ~45 graduate students*

2012 Grader: Human Physiology, Harvard School of Public Health  
*Graded assignments and exams for ~45 graduate students*

- 2013 Seminar Leader: The Human Organism, Harvard College  
*Developed and led a weekly two hour special interest section on exercise, the musculoskeletal system, and health for ~15 undergraduate students*
- 2014 Project Supervisor: Physical Therapy Student Projects, Northeastern University  
*Worked to develop a project for DPT students on biomechanics and provided mentorship*
- 2014 Co-instructor: Environmental and Occupational Epidemiology, UConn Health  
*Development, planning, and implementation of the course, develop and give lectures and lead sessions of the course. ~15 students*
- 2015-present Guest Lecturer: Environmental and Occupational Epidemiology, UConn Health  
*Present various lectures on exposure assessment and occupational health topics. ~15 students*
- 2015 Preceptor: Toolkit for Scientific Communication, UConn Health  
*Developing and leading two modules of the course, giving lectures. ~20 students*

### **Non-Credit Courses on Research and Teaching**

Discussion Leading Seminar, Derek Bok Center For Teaching and Learning, HSPH  
Teaching Philosophy, Derek Bok Center For Teaching and Learning, HSPH  
The Collaborative Operating System, Teleseminar  
Federation of American Societies for Experimental Biology (FASEB)/Maximizing Access to Research Careers (MARC) Program Postdoctoral Preparation Institute  
"Writing Winning Grants" Seminar Series

### **Honors**

- 2005, 2006 New England Scholar, University of Connecticut  
2006 Tau Beta Pi Engineering Honor Fraternity  
2006 Mortar Board Honor Society  
2011 American Society for Safety Engineers Fellowship  
2013 Nominated, PREMUS 2013 Best Paper Award  
2013 Derek Bok Center Certificate of Distinction in Teaching

### **Community Service Related to Professional Work**

- 2010-2011 Student Representative, Exposure, Epidemiology and Risk Curriculum Committee, HSPH  
2011-present APHA Student Assembly Abstract Reviewer  
2011-present Reviewer, BMC Research Notes  
2011-2012 APHA Student Assembly Abstracts Chair  
2012-present Reviewer, American Journal of Industrial Medicine  
2012-present Reviewer, Ergonomics  
2012-present HFES Occupational Ergonomics Group Abstract Reviewer  
2013-present Reviewer, Journal of Racial and Ethnic Health Disparities  
2013-present Center for Clinical and Translational Research Occupational Health Core Interest Group  
Committee Member  
2014-present Harvard College Undergraduate General Education Conant Prize Reviewer  
2015 Mentor, Connecticut Public Health Association  
2015-present Reviewer: Ergonomics in Design  
2015-present Judge, UConn Health Medical/Dental Student Research Day

## Outreach Activities

- 2014-present Presenter, UConn Health Employee Health Fair  
2014 Presenter, University of Connecticut Employee Health Fair  
2015 Contributing Author, Center for Promotion of Health in the New England Workforce “News and Views” Blog

## Peer-Reviewed Journal Articles

1. **Bruno, J.L.**, Li, Z., Trudeau, M., Raina, S., Dennerlein, J.T. (Journal of Applied Biomechanics, 2012 Jul:28(3):343-8) “A single video camera postural assessment system to measure rotation of the shoulder during computer use.”
2. **Bruno Garza, J.L.**, Eijkelhof, B.H.W., Johnson, P.W., Raina, S.M., Rynell, P., Huysmans, M.A., van Dieen, J.H., van der Beek, A.J., Blatter, B.M., Dennerlein, J.T., (Ergonomics, 2012 Jun:55(6):670-81) “Observed Differences in Upper Extremity Biomechanical Exposures Across Computer Activities in a Field Study of Office Workers.”
3. **Bruno Garza, J.L.**, Catalano, P.J., Katz, J.N., Huysmans, M.A., Dennerlein, J.T. (Journal of Occupational and Environmental Hygiene, 2012 9(12):691-8) “Developing a framework for predicting upper extremity muscle activity, posture, velocity, and acceleration during computer use: the effect of keyboard use, mouse use, and individual factors.”
4. **Bruno Garza, J.L.**, Eijkelhof, B.H.W., Johnson, P.W., Catalano P., Katz J.N., Huysmans, M.A., van Dieen, J.H., van der Beek, A.J., Blatter, B.M., Dennerlein, J.T., (American Journal of Industrial Medicine, 2013 Oct:56(10):1190-200) “The effect of reward and over-commitment on trapezius muscle effort and postures of the head, neck, and torso.”
5. **Garza, J.L.**, Young JG. (Accepted, Work) “A review of the effects of computer input device design on biomechanical loading and musculoskeletal outcomes during computer work.”
6. **Bruno Garza, J.L.**, Eijkelhof, B.H.W., Huysmans, M.A., Johnson, P.W., van Dieen, J.H., Catalano, P.J., Katz, J.N., van der Beek, A.J., Dennerlein, J.T. (BMC Musculoskeletal Disorders, 2014 Sep:15:292) “Prediction of trapezius muscle activity and shoulder, head, neck, and torso postures during computer use: results of a field study.”
7. **Garza, J.L.**, Cavallari, J.M., Eijkelhof B.H.W., Huysmans, M.A., Thamsuwan, O., Johnson, P.W., van der Beek, A.J., Dennerlein, J.T. (International Archives of Occupational and Environmental Health, 2014 Sep 3;15:292) “Office Workers with High Effort-Reward Imbalance and Over-commitment have Greater Decreases in Heart Rate Variability Over a Two Hour Working Period.”
8. **Garza, J.L.**, Fallentin, N., Dennerlein, J.T. (Accepted, IIE Transactions on Occupational Ergonomics and Human Factors) “Patterns of forearm muscle activity and task parameters change during a repetitive sub-maximum forceful wrist flexion task.”
9. **Garza, J.L.**, Cavallari, J.M., Wakai, S., Schenck, P., Simcox, N., Morse, T., Meyer, J.D., Cherniack, M. (AJIM, 2015 Sep;58(9):988-95) “Traditional and environmentally preferable cleaning product exposure and health symptoms in custodians”.
10. **Garza, J.L.**, Mittleman M.A., Zhang, J., Christiani, D.C., Cavallari, J.M. (Accepted, PlosOne). “Time course of heart rate variability response to PM2.5 exposure from secondhand smoke.”
11. **Garza, J.L.**, Dugan, A.G., Faghri, P.D., Gorin, A.A., Huedo-Medina, T.B., Kenny, A.M., Cherniack, M.G., Cavallari, J.M. (Accepted, BMC Obesity). “Demographic, health-related, and work-related factors associated with body mass index and body fat percentage among workers at six Connecticut manufacturing companies across different age groups: a cohort study.”
12. Cavallari, J.M., Simcox, N.J., Wakai, S., Lu, C., **Garza, J.L.**, Morse, T.F., Cherniack, M. (Accepted, Annals of Occupational Hygiene). “Characterization of Urinary Phthalate Metabolites among Custodians.”
13. Heiden, M., Mathiassen, S.E., Garza, J.L., Liv, P., Wahlstrom, J. (Accepted, Annals of Occupational Hygiene). “A comparison of two strategies for building an exposure prediction model.”
14. Eijkelhof BHW, Huysmans MA, **Bruno Garza JL**, Blatter BM, van Dieen JH, Dennerlein JT, van der Beek AJ. (European Journal of Applied Physiology, 2013Dec:113(12):2897-912) “The effects of

workplace stressors on muscle activity in the neck-shoulder and forearm muscles during computer work: a systematic review and meta-analysis.”

15. Eijkelhof BHW, **Bruno Garza JL**, Huysmans MA, Blatter BM, van Dieen JH, Dennerlein JT, van der Beek AJ. (Scandinavian Journal of Work and Environmental Health, 2013 Jul:39(4):379-89) “The effects of overcommitment and reward on muscle activity, posture, and forces in the arm-wrist-hand region, a field study among computer workers.”
16. Robertson MM1, Boiselle P, Eisenberg R, Siegal D, Chang CH, Dainoff M, Garabet A, **Garza JB**, Dennerlein J. (Work. 2012;41 Suppl 1:1818-20. doi: 10.3233/WOR-2012-0391-1818.) Examination of computer task exposures in radiologists: a work systems approach.
17. Lee N, Batt MK, Cronier BA, Jackson MC, **Bruno Garza JL**, Trinh DS, Mason CO, Spearry RP, Bhattacharya S, Robitz R, Colbert MC, Zolotukhin S, Nakafuku M, MacLennan AJ (Journal of Neuroscience, 2013 Jan:33(3):1241-58) “Ciliary Neurotrophic Factor Receptor Regulation of Adult Forebrain Neurogenesis.”

### Peer-Reviewed Conference Papers

1. **Bruno Garza JL**, Eijkelhof BHW, Huysmans MA, Johnson PW, van Dieen JH, van der Beek AJ, Dennerlein JT. The effects of psychosocial factors on trapezius muscle activity levels during computer use. HFES Conference Paper 2012, Boston, USA.
2. **Bruno Garza, J.L.**, Eijkelhof, B.H.W., Johnson, P.W., Raina, S.M., Rynell, P., Huysmans, M.A., van Dieen, J.H., van der Beek, A.J., Blatter, B.M., Dennerlein, J.T. (2012) Developing a framework for assessing muscle effort and postures during computer work in the field: The effect of computer activities on neck/shoulder muscle effort and postures. *Presented at:* IEA, Recife, Brazil.

### Conference Presentations

1. **Garza JL**, Cavallari JM, Faghri P, Gorin A, Huedo-Medina T, Kenny A, Dugan A. (2015) Factors associated with change in body mass index and body fat percentage in manufacturing workers across different ages. *Poster at:* The Obesity Society Conference, Los Angeles, CA.
2. **Garza JL**, Wakai S, Cavallari JM. (2015) Motivators and Barriers to the Use of Personal Protective Equipment Among Custodians. *Poster at:* APHA, Chicago, IL.
3. **Garza JL**, Cavallari JM, Faghri P, Gorin A, Huedo-Medina T, Kenny A, Dugan A. (2015) Demographic, Health-Related, and Work-Related Factors Associated with Body Mass Index Among Manufacturing Workers in Different Age Groups. *Poster at:* APHA, Chicago, IL.
4. **Garza JL**. (2015) Exposure prediction modeling – challenges and opportunities for occupational health. *Presented at:* Sturbridge Symposium, Sturbridge, MA.
5. **Garza JL**, Mittleman M, Zhang J, Christiani, Cavallari JM. (2015) Time course of heart rate variability response to PM2.5 exposure from secondhand smoke. *Presented at:* Flight Attendant’s Medical Research Institute Symposium, Miami FL.
6. **Garza JL**, Cavallari JM, Faghri P, Gorin A, Huedo-Medina T, Kenny A, Dugan A. (2015) Factors associated with body mass index among manufacturing workers across different ages. *Presented at:* Sturbridge Symposium, Sturbridge, MA.
7. **Garza JL**, Cavallari JM, Wakai S, Schenck P, Welsh L, Meyer J, Morse T, Cherniack M. (2014) An index to identify differences in custodians’ exposures to cleaning chemicals. *Presented at:* APHA, New Orleans LA.
8. **Garza JL**, Zhang J, Fang S, Mittleman M, Christiani D, Cavallari JM. (2014) Acute inflammatory response to secondhand smoke exposure among non-smoking construction workers: a repeated measures study. *Presented at:* EPICOH, Chicago IL.
9. **Garza JL**, Zhang J, Fang S, Mittleman M, Christiani D, Cavallari JM. (2014) Acute effects of Second Hand Tobacco Smoke Exposure on Inflammatory Cytokine and Adhesion Molecule Levels in Construction Workers. *Presented at:* Flight Attendant’s Medical Research Institute Symposium, Miami FL.

10. **Garza JL**, Cavallari JM, Wakai S, Schenck P, Welsh L, Meyer J, Morse T, Cherniack M. (2014) An index to identify differences in custodians' exposures to cleaning chemicals. *Presented at: Sturbridge Symposium, Sturbridge MA.*
11. **Bruno Garza JL**, Eijkelhof BHW, Huysmans MA, Johnson PW, Catalano PJ, Katz JN, van Dieen JH, van der Beek AJ, Dennerlein JT. (2013) The effect of over-commitment and reward on trapezius muscle activity and shoulder, head, neck, and torso postures during computer use in the field. *Poster presentation at: Health, Workplace, and Environment Conference, Storrs, CT.*
12. **Bruno Garza JL**, Eijkelhof BHW, Huysmans MA, Johnson PW, Catalano PJ, Katz JN, van Dieen JH, van der Beek AJ, Dennerlein JT. (2013) Building better prediction models for exposure assessment of trapezius muscle activity during computer use. *Presented at: PREMUS, Busan, South Korea.*
13. **Bruno Garza JL**. (2013) Measuring physical exposures among office workers: new tools and applications. *Presented at: Sturbridge Symposium, Sturbridge, MA.*
14. **Bruno Garza JL**. Eijkelhof BHW, Huysmans MA, Johnson PW, Catalano PJ, Katz JN, van Dieen JH, van der Beek AJ, Dennerlein JT. (2013) Reward and over-commitment increase trapezius muscle activity in a real office work environment. *Presented at: APA-Work, Stress, and Health; Los Angeles, CA*
15. **Bruno**, J.L., Huysmans, M., & Dennerlein, J.T., (2010) "Individual variability within computer users improves accuracy of predictions of biomechanical patterns in computer workers." *Presented at: PREMUS, Angers, France.*
16. **Bruno, J.L.**, Li, Z., Trudeau, M., Raina, S., Dennerlein, J.T. (2010) "A video-based postural assessment system to measure rotation of the shoulder during computer use." *Poster presentation at: PREMUS, Angers, France.*
17. Eijkelhof, B.H.W., Huysmans, M.A., Blatter, B.M., **Bruno, J.L.**, Johnson P.W., van der Beek, A.J., van Dieen, J.H., Dennerlein, J.T., 2010, "Interactions of biomechanics and psychosocial stressors in relation to development of MSDs in the modern office: The 'PROOF' study protocol." *Poster presentation at: PREMUS, Angers, France.*
18. Udtamadilok, T., **Bruno, J.**, O'Day, E., Hopcia, K., Dennerlein, J.T., (2010), "Development of an Observational Walkthrough Checklist used to Evaluate Hospital Worker Safety within a Patient Care Unit." *Poster presentation at: PREMUS, Angers, France.*
19. **Bruno, J.L.**, Dennerlein, J.T., (2009) "Predicting Biomechanical Patterns in Office Workers Based on Computer Usage Patterns and Individual Anthropometry." *Poster presentation at: X2009, Boston, USA.*

### Invited Talks

- 2009 Predicting Biomechanical Patterns in Office Workers Based on Computer Usage Patterns and Individual Anthropometry  
Harvard School of Public Health Department of Environmental Health Education and Research Center Seminar Series, Boston MA
- 2010 Predicting Occupational Biomechanics in Office Workers: The PROOF Study  
Mini-Marconi Conference, Office Ergonomics Research Committee, Boston MA
- 2011 Quantifying forearm muscle changes and adaptation during a fatiguing repetitive wrist flexion task  
Liberty Mutual Research Institute for Safety TRC, Hopkinton MA
- 2012 The effects of psychosocial factors on trapezius muscle activity levels during computer use.  
Harvard School of Public Health Department of Environmental Health Education and Research Center Seminar Series, Boston MA
- 2012 The effect of psychosocial stress on upper extremity biomechanical loading during computer work in the real work environment  
Marconi @ Marigold, Office Ergonomics Research Committee, Boston MA

- 2012 Health and Wellness Talk: Office Ergonomics  
Northeastern University Admissions Office Health Seminar Series, Boston MA
- 2013 The study of musculoskeletal disorders: difficulties, new methods, and their applications.  
Eastern Connecticut State University Department of Biology Guest Lecture, Willimantic CT
- 2013 Research in musculoskeletal disorders—need for biology  
Framingham State University Department of Biology Guest Lecture, Framingham MA
- 2013 Research Methods in Public and Occupational Health: Exposures, Outcomes, and Exposure/Outcome Relationships  
University of Connecticut Health Center Department of Community Medicine Guest Lecture, Farmington CT
- 2014 Investigating pathways between environmental exposures and health outcomes  
Yale Occupational and Environmental Medicine Seminar Series, New Haven CT
- 2014 The effect of workplace psychosocial factors on heart rate variability decreases over a workday  
University of Connecticut Department of Industrial and Occupational Psychology Guest Lecture, Storrs CT
- 2014 New tools for the assessment of office workers' muscle activity, posture, and force exposures during computer use, and their applications  
University of Gavle Department of Occupational and Public Health Guest Lecture, Gavle Sweden
- 2014 New tools for the assessment of workplace physical exposures, and their applications  
UConn Health Division of Occupational and Environmental Medicine Seminar Series, Farmington CT
- 2015 Research on biomechanics and musculoskeletal disorders  
University of Connecticut Physical Therapy Program Guest Lecture, Storrs CT

## **Funding Information**

### **Previous**

Grant No./PI (Jennifer Garza, PI)  
 Source: Collaboration with the University of Gavle, Sweden and Dr. Svend Erik Mathiassen  
 Title: Methods to improve exposure prediction modelling for assessment of physical exposures during computer use  
 Dates: 2014-2015  
 Major Goals: To identify new methods for modelling physical exposures during computer use based on questionnaire-based and directly measured predictors.  
 Role: Principal Investigator

Grant No./PI (Jennifer Garza, PI)  
 Source: Center for the Promotion of Health in the New England Workplace Pilot Project Program  
 Title: Characterization and Predictors of Personal Protective Equipment Use and Healthy Lifestyle Among Custodians Using Cleaning Products  
 Dates: 2014-2015  
 Major Goals: To identify motivators and barriers to health and the use of personal protective equipment among custodians using cleaning chemicals.  
 Role: Principal Investigator

Grant No./PI (Jennifer Cavallari, PI)  
Source: Center for Clinical and Translational Research, Center for Health Intervention and Prevention  
Title: Occupational Obesity and Aging Research (OoAR)  
Dates: 2014-2015  
Major Goals: To identify individual and workplace level predictors and correlates of obesity within a population of aging workers  
Role: Co-Investigator

Grant No./PI (Jennifer Cavallari, PI)  
Source: Flight Attendants Medical Research Institute Young Clinical Scientist Award  
Title: Cardiovascular Effects of Second Hand Tobacco Smoke in Construction Workers  
Dates: 2009-2014  
Major Goals: To identify the cardiovascular responses to second hand smoke and welding fume exposures among construction workers.  
Role: Postdoctoral Fellow

Grant No./PI 1 R01 OH008781-01 A2 (Jack Dennerlein, PI)  
Source: Centers for Disease Control and Prevention (NIOSH)  
Title: Interactions of Biomechanics and Psychosocial Stressors and MSDs in the Modern Office  
Dates: 7/1/07-6/30/13  
Major Goals: Determine whether psychosocial stressors affect upper extremity biomechanics during computer use, whether psychosocial stressors in conjunction with task and individual factors can be used to predict biomechanics during computer use, and whether predicted biomechanical exposures are associated with MSDs.  
Role: Doctoral Student Researcher

Grant No./PI American Society for Safety Engineers Fellowship (Jennifer Bruno Garza, PI)  
Source: Liberty Mutual Research Institute for Safety/American Society for Safety Engineers  
Title: Quantifying forearm muscle changes and adaptation during a fatiguing repetitive wrist flexion task  
Dates: Summer 2011  
Major Goals: Characterize the electromyography response of the six major muscles involved in wrist movement (the flexor carpi radialis, the flexor carpi ulnaris, the flexor digitorum superficialis, the extensor carpi radialis, the extensor carpi ulnaris, and the extensor digitorum) to low frequency fatigue of the flexor carpi radialis during an isolated wrist flexion task designed to mimic work required in occupational settings.  
Role: Principal Investigator

Grant No./PI 5R21OH009831-02 (Martin Cherniack, PI)  
Source: Centers for Disease Control and Prevention/National Institute for Occupational Safety and Health  
Title: Green Cleaning: Exposure Characterization and Adoption Process Among Custodians  
Dates: 2009-2014  
Major Goals: To identify health outcomes related to exposure to cleaning chemicals, and to improve acceptance and ensure proper use of green cleaning programs.  
Role: Co-Investigator