

# CURRICULUM VITAE

## JEONG HO (JAY) KIM

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### Work Address

University of Washington  
Ergonomics Laboratory  
Box 354695, Seattle WA 98195  
Phone: 206.543.4544 Fax: 206.616.6240  
e-mail: jhkim01@uw.edu

### Home Address

4747 30<sup>th</sup> Ave NE #B111  
Seattle, WA 98105  
Phone: 608.469.9135

### EDUCATION

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- 2008 - 2012**     **Ph.D in Industrial and Systems Engineering (Expected in Spring 2012)**  
University of Washington – Seattle  
Thesis Advisor: Peter W Johnson, Ph.D  
Thesis: Non-invasive real-time assessment of muscle fatigue during computer use: using mouse button click and keystroke duration.  
Research Emphasis: **Ergonomics on computers including Tablet PCs**
- 2005 - 2007**     **M.S. in Industrial and Systems Engineering**  
University of Wisconsin - Madison  
Focused on Quality Engineering
- 1995 - 2003**     **B.S. in Industrial and Systems Engineering**  
Dankook University, South Korea  
Minor in Economics

### PROFESSIONAL EXPERIENCE

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- 2009 - present**   **ERGONOMICS LAB at the University of Washington – Seattle, WA**  
*Predoctoral Research Associate, project coordinator*
  - Design studies and develop data acquisition methods
  - Lead externally-funded projects
- 2003 - 2004**     **MOLEX KOREA, Quality Management Division – South Korea**  
*Quality Engineer*
  - Designed and developed various statistical quality control methods.
  - Awarded with “**BEST employee of the year (2003)**”
- 1997 - 1999**     **REPUBLIC OF KOREA ARMY – South Korea**  
*Headquarter Sergeant*
  - Served in the department of transportation
  - Awarded with 8000K NO-ACCIDENT Medal

## HONORS AND AWARDS

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<b>2012</b>	GPSS Travel Grant, University of Washington
<b>2011</b>	IEA KU Smith Award finalist ( <b>best student paper</b> ), International Ergonomics Association
<b>2011</b>	Community of Innovators Awards nominee ( <b>best student researcher</b> ), College of Engineering
<b>2011</b>	Graduate student travel award, University of Washington
<b>2009 - present</b>	Predocutorial Research Assistantship, University of Washington
<b>2009</b>	Alpha Pi Mu, the National Industrial Engineering Honor Society
<b>2008 - 2009</b>	Predocutorial Teaching Assistantship, University of Washington
<b>2008</b>	Clairmont L. Egtvedt Fellowship, University of Washington
<b>2003</b>	Employee of the year, Molex Korea
<b>2000 - 2002</b>	Scholarship with Academic distinction, Dankook University

## TEACHING EXPERIENCE

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<b>2008 - 2009</b>	<i>Teaching Assistant</i> , University of Washington - Seattle INDE 315: Probability and Statistics for Engineers, Fall 2008 – Winter 2009 INDE 351: Human Factors in Engineering Design, Spring 2009 <i>Co-instructor</i> , University of Washington - Seattle ENVH 566: Introduction to Ergonomics, Winter 2012
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## BIBLIOGRAPHY

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### Peer Reviewed Papers

1. **Kim, JH**, Johnson PW. (Accepted) Viability of Using Digital Signals from the keyboard to Capture Typing Force Exposures. *Ergonomics*
2. **Kim JH**, Johnson PW. (2012) Can Digital Signals from the Keyboard Capture Force Exposures during Typing? *Work* 4(2012) 2588-2590.

### Peer Reviewed Papers in preparation

1. **Kim JH**, Johnson PW. Physiological variations between keyboard and mouse use. Target Journal - *European Journal of Applied Physiology*.
2. **Kim JH**, Johnson PW. Validation of a Software Program for Measuring Fatigue-Related Changes in Mouse Button Click and Keystroke Durations. Target Journal – *International Journal of Industrial Ergonomics*.
3. **Kim JH**, Aulck L, Johnson PW. Are There Any Differences in Physical Exposures and Typing Performance between Conventional and Virtual Keyboards? Target Journal – *Human Factors*
4. Johnson PW, Komandur S, Crenshaw A, **Kim JH**, Dennerlein J. Relationship between Mouse Button Actuation Forces, Click Duration and Muscle Twitch Contraction and One-half Relaxation Times. Target Journal - *European Journal of Applied Physiology*.
5. **Kim JH**, Aulck L, Thamsuwan O, Johnson PW, The effects of key sizes of touch screen virtual keyboard on productivity, usability, and typing forces. Target Journal – *Human Factors*

### Peer Reviewed Conference Proceedings/Presentations

1. **Kim JH**, Johnson PW. (2011) Validation of software-based measures of keystroke durations with external USB-based logger. 61<sup>st</sup> Annual Industrial Engineering Research Conference, Reno, NV.
2. **Kim JH**, Johnson PW. (2011) Validation of a Software Program for Measuring Fatigue-Related Changes in Keystroke Durations. 33<sup>rd</sup> Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Boston, MA.
3. **Kim JH**, Johnson PW. (accepted) Validation of a Software Program for Measuring Fatigue-Related Changes in Keystroke Durations. Annual US-Korea Conference on Science and Engineering 2011, Park City, UT.
4. **Kim JH**, Johnson PW. (2012) Can Digital Signals from the Keyboard Capture Force Exposures during Typing? 18<sup>th</sup> World Congress on Ergonomics, Recife, Brazil.
5. **Kim JH**, Aulck L, Johnson PW. (accepted) Typing Force and Performance Variability between Conventional and Virtual Keyboards. 62<sup>nd</sup> Annual Industrial Engineering Research Conference, Orlando, FL.
6. **Kim JH**, Aulck L, Johnson PW. (submitted) Are there Differences in Force Exposures and Typing Productivity between touchscreen and conventional keyboard? Human Factors and Ergonomics Society 56<sup>th</sup> Annual Meeting, Boston, MA.
7. **Kim JH**, Aulck L, Johnson PW. (submitted) Are there differences in muscle activity, subjective discomfort, and typing performance between virtual and conventional keyboards? 34<sup>th</sup> Annual International Conference of the Engineering in Medicine and Biology Society, San Diego, CA.

### Other Non-referred Publications/Presentations

1. **Kim JH**, Johnson PW. (2011) Validation of UW/Harvard Computer Interaction Monitoring Software for Measuring Fatigue-Related Changes in Keystroke Durations. 23<sup>rd</sup> Annual Occupational, Environmental, and Public Health Conference, Blain, WA.
2. **Kim JH**, Johnson PW. (2011) Can Digital Signals from the Keyboard Capture Force Exposures during Typing? Northwest Biomechanics Symposium 2011, Vancouver, BC, Canada
3. **Kim JH**, Johnson PW. (2011) Computer Input Devices as a surrogate exposure assessment tool. Korean-American Engineers and Scientists Association Northwest Regional Conference 2011, San Jose, CA.
4. **Kim JH** (2011) Non-invasive Real-time Assessment of Muscle Fatigue during Computer Use, Industrial and Systems Engineering Graduate Seminar: IND E 593, University of Washington, Seattle, WA.

### FUNDED PROJECTS

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<b>2009 – 2011</b>	Evaluation of computer mouse and keyboard as exposure assessment tools. Peter W. Johnson, PhD. (PI), NIOSH (R21). \$275,000, Research Assistant, 50% effort
<b>2011 – present</b>	Ergonomic and human factors analysis of virtual keyboards. Peter W. Johnson, PhD. (PI), Hewlett Packard. Study Coordinator, 25% effort.

**2011 – present** Ergonomic and human factors analysis of low travel keyboards.  
Peter W. Johnson, PhD. (PI), Hewlett Packard. Study Coordinator,  
25% effort.

## **SERVICES**

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Reviewer, Journal, *Applied Ergonomics*  
Reviewer, Journal, *Human Factors*  
Reviewer, Industrial Ergonomics Technical group, 56<sup>th</sup> Human Factors and Ergonomics  
Society Annual Meeting (2012)  
Chair, Ergonomics Track, 62<sup>nd</sup> IIE Annual Applied Solution Conference (2012)  
Officer, Alpha Pi Mu, National Industrial Engineering Honor Society, (2011-2012)

## **AFFILIATIONS**

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Institute of Industrial Engineers  
Human Factors and Ergonomic Society  
Korean-American Scientists and Engineers Association  
Alpha Pi Mu, the National Industrial Engineering Honor Society

## **SKILLS AND QUALIFICATION**

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Strong background on statistics: Multivariate, Bayesian, Bootstrapping, Simulation, etc.  
Programming language: JAVA, LabVIEW, Matlab  
Statistic Software: R, JMP, SPSS, Minitab, STATA  
Fluent in English and Korean