



## FELLOW PROFILE

### Karen Jacobs



**Degrees, certifications, etc.:** EdD, OTR/L, CPE, FAOTA

**Current status:** Active HFES Member

**Homepage:** <http://blogs.bu.edu/kjacobs/>

**Biography:** I became involved in ergonomics with my first position as an occupational therapist in 1980 when I was invited to create a vocational high school for students with learning disabilities. It became apparent that the application of ergonomic principles was important in the development of classroom space, use of equipment and tools as well as in the design of curriculum.

My major career research evolved from this first experience to an interest in examining the interface between the environment and human capabilities. In particular, the individual factors and environmental demands associated with increased risk of functional limitations among populations of university and middle school aged students, particularly in the use of technology such as notebook computers and backpack use. In recent years, in a collaborative venture, Kent State University, JBS International, Inc., West Virginia University, and Boston University we initiated *Project Career: Development of an Interprofessional Demonstration to Support the Transition of Students with Traumatic Brain Injuries from Post-secondary Education to Employment*. The goal of this 5-year NIDRR supported project is to develop, test and implement a technology driven, long-term and resource-rich individualized support program that merges assistive technology for cognition with vocational rehabilitation practices to improve career readiness and employment outcomes of civilian and veteran students with traumatic brain injuries.

## **Employment History**

- Clinical Professor & Program Director, On-line Post-professional Occupational Therapy Doctorate in Occupational Therapy Program (OTD) Boston University, College of Health and Rehabilitation Sciences: Sargent College Boston, MA
- Consultant in Ergonomics; Consultant in ergonomics & lecturer to a variety of settings: business, industry, hospitals, school systems, educational collaborative, universities, rehabilitation centers, insurance companies, skilled nursing facilities, private practices, attorneys, a mass transportation agency, & publishers.
- Lecturer, Ono Academic College Kiryat, Ono, Israel
- Honorary Professor, School of Social Science and Social Work Plymouth University Plymouth, UK
- Editor-in-Chief, Founding editor of the interprofessional, international, peer-reviewed journal, *WORK: A Journal of Prevention, Assessment & Rehabilitation*. IOS Press, The Netherlands.

## **What are your significant contributions to the field?**

I helped establish ergonomics role with children and youths. From 2007–2012, I was the chairperson of the Ergonomics for Children and Educational Environments (ECEE) Technical Committee of the International Ergonomics Association (IEA). The highly successful backpack awareness initiative conducted annually in the US and Iceland is one example of my accomplishments in the area of ergonomics for children and youths. I established collaboration between American Occupational Therapy Association (AOTA) and L.L. Bean, Inc. to prevent musculoskeletal discomfort and promote healthy backpack use. The backpack education initiative resulted in a hangtag included on each L.L. Bean backpack, a brochure with instructions on how to select, pack and wear backpacks correctly, and a news video release which was viewed by thousands of consumers. I continue her national involvement in backpack ergonomics as the national spokesperson for the AOTA's National Backpack Awareness Day. I co-authored consumer tip sheets for on the ergonomics of backpack use, the use of computers and personal digital assistants (PDAs), of carrying a purse, briefcase or luggage as well as personal transition strategies for newly unemployed workers. For the last 15 years, the National School Backpack Awareness Day has provided education to millions of students, parents, teachers, and administrators. Through this backpack initiative, I created a sustainable model program to communicate the benefits of ergonomics to the public.

My research examines the interface between the environment and human capabilities. Currently she examines the individual factors and environmental demands associated with increased risk of functional limitations among populations of university and middle school students, focusing on notebook computing, tablet use, backpack use, and comparative effectiveness of conducting an ergonomic jobsite analysis through telehealth strategies. In all of these studies, I translated the knowledge gained into tips sheets that can be easily incorporated into daily activities by consumers.

I shared this work beyond the research community through her involvement in public forums. One such outlet is her blog at Boston University (<http://blogs.bu.edu/kjacobs/>) where the public can find ergonomics tip sheets. Here she translates evidences based tips in the form of readable documents for the general public. Included in this blog is **Stretch Break for Kids**, a free software program that she helped create. This program has been translated into several languages and disseminated around the world.

In 1990, I founded and continue to be the editor of **WORK: A Journal of Prevention, Assessment & Rehabilitation** (IOS Press, The Netherlands). The monthly journal is included in a number of databases, including CINAHL, MEDLINE, REHABDATA, and SCOPUS, has been approved by Thomas Scientific for an impact factor and is endorsed by the International Ergonomic Association (IEA). WORK published the 2012 Congress Proceedings for the IEA Congress. The journal has a complimentary webinar series, **Learn at WORK**, which can be found on the **Learn at WORK** YouTube channel <https://www.youtube.com/channel/UCOJaICXvSg9fPHaFFs48PuQ>.

### **Have you received any notable awards or recognition during your career?**

I have received notable awards and recognition during my career. I will highlight some of these.

- 2016 Vocational Service Leadership-Awarded by Rotary International
- 2012 Faculty-in-Residence Award-Awarded by Boston University Office of Residence Life
- 2011 Eleanor Clarke Slagle Lectureship-Awarded by the American Occupational Therapy Association
- 2009 Award of Merit-Awarded by the Canadian Association of Occupational Therapists (CAOT)
- 2007 Keeper of the Flame Award-Awarded by National Women's Hall of Fame
- 2006 & 2007 Excellence in Advising-Awarded by Boston University Student Activities
- 2005 The J. William Fulbright Foreign Scholarship-Awarded in the bi-national program of educational exchanges between the United States and Iceland
- 2004 Herbert J. Hall Award-Awarded by the Massachusetts Association for Occupational Therapy in recognition of professional contribution to occupational therapy
- 2003 Award of Merit-Awarded by the American Occupational Therapy Association (AOTA) in recognition of extraordinary leadership in marketing, ergonomics, work, and management
- 2003 Board of Directors-Award Awarded by the American Occupational Therapy Association (AOTA) in recognition of extraordinary service and outstanding advocacy in advancing the interests of occupational therapy among various publics
- 2001 Honorary Doctorate of Humane Letters-Awarded by Bay Path College Longmeadow, Massachusetts for exemplary leadership skills

- 2000 Doctor of Science (honorary)- Awarded by the University of Indianapolis in recognition of outstanding contributions to the field of occupational therapy and for the development and promotion of the field to multiple external audiences
- 1988 Inducted as a Fellow-American Occupational Therapy Association (AOTA)

**Which articles in *Human Factors* would you say were the most influential to you and your research or practice?**

**Children's Posture and Muscle Activity at Different Computer Display Heights and During Paper Information Technology Use** Leon

Straker, Robin Burgess-Limerick, Clare Pollock, Jemma Coleman, Rachel Skoss, and Barbara Maslen; *Human Factors: The Journal of the Human Factors and Ergonomics Society*, February 2008; vol. 50, 1: pp. 49–61.

**Inculcating the Ergonomic Culture in Developing Countries: National Healthy Schoolbag Initiative in Sri Lanka** Kapila Jayaratne; *Human*

*Factors: The Journal of the Human Factors and Ergonomics Society*, December 2012; vol. 54, 6: pp. 908924., first published on September 6, 2012.

**Effects of Carrying a Backpack in an Asymmetrical Manner on the Asymmetries of the Trunk and Parameters Defining Lateral Flexion of the Spine** Justyna Drzał-Grabiec, Sławomir Snela, Maciej Rachwał, Justyna

Podgórska, and Justyna Rykała; *Human Factors: The Journal of the Human Factors and Ergonomics Society*, March 2015; vol. 57, 2: pp. 218226., first published on August 8, 2014.

**Please provide any links to your online articles, essays, blogs, Wikipedia pages, etc., that pertain to your research, publications or practice.**

My blog is: <http://blogs.bu.edu/kjacobs/>.

<http://content.iospress.com/articles/work/wor2374> Vink, P., Bazley, C., and Jacobs, K. (2016). Modeling the Relationship Between The Environment and Human Experiences. *WORK*, 765 – 771.

<http://onlinelibrary.wiley.com/doi/10.1002/oti.1431/full> Doyle, N., Jacobs, K., and Ryan, C. (2016). Faculty mentors' perspectives on e-mentoring post-professional occupational therapy doctoral students. *Occupational Therapy International*.

<http://content.iospress.com/articles/neurorehabilitation/nre1273> Hendricks, D.J., Sampson, E., Rumrill, P., Leopold, A., Elias, E., Jacobs, K., Nardone, A., Scherer, M., and Stauffer, C. (2015). Activities and interim outcomes of a multi-site development project to promote cognitive support technology use and employment success among postsecondary students with traumatic brain injuries. *Neurorehabilitation*, 37 (3), 449–458.

<http://content.iospress.com/articles/neurorehabilitation/nre1274> Nardone, N., Sampson, E., Stauffer, C., Leopold, A., Jacobs, K., Hendricks, D., Elias, E., Chun, H., Rumrill, P. (2015). Project career: A qualitative examination of five college students with traumatic brain injuries. *Neurorehabilitation*, 37 (3), 459–469.

<http://search.proquest.com/openview/f1c0fb93a4c196f9a89945453f8d46fa/1?pq-origsite=gscholar> Jacobs, K., Cason, J., McCullough, A., (2015). The process for the formulations of the international telehealth position statement for occupational therapy. *International Journal of Telerehabilitation*. 7(1): 21–31.

<http://www.tandfonline.com/doi/abs/10.3109/07380577.2015.1006752> Jacobs, K., Doyle, N., Ryan (2015). The Nature, Perception, and Impact of e-mentoring on Post-professional Occupational Therapy Doctoral Students. *Occupational Therapy In Health Care*. 29(2): 201–213, 2015.

<http://hfs.sagepub.com/content/56/4/784.full.pdf+html> Baker, N. & Jacobs, K. (2013). The feasibility and accuracy of using a remote method to assess computer workstations. *Human Factors*.

<http://content.iospress.com/articles/work/wor01603> Baker, N., Livengood, H., Jacobs, K. (2013). Reliability and Concurrent Validity of the Computer Workstation Checklist. *WORK*, 213–221.

### **What advice would you give someone considering HF/E as a profession?**

President John F. Kennedy shared, “As we express our gratitude, we must never forget that the highest appreciation is not to utter words but to live by them.” I believe that gratitude is one of the most powerful emotions that we can practice. Every day I feel grateful and try to take the time to be mindful of this emotion. I try to express my gratitude out loud, not just reminding myself, but sharing it with others. As Ralph Waldo Emerson wrote, “Cultivate the habit of being grateful for every good thing that comes to you, and to give thanks continuously. And because all things have contributed to your advancement, you should include all things in your gratitude.” My advice to someone considering HF/E as a profession is to be grateful to have some many options in a career; and to embrace with enthusiasm and passion the role that you may have in HF/E to reshape how we live, work, and play to make our environment and the world better for all.