

HUIJU PARK, Ph.D.

Associate Professor of Apparel Design

Fiber Science & Apparel Design,
College of Human Ecology
131 Human Ecology Building,

Cornell University

Ithaca, NY 14853

hp347@cornell.edu

Office: 607-255-0185

<http://huijupark.wix.com/humanperformancelab>

Huiju Park obtained his Ph.D. at Oklahoma State University with an expertise in functional apparel design. Dr. Park has participated in multiple funded multidisciplinary research projects aiming to improve the mobility and thermal comfort of personal protective clothing system including ballistic body armor, CBRN protective clothing, and firefighters' bunker gear over the years. He has focused on **wearable technology**, biomechanic and physiological evaluation of **personal protective clothing system** and **sports apparel** by exploring the advantages of the latest human performance simulation and assessment technologies such as motion capture and thermal manikin systems.

His professional career as an athletic apparel & footwear manager at PUMA Korea, endowed him with broad knowledge of commercially available ergonomic design features and technologies to improve mobility, comfort & athletic performance. He has published **39 peer-reviewed journal papers**, and secured about **\$6 million research funding** as the PI and a Co-PI from various agencies and industry partners including the **Department of Energy, USDA, NASA, Environmental Protection Agency, and Department of Defense**.

His research and creative designs won numerous awards from international conferences and design competitions: *2020 ITAA Mid-Career Excellence Award, 2018 Paper of Distinction Award at ITAA, 2016 Oklahoma State University College of Human Science Rising Star Award, 2015 ITAA (International Textile and Apparel Association) Rising Star Award, Honorable Mention in 2014 P3 Design Award (Environmental Protection Agency), 2012 Oklahoma State University Graduate Research Excellence Award, Paper of Distinction Award at International Textile and Apparel Association (2012), 2010 Phoenix Award for Oklahoma State University – Outstanding Doctoral Student; 2010 ATEXINC Excellent Marketable Design Award at International Textile and Apparel Association, Second Place at American Quilter's Society Fashion Design Competition (2009).*

He has taught **Fashion CAD, 3D Virtual Fashion Design, Functional Clothing, Sportswear and Smart Clothing Design and Programming** at Cornell University.

EDUCATION

- 2011** **Ph. D in Human Sciences – Emphasis on Functional Apparel Design**
 Oklahoma State University, Stillwater, Oklahoma
 Advisor: Dr. Donna Branson
 Dissertation: Impact of Body Armor and Load Carriage on Lower Body Movement
- 2002** **Master of Science in Clothing and Textiles**
 Yonsei University, Seoul, Korea
 Advisor: Dr. Jooheon Lee
 Thesis: An Explorative Research for Possibility of Digital-wear based on Motion-detective Input Technology as Apparel Product and a Suggestion of the Design Prototypes
- 1997** **Bachelor of Science in Clothing and Textiles**
 Yonsei University, Seoul, Korea

PROFESSIONAL EXPERIENCE

- 2017-Present** **Associate Professor**
 Department of Fiber Science and Apparel Design, Cornell University
- 2011-2016** **Assistant Professor**
 Department of Fiber Science and Apparel Design, Cornell University
- 2007-2011** **Research Associate**
 IPART (Institute for Protective Apparel Research & Technology), Oklahoma State University
2007-2011: Research Associate
 - Grant Research Project: Development and Evaluation of Body Armor and Smart Clothing (Funded by Office of Naval Research)**2008 Fall-2010 Spring:** Research Associate
 - Grant Research : Development and Evaluation of Smart Clothing for Firefighters (Funded by OCAST: Oklahoma Center for the Advancement of Science and Technology)

INDUSTRY EXPERIENCE

- 2006-2007** **Footwear Product Line Manager**
 E.LAND Co., Ltd. / Division of PUMA KOREA, Seoul, Korea.
- 2002-2005** **TeamSports Product Line Manager**
 E.LAND Co., Ltd. / Division of PUMA KOREA, Seoul, Korea.
Responsibility: Market Research, Trend Forecasting, Global Sourcing, Domestic Production Control and Profitability Analysis
- 2002** **Assistant Technical Designer**
 G.F. Textile Inc. Seoul, Korea.

39 REFREED JOURNAL PUBLICATIONS

* indicates Cornell graduate and undergraduate student co-authors.

2020

1. Lou, L., Shou, D., **Park, H.**, Zhao, D., Wu, Y., S., Hui, X., Yang, R., Kan, E., and Fan, J. (2020). Thermoelectric Air Conditioning Undergarment for Personal Thermal Management and HVAC Energy Saving. *Energy and Buildings (Impact factor: 4.495)*.
2. *Nemeth, M., **Park, H.**, & Mendle, J. (2020). Collegiate Female Athletes' Body Image and Clothing Behaviors. *Fashion and Textiles*.
3. Beaudette, E., Kan, E., & **Park, H.** (2020, Under Review). Exploration of Wearable Position Sensing based on RFID Technology and Machine Learning. *Clothing and Textile Research Journal (Impact factor: 1.12)*.

2019

4. **Park, H.**, Kakar, R., *Pei J., Tome, J., & Stull, J. (2019). Impact of Size of Fire Boots and Self-Contained Breathing Apparatus on Firefighters' Mobility. *Clothing and Textile Research Journal (Impact factor: 0.897)*. 37(2), 103-118. <https://doi.org/10.1177/0887302X18807753>
5. **Park, H.**, *Pei, J., *Shi, M., *Xu, Q., & Fan, J. (2019), Designing Wearable Computing Device for Improved Comfort and User Acceptance, *Ergonomics*. (Impact factor: 1.818), 62(11), 1474-1484.
6. *Pei, J., **Park, H.**, & Ashdown, S. (2019). Female Breast Shape Classification based on Analysis of CAESAR 3D Body Scan Data, *Textile Research Journal (Impact factor: 1.4)* <https://doi.org/10.1177/0040517517753633>

2018

7. **Park, H.** & Koo, S. (2018). Emerging trends in 3D technology adopted in apparel design research and product development. *Journal of Korean Society of Clothing and Textiles*. 42(1), 195-209.
8. Tian M., **Park, H.**, *Koo, H., *Xu, Q., & Li, J. (2018). Effects of Load Carriage and Work Boots on Lower Limb Kinematics of Industrial Workers, *International Journal of Occupational Safety and Ergonomics*. 24(4), 582-591. (Impact factor: 0.35). DOI: <http://dx.doi.org/10.1080/10803548.2017.1334336>

2017

9. *Pei, J., **Park, H.**, Ashdown, S., Arzu Vuruskan (2017). A Sizing Improvement Methodology Based on Adjustment of Interior Accommodation Rates across Categories within a Size Chart, *International Journal of Clothing Science and Technology*. 29(5), 716-731 (Impact factor: 0.75)
10. *Beaudette, E., & **Park, H.** (2017), Impact of Seam Types on Thermal Comfort of Athletic Bodywear, *Textile Research Journal*. (Impact factor: 1.599).87(9), 1052-1059.
11. Lewis, T. L., **Park, H.**, Netravali, A. N., & Trejo, H. X. (2017). Closing the loop: a scalable zero-waste model for apparel reuse and recycling. *International Journal of Fashion Design, Technology and Education*. 10(3), 353-362.
12. Tian M., **Park, H.**, *Koo, H., *Xu, Q., & Li, J. (2017). Impacts of Work Boots and Load Carriage on the Gait of Oil Rig Workers, *International Journal of Occupational Safety and Ergonomics*. 23(1), 118-126. (Impact factor: 0.35)

2016

13. **Park, H.**, Hwang, S., Lee, J-Y., Fan, J., & Jeong, Y. (2016). Impact of Electrical Heating on Effective Thermal Insulation of a Multi-layered Winter Clothing System for Optimal Heating Efficiency, *International Journal of Clothing Science and Technology*. 28(2), 254-264. (Impact factor: 0.333)
14. Lee, E., & **Park, H.** (2016), 3D Virtual Fit Simulation Technology: Strengths and Areas of Improvement for Increased Industry Adoption, *International Journal of Fashion Design, Technology and Education*. 1-12. ISSN 1754-3266.
15. *Donelan, C., & **Park, H.** (2016). Evaluation of Cooling Garments for Improved Design and Thermal Comfort Thermal Manikin Tests, *AATCC Research Journal*. 3(5), 1-11.

DOI: 10.14504/ajr.3.5.1

16. *Alicia Potuck, A., *Meyers, S., *Levitt, A., *Beaudette, E., Xiao, H., Chu, C., & **Park, H.** (2016), Development of Thermochromic Pigment-based Sportswear for Detection of Physical Exhaustion, *Fashion Practice*. 8(2), 279-295.

2015

17. **Park, H.**, Kim, S., *Morris, K., *Moukperian, M., Moon, Y., & Stull, J. (2015). Effect of Firefighters' Personal Protective Equipment on Foot Function and Gait, *Applied Ergonomics*. (Impact factor: 1.332). 48, 42-48.
18. **Park, H.**, *Trejo, H., *Miles, M., *Bauer, A., Kim, S., & Stull, J. (2015). Impact of Firefighters' Turnout Gear on Lower Body Range of Motion, *International Journal of Clothing Science and Technology*. (Impact factor: 0.333). 27(3). 315-334.
19. Lee, J-Y, Park, J., **Park, H.**, Coca, A., Kim, J-H., Taylor, N.A.S., Son, S-Y., & Tochihara, Y. (2015), What Do Firefighters Desire from the Next Generation of Personal Protective Equipment? Outcomes from an International Survey, *Industrial Health*. 53(5), 434-444. (Impact factor: 1.045)
20. Kim, S., & **Park, H.** (2015). Impact of Firefighters' Protective Clothing and Equipment on Upper Body Range of Motion. *Fashion and Textile Research Journal*. 17 (4). 635-645.
21. Lee, H. Y. & **Park, H.** (2015). Comparison of Thermal-moisture Properties in Combination of 3D Spacer and Polyurethane Foam for Mold Brassier Cups. *Korean Journal of Human Ecology*. 24(2). 285-295.

2014

22. **Park, H.**, Branson, D., Kim, S., Warren, A., Jacobson, B., Petrova, A., Peksoz, S., & Kamenidis, P. (2014), Effect of Armor and Carrying Load on Body Balance and Leg Muscle Function, *Gait and Postures* (Impact factor: 1.969). 39(1), 430-435.
23. **Park, H.**, Park, J., Lin S-H., & Boorady, L. (2014). Assessment of Firefighters' Needs for Personal Protective Equipment, *Fashion & Textiles*, 1(1), 1-13.
24. **Park, H.**, Kim, S., *Wu Y., & *Allen, N. (2014), Beyond Protection: Technology and Design Moving Toward Human Factors of Fire Gear, *AATCC Review*, (Impact factor: 0.254), 14(5), 40-45.
25. **Park, H.**, & Hahn, K. (2014), Perception of Firefighters' Turnout Ensemble and Level of Satisfaction by Body Movement, *International Journal of Fashion Design, Technology and Education*. 7(2), 85-95.

2013

26. **Park, H.**, Branson, D., Petrova, A., Peksoz, S., Jacobson, B., Warren, A., Goad, C., & Kamenidis, P. (2013), Impact of Ballistic Body Armor and Load Carriage on Walking Patterns and Perceived Comfort, *Ergonomics* (Impact factor: 1.674). 56(7), 1167-1179.
27. Han, H., **Park, H.**, & Jeon, E. (2013), User Acceptance of a Light-Emitting Diode Vest for Police, *Fashion and Textiles Research Journal*, 15(5), 834-840.
28. **Park, H.**, Branson, D., Petrova, A., Peksoz, S., Warren, A., Jacobson, B., Goad, C., & Kamenidis, P. (2013), Effects of Body Armor and Load Carriage on Lower Limb Joint Movement, *Journal of Human Performance in Extreme Environments*. 10(2). DOI: <http://dx.doi.org/10.7771/2327-2937.1049>

2012

29. **Park, H.**, An, S. K., Peksoz, S., Cao, H., & Branson, D. (2012). Core Body Temperature Prediction through Monitoring of Microclimate under Body Armor Using Thermal Manikin, *AATCC Review*. 12(2), 69-72.
30. **Park, H.** (2012), Toward Finding an Optimal Balance between Function and Comfort in the Most Intimate Human Environment, *Journal of Ergonomics*, 2(4) 1:e114. DOI:10.4172/2165-7556.1000e114

Citations	595	2	3	16	40	51	56	75	99	99	115
h-index	11			3	4	5	6	8	9	10	11
i10-index	12							6	8	10	12

REFERRED CONFERENCE PROCEEDINGS

- Jo, J., & **Park, H.** (2020). Fit of Fire Boots: CT (Computerized Tomography) Scan and 3D Simulation. 2020 Annual Conference of ITAA (International Textile and Apparel Association), Denver, CO. (Accepted, Oral presentation)
- Jo, J., & **Park, H.** (2020). Head Orientation Monitoring with Wearable RFID for Detection of Lateral Glance of Children with Autism Spectrum Disorder. 2020 Annual Conference of ITAA (International Textile and Apparel Association), Denver, CO. (Accepted, Oral presentation)
- Du Puis, J. L., Bayne, R., & **Park, H.** (2020). Developing a Wearable Technology Compression Shirt Prototype: Interdisciplinary Collaboration between Apparel Design and Mechanical Engineering. 2020 Annual Conference of ITAA (International Textile and Apparel Association), Denver, CO. (Accepted, Oral presentation)
- Li, M., **Park, H.**, & Ruina, A. (2019). Design and Evaluation of New Personal Floating Device for Rowers. 2019 Annual Conference of ITAA (International Textile and Apparel Association), Las Vegas, NV.
- Guria, S., & **Park, H.** (2019). Design and evaluation of coverall for pesticide applicators using an ergonomic framework. 2019 Annual Conference of ITAA (International Textile and Apparel Association), Las Vegas, NV.
- Park, H.**, Kakar, R. S., Pei, J., Lee, H., Tome, J., and Stull, J. (2018). Different Impacts of Boot Height and Air Tanks on the Mobility of Tall and Short Firefighters, *2018 Annual Conference of ITAA (International Textile and Apparel Association)*, Cleveland, OH.
- Shi, M., Jia, M., and **Park, H.** (2018). Using Artificial Intelligence to Analyze Fashion Images, 2018 Annual Conference of ITAA (International Textile and Apparel Association), Cleveland, OH.
- Sokolowski, S., Griffin, L., Carufel, R., Kim, N., **Park, H.**, Shi, M., Morris, K., Aflatoony, L., McKinney, E., Leathers, K., Wu, Y., Park, J., Conroy, B., Carvalho, M. (2018). A User-Centered Approach for New PPE Development: iWomen Case Study, 2018 Annual Conference of ITAA (International Textile and Apparel Association), Cleveland, OH.
- Guria, S. & **Park, H.** (2018). Assessing the Needs of Greenhouse and Farm Workers Engaged in Pesticide Application for Improved Personal Protective Equipment (PPE) Design. AATCC 2018 International Conference, Greenville, SC.
- Jia, M., Tome, J. M., Shi, M., **Park, H.**, & Kakar, R. S. (2018). Dynamic Knee Orthosis System for Females with Anterior Cruciate Ligament Injuries. American College of Sports Medicine 2018 Annual Meeting, Minneapolis, MN.
- Jia, M., Shi, M., Kakar, R. S., **Park, H.**, & Fan, J. (2018). Design of Smart Leggings and Motion Control Device for Effective Recovery from Knee Ligament Injuries. AATCC 2018 International Conference, Greenville, SC.
- Guria, S. & **Park, H.** (2017). Assessment of greenhouse pesticide applicators' needs for personal protective gear. 2017 Annual Conference of ITAA (International Textile and Apparel Association). Petersburg, Florida.
- Doty, K., Li, M., Black, E., Chandler, A., Guria, S., **Park, H.**, & Green, D. (2017). Preliminary Investigation of Bikram Yoga Apparel for Improved Mobility and Comfort. 2017 Annual Conference of ITAA (International Textile and Apparel Association). Petersburg, Florida.
- Pei, J., **Park, H.**, & Ashdown, S. (2016) Female Breast Shape Classification Based on Analysis of CAESAR data, *2016 Fiber Society Meeting*, Cornell University, Ithaca, NY
- Lee, H., Beaudette, E., & **Park, H.** (2016). Development of New Hockey Gear for Enhanced Neck Laceration Protection, *2016 Fiber Society Meeting*, Cornell University,

Ithaca, NY

- Park, H.**, Hwang, S-K., Lee, J-Y., Fan, J., and Jeong, Y. (2016). Effectiveness of Electrical Heating for Improved Thermal Insulation of a Multi-layered Winter Clothing System, *2016 Annual Conference of ITAA (International Textile and Apparel Association)*, Vancouver, British Columbia.
- Tian, M., **Park, H.**, and Li, J. (2016). Impact of Wearing Work Boots and Carrying Load on Lower-Limb Kinematic and Safety, *2016 Annual Conference of ITAA (International Textile and Apparel Association)*, Vancouver, British Columbia.
- Park, H.**, Pei, J., Shi, M., Xu, Q., & Fan, J. (2016), Acceptable Physical Attributes of Wearable Computing Device based on Human Factors, *2016 International Conference on Applied Human Factors and Ergonomics*, Orlando, FL.
- Kakar, RS., **Park, H.**, Lee, H., & Tome, J. (2016), Effect of Boot Height on Walking and Duckwalking Mechanics in Firefighters. 2016 40th Annual Meeting of the American Society of Biomechanics, Raleigh, NC.
- Beaudette, E., & **Park, H.** (2015), Thermal Comfort Evaluation of Seam Types in Athletic Bodywear, *2015 Annual Conference of ITAA (International Textile and Apparel Association)*, Santa Fe, NM.
- Park, H.**, Kim, S., Morris, K., Moukperian, M., Moon, Y., & Stull, J. (2014), Impact of Firefighters' Personal Protective Equipment on Gait Instability and Injury Risk, *2014 Annual Conference of ITAA (International Textile and Apparel Association)*, Charlotte, NC.
- Park, H.**, & Hahn, K. (2014), Perception of Firefighters' Turnout Ensemble and Level of Satisfaction by Body Movement, *2014 Annual Conference of ITAA (International Textile and Apparel Association)*, Charlotte, NC.
- Lee, E., & **Park, H.** (2014), Filling the Gap between Education and the Field in Technical Design: I Wish I Had Learned This Before, *2014 Annual Conference of ITAA (International Textile and Apparel Association)*, Charlotte, NC.
- Beaudette, E., Sanchez-Botero, L., Ashdown, S., **Park, H.**, & Hinestroza, J. (2014). Innovative Explorations in Apparel Design to Create Engineered Outfits with Lighting Technologies, *2014 International Symposium of Wearable Computer*, San Francisco, CA.
- Lee, J., **Park, H.**, Hwang, S., Jang, Y., Kim, S., Fan, J., & Jeong, Y. (2013). Influences of Air Temperature and Thermal Insulation of Clothing Ensemble on Thermal Insulation added by Active Heating Unit, *The Annual Conference of Korean Society of Living Environmental System*, Seoul, Korea.
- Park, H.**, Branson, D., Kamenidis, P., Warren, A., Jacobson, B., Peksoz, S., & Petrova, A. (2012). Exploration of Simultaneous Mobility Assessment for Protective Clothing, *5th European Conference on Protective Clothing and NOKOBETEF 10*, Valencia, Spain.
- Park, H.**, Branson, D., Petrova, A., Peksoz, S., Jacobson, B., Warren, A., Goad, C., & Kamenidis, P. (2012). Effects of Body Armor and Load Carriage on Lower Limb Joint Movement, *2012 Annual Conference of ITAA (International Textile and Apparel Association)*, Honolulu, Hawaii.
- Choi, K., **Park, H.**, Chung, E. & Peksoz, S. (2011). Scientometric Analysis of Research in Smart Clothing: State of the Art and Future Direction, *2011 Human Computer Interaction International Conference*, Orlando, FL.
- Park, H.**, Nolli, G., Branson, D., Peksoz, S., & Petrova, A. (2010). Mobility Evaluation of Lower Body Movement using Motion Capture System while Wearing Ballistic Body Armor, *2010 Annual Conference of ITAA (International Textile and Apparel Association)*, Montreal, Quebec, Canada.
- Park, H.**, & Cho, H. (2010). Factors Influencing Commitment to Social Networks: Implications for the Apparel Business, *2010 Annual Conference of ITAA (International Textile and Apparel Association)*, Montreal, Quebec, Canada.
- Peksoz, S., Cao, H., **Park, H.**, An, S. K., & Branson, D. (2010), Core Temperature Prediction Modelling using a Sweating Manikin, *The 8th International Meeting for Manikins and Modeling*, Victoria, BC, Canada.
- Branson, D., Kamenidis, P., Peksoz, S., **Park, H.**, An, S. K., & Starr, C. (2010). Thermal Manikin Evaluation of Prototype Arm and Shoulder Armor, *The 8th International Meeting for*

- Manikins and Modeling*, Victoria, BC, Canada.
- Park, H.**, An, S. K., Peksoz, S., Cao, H., & Branson, D., (2010). Core Body Temperature Prediction through Monitoring of Microclimate under Body Armor Using Thermal Manikin, *2010 Annual Conference of American Association of Textile Chemists and Colorists*, Atlanta, GA.
- Park, H.**, Choi, K., & Branson, D. (2009), Physical Properties of Military Textiles Affecting Thermal Response to Solar Radiation, *2009 Annual Conference of ITAA (International Textile and Apparel Association)*, Bellevue, WA.
- An, S. K., **Park, H.**, Cao, H., Peksoz, S., & Branson, D. (2009), Development of Estimation Model to Predict Firefighter's Core Temperature from Microclimate Data, *2009 Annual Conference of ITAA (International Textile and Apparel Association)*, Bellevue, WA.
- Peksoz, S., Starr, C., Choi, K., Kamenidis, P., **Park, H.**, & Branson, D. (2009), *Evaluation of Prototype Personal Cooling Interfaced with a Liquid Cooled Garment under Hazmat Suits*, *2009 Annual Conference of ITAA (International Textile and Apparel Association)*, Bellevue, WA.
- Peksoz, S., **Park, H.**, An, S. K., & Cao, H. (2009), Smart Clothing for Firefighter Protection, *Intelligent Textiles and Mass Customization International Conference*, Casablanca, Morocco.
- Park, H.**, Choi, K., & Branson, D. (2009), Effect of Heat Reflective Textile for Thermal Protective Smart Apparel System against Solar Radiation, *2009 Human Computer Interaction International Conference*, San Diego, CA.
- Park, H.** (2009), Thermal Effects of Heat Reflective Fabric for Military Application, *2009 Annual Conference of Oklahoma Association of Family and Consumer Science*, Stillwater, OK.
- Cao, H., An, S. K., **Park, H.**, Xu, B., Li, X., & Branson, D. (2008), The Effect of Fabric Covering on Sensor's Humidity Measurement, *2008 Annual Conference of ITAA (International Textile and Apparel Association)*, Schaumburg, IL.

INVITED PRESENTATIONS

- Park, H.** (2020), Innovation in Design of Protective Clothing, Oklahoma State University. (November 15, 2020)
- Park, H.** (2019), Applications of Emerging Technologies in Design of Protective Clothing, Illinois State University. (April 8, 2019)
- Park, H.** (2018), Engineering the Most Intimate Human Interface, University of Georgia, Athens, GA, (October 3, 2018)
- Park, H.** (2015), Ergonomic Approach toward Improving Firefighters' Mobility and Safety, International Symposium of Firefighter Heat Strain, Seoul National University, Seoul, Korea (April 8, 2015)
- Park, H.** (2015), Advances in Performance Apparel, Cornell Institute for Fashion and Fiber Innovation Symposium, Cornell University, Ithaca, NY (May 18, 2015)
- Park, H.** (2013), Technology-driven Design Approach in Sportswear and Protective Clothing, Global Future Conference, Manchester Metropolitan University, Manchester, UK (February 12, 2013)
- Park, H.** (2013), Present and Future of Protective Clothing Research, 2013 Special Seminar for Research Center for Textiles and Fashion, Yonsei University, Seoul, Korea, (November 26, 2013)
- Park, H.** (2013), Wearable Technologies for Smart Health Care System, 2013 Special Seminar for Department of Bio-mechatronics, Sungkyunkwan University, Seoul, Korea, (November 27, 2013)
- Park, H.** (2012), Physiological and Biomechanical Assessment of Protective Clothing Systems, Annual Conference of Korean Society of Clothing and Textiles, Seoul, Korea. (May 16, 2012)

GRANTS (58 submitted, 21 funded, 3 under review, 34 not funded)

As the PI and a Co-PI, I have secured **\$6 million research funding** for various projects since my appointment at Cornell University in 2011.

Sources of funding include the Department of Energy, NASA, USDA, Environmental Protection Agency, the United States Agency for International Development, and various fashion companies.

[21 Proposals Funded]

** indicates Active Projects.

** Development of Facemasks for Children for Improved Protection and Non-contaminated Donning/Doffing

PIs: Park, H. & Baytar, F.
 Source of Funds: **Cornell Atkinson Center**
 Amount Funded: **\$10,000**
 Period : July 2020 – December 2020

** Stretchable Optical Lightguides for Sensing Deformation During Parachute Deployment

PIs: Shepherd, R. & Park, H.
 Source of Funds: **NASA**
 Amount Funded: **\$10,000** (Sub-award to Park: \$10,000. The entire funding has been transferred to Park with the PI's agreement)
 Period : November 2020 – September 2021

** Evaluation of Civilian Face Masks via Wear Trials

PIs: Kozen, F., Phoenix, K., & Park, H.
 Source of Funds: **Cornell Atkinson Center**
 Amount Funded: **\$6,488**
 Period : July 2020 – December 2020

** Indoor Occupant Counting and Co2 Monitoring Based on RF Backscattering

PIs: Kan, E., Park, H., Hysell, D., Zadeh, R., Mukhopadhyay, J.
 Source of Funds: **Department of Energy**
 Amount Requested: **\$1,500,000 (Sub-award to Park: \$278,491)**
 Period : April 2018 – March 2021

** Non-Encapsulating NFPA 1994 Class 1 Protective Ensemble

PIs: WL Gore, Lion Apparel, Jeffrey Stull. & Park, H. (Sub-contractor)
 Source of Funds: **Combating Terrorism Technical Support Office**
 Amount Requested: **Sub-award to Park at Cornell: \$116,245**
 Period : July 2018 – September 2019

** Anthropometric and Biomechanical Study for Improved Size and Fit of Protective Gear for Farmers and Firefighters

PIs: Park, H.
 Source of Funds: **National Institute of Food and Agriculture, USDA**
 Amount Requested: **\$87,090 (Direct cost only)**
 Period : October 2017 – September 2020

** New College Resources for Data Science and Programming Course Development

PIs: Park, H.
 Source of Funds: **College of Human Ecology, Cornell University**
 Amount Requested: **\$145,250 (Direct cost only)**
 Period : October 2019 – September 2022

Optic Lace for Parachute

PIs: Shepherd, R. & Park, H.

Source of Funds: **NASA**

Amount Funded: **\$52,000** (Sub-award to Park: \$52,000. The entire funding has been transferred to Park with the PI's agreement)

Period : December 2019 – September 2020

Thermoregulatory Clothing System for Building Energy Saving

PIs: Fan, J., Park, H., Kan, E., Yang, R., & Lewis, T.

Source of Funds: **Department of Energy**

Amount Funded: **\$2,996,800 (Sub-award to Park: \$450,405)**

Period : March 2015 – August 2018

Impact of Golf Shoes on Turf Damage

PIs: Park, H.

Source of Funds: **Footjoy Inc.**

Amount Requested: **\$5,000 (Direct cost only)**

Period : July 2017 – September 2018

New Pesticide Applicators Protective Gear for Improved Thermal Comfort and Mobility

PIs: Park, H.

Source of Funds: **National Institute of Food and Agriculture, USDA**

Amount Requested: **\$89,314 (Direct cost only)**

Period : October 2016 – September 2019

Biomechanic and Anthropometric Assessment on Impact of Firefighters Personal Protective Equipment on Mobility and Body Balance

PIs: Park, H.

Source of Funds: **National Institute of Food and Agriculture, USDA**

Amount Funded: **\$95,500 (Direct cost only)**

Period : October, 2012 – September, 2017

New Clothing System for Improved Heat Stress Relief, Full Body, Liquid Integrity, and Ease of Donning

PIs: Jeffrey Stull., Kappler, Inc., & Park, H. (Sub-contractor)

Source of Funds: **United States Agency for International Development**

Amount Requested: **\$650,000 (Sub-award to Cornell: \$55,289)**

Period : June 2015 – March 2016

P3 Design Award: Proposed Process for Management of Textile Waste From Redesigned Secondhand Clothing Production in Haiti (Phase I)

PIs: Lewis, T., Park, H., & Netravali, A

Source of Funds: **Environmental Protection Agency**

Amount Funded: **\$11,922**

Period : October, 2012 – September, 2013

Low Cost, Lightweight, Multi-Functional First Responder Biological Protective Ensemble

PIs: Jeffrey Stull, & Park, H. (Sub-contractor)

Source of Funds: **Department of Defense**

Amount Requested: **Sub-award to Cornell: \$84,210**

Period : January 2016 – June 2017

Development of Cut Resistant Protective Hockey Shirt

PIs: **Park, H.**
Source of Funds: **Empire State Development's Division of Science, Technology and Innovation (NYSTAR) through CCMR (Center for Cornell Material Research) Jumpstart Program**
Amount Funded: **\$15,000**
Period : February, 2015 – June, 2015

Investigation of Upper Body Classification for Shaping Wear

PIs: **Park, H.** & Ashdown S.
Source of Funds: **Hanes Group through Cornell Institute for Fashion and Fiber Innovation**
Amount Funded: **\$ 95,000**
Period : September, 2015 – May, 2016

Investigation of Active Sportswear Sizing System

PIs: **Park, H.** & Ashdown S.
Source of Funds: **Winds Group through Cornell Institute for Fashion and Fiber Innovation**
Amount Funded: **\$1,800**
Period : November, 2014 – February, 2015

Active Youth; Activewear; Active Learning

PIs: Coffman, C & **Park, H.**
Source of Funds: **New York State 4H Foundation**
Amount Funded: **\$7,808**
Period : January, 2013 – December, 2013

Engage Youth in Stem Learning and Resource Development Through Innovation in Activewear

PIs: Coffman, C & **Park, H.**
Source of Funds: **College of Human Ecology and Cornell Cooperative Extension Intern Program**
Amount Funded: **\$4,000**
Period : June, 2013 – August, 2013

Migrating for New Habitat

PIs: **Park, H.**, Morris, K., Flint, R., Jeong, Y., and Ashdown, S.
Source of Funds: **Cornell Council for Art Grant**
Amount Funded: **\$2,500**
Period : October, 2011 – September, 2012

[3 Proposals Submitted, Currently Under Review]

In-Situ Strain Mapping of F-111 Fabrics for Measuring Parachute Dynamics

PIs: Organic Robotics Corp. & **Park, H.**
Source of Funds: **Department of Defense**
Amount Funded: **\$645,000 (Sub-award to Park: \$284,102)**
Period : February, 2021 – August, 2021

Ubiquitous Monitoring of Warfighters' Mind-Body State using Wearable Light Lace Photonic Sensors

PIs: Organic Robotics Corp. & **Park, H.**
Source of Funds: **Department of Defense**
Amount Funded: **\$166,497**
Period : February, 2021 – August, 2021

Developing a Capstone Course for Human-Centered Design, Digital Capability, Functional Materials and Responsible Supply

PIs: Frey, M., Lewis, T & Park, H.
Source of Funds: **The Proctor & Gamble Company (P&G)**
Amount Funded: **\$17,500**
Period : July, 2021 – June, 2022

[34 Proposals Submitted, Not Funded]

Wearable Fiber Optic Performance Monitor

PIs: Organic Robotics Corp. & Park, H.
Source of Funds: **Department of Defense STTR**
Amount Funded: \$49,995
Period : February, 2021 – May, 2021

Development of Biological Protective Clothing for Infection-Free Doffing and Rapid Body-Cooling

PIs: Park, H.
Source of Funds: **Fast Grants Org.** <https://fastgrants.org/?subscribed=true>
Amount Funded: **\$511,603**
Period : July, 2020 – December, 2020

Transient Etiological Agent Mitigation Through Enhanced Fabric Layered Over Neutralizing Biomes (TEAM TEFLON Biomes).

Cornell team was a subcontract from the University of Minnesota,
PI: Michael Smanski (12 co-PIS cannot disclose per DARPA rules)
\$ 34.2 Million (total budget).
Budget of Cornell Team: \$4,068,638
Huiju Park is one of the Co-PIS in the Cornell Team.
Project period: July 2020 – June 2025

Chemical and Biological Shield

Cornell team was a subcontract of Protect
The Force, LLC, PI: Francisco Martinez (4 co-PIS cannot disclose per DARPA rules),
\$ 25.3 Million (total budget).
Budget of Cornell Team: \$7,266,303
Huiju Park is one of the Co-PIS in the Cornell Team.
Project period: July 2020 – June 2025

Developing better-fitting face masks based on face anthropometry and generative design to improve protection

PIs: Baytar, F., Kalantari, S., Phoenix, K., & Park, H.
Source of Funds: **Cornell Atkinson Center**
Amount Funded: **\$10,000**
Period : July, 2020 – December, 2020

User-Centered Systems of Ergonomic Performance & Compatibility for Firefighter Turnout Gear

PIs: Griffin, L., Park, H., & Sokolowski, S.
Source of Funds: Assistance to Firefighter Grant Program, Federal Emergency Management Agency
Amount Requested: \$1,499,577
Period : July 2018 – June 2021

Egocentric Posture Acquisition and Motion Tracking by RFID Backscattering

PIs: Kan, E., & Park, H.
Source of Funds: **SONY Inc.**
Amount Requested: **\$150,000**
Period : January 2018 – December 2018

Intelligent Bedrooms by Noninvasive Sleep and Activity Monitoring

PIs: Kan, E., Park, H., Krieger, A., & Zadeh, R.
Source of Funds: **National Science Foundation**
Amount Requested: **\$1,399,444**
Period : August 2017 – July 2020

Small-Now: Scaleable Manufacturing of Flexible Nanophotonics for Wearable Applications

PIs: Erickson, D., Shepherd, R. & Park, H.
Source of Funds: **National Science Foundation**
Amount Requested: **\$1,500,000**
Period : July 2016 – June 2020

Battery-Free Smart Garments for Smart Homes and Buildings

PIs: Kan, E., Fan J., & Park, H.
Source of Funds: **Atkins Center for a Sustainable Future**
Amount Requested: **\$140,985**
Period : July 2016 – June 2018

Quantification of Foot Alignment for Diagnosis of Dynamic Foot Function

PIs: Park, H.
Source of Funds: **National Science Foundation CAREER**
Amount Requested: **\$498,889**
Period : July, 2017 – June, 2022

Minimizing Circadian Sleep Disruption and Reducing Pain in Hospitalized Older Adults: PRIME: an Integrative Evaluation and Monitoring System

PIs: Rana, Z., Kan, E., & Park, H.
Source of Funds: **Cornell Discovery and Innovation Research Seed Program**
Amount Requested: **\$250,000**
Period : May 2016 – April 2018

Hydraulically Actuated Soft Exosuit for Assisted Undersea Salvage and Rescue

PIs: Robert Shepherd (PI) & Park, H. (Co-PI)
Source of Funds: **Office of Naval Research**
Amount Requested: **\$510,000 (Sub-award to Park, H.: \$71,011)**
Period : June 2016 – May 2019

Wearable Activity Surveillance System by Harmonic Radar for First Responders

PIs: Park, H. & Kan, E.
Source of Funds: **Intel Inc. (Invitation only proposal)**
Amount Requested: **\$320,000**
Period : January 2016 – December 2017

Smart Firegear with Wireless Sensor and Id

PIs: Park, H. & Kan, E.
Source of Funds: **Intel Inc. (Invitation only proposal)**
Amount Requested: **\$340,000**

Period : January 2016 – December 2017

Standardized Test Method for Cooling System Assessment Based on Key Performance Indices

PIs: Jeffrey Stull, Park, H. & Fan, J.

Source of Funds: **Department of Homeland Security**

Amount Requested: **\$840,000 (Sub-award to Cornell: \$650,000)**

Period : January 2016 – December 2017

Context-Intelligent Wearable Activity Surveillance System by RF Backscattering

PIs: Kan, E., Park, H., & Jeffrey Stull,

Source of Funds: **Department of Homeland Security**

Amount Requested: **\$480,000**

Period : January 2016 – December 2017

Human Kinematic Tracking by RF Backscattering with Kinesiology Learning

PIs: Kan, E & Park, H.

Source of Funds: **National Science Foundation**

Amount Funded: **\$976,767**

Period : May 2015 – April 2019

Indoor Tagless RF Locating for Patient Monitoring

PIs: Kan, E & Park, H.

Source of Funds: **National Science Foundation**

Amount Funded: **\$473,460**

Period : May 2015 – April 2017

Smart Thermoregulatory Clothing for Energy Saving for Performance

PIs: Fan, J., Park, H. & Kan, E

Source of Funds: **Atkinson Center for a Sustainable Future Academic Venture Fund**

Amount Funded: **\$120,000**

Period : July, 2014 – June, 2016

Development of Contamination and Particle Resistance Firefighting Protective Ensemble

PIs: International Association of Firefighters, Jeffrey Stull & Park, H.

Source of Funds: **Department of Homeland Security**

Amount Requested: **\$939,886 (Cornell portion: \$142,667)**

Period : May 2015 – October 2016

Quantification of Foot Alignment for Diagnosis of Dynamic Foot Function

PIs: Park, H.

Source of Funds: **National Science Foundation CAREER**

Amount Requested: **\$500,000**

Period : July, 2015 – June, 2020

P3 Design Award: Proposed Process for Management of Textile Waste from Redesigned Secondhand Clothing Production in Haiti (Phase Ii)

PIs: Lewis, T., Park, H., & Netravali, A

Source of Funds: **Environmental Protection Agency**

Amount Funded: **\$57,984 (Direct cost only)**

Period : September, 2014 – August, 2016

Enhancing Safety of Care-Takers Involved in Education of Children with Developmental Disabilities and Autism

PIs: Park, H., & Netravali, A

Source of Funds: **Cornell Institute for Social Science**
Amount Funded: **\$12,000 (Direct cost only)**
Period : January, 2015 – December, 2015

Functional, Fashionable and Comfortable Fibertronics

PIs: Kan, E., Fan, J., & **Park, H.**
Source of Funds: **Cornell Center for Material Research Seed Fund**
Amount Funded: **\$20,000**
Period : May, 2014 – April, 2015

Quantification of Foot Alignment for Diagnosis of Dynamic Foot Function

PIs: **Park, H.**
Source of Funds: **National Science Foundation CAREER**
Amount Requested: **\$467,640**
Period : July, 2014 – June, 2019

Biomechanic Assessment of Impact of Body Armor and Load Carriage on Warfighters' Mobility

PIs: **Park, H.**, Ashdown, S., & Feathers, D.
Source of Funds: **Natick Soldier Research, Development and Engineering Center**
Amount Requested: **\$919,985**
Period : September 1, 2011 - August 30, 2012

Monitoring of Dismounted Warfighters' Military Task Performance and Physiological Reactions to Body Armor and Load Carriage

PIs: **Park, H.**
Source of Funds: **DARPA (Defense Advanced Research Projects Agency) Young Faculty Award**
Amount Requested: **\$270,179**
Period : September 1, 2012 - August 30, 2014

Development of a Prototype of a Wearable Fall-Detection and Alarm System for The Elderly

PIs: **Park, H.**, Hosseinzadegan, H and Lal, A.
Source of Funds: **Cornell Institute for Translational Research on Pain in Later Life**
Amount Requested: **\$20,000**
Period : June, 2013 – May, 2014

CB Protective Sock/Liner System Based on Modification of Existing Field-Demonstrate Product

PIs: Cole Williams, Jorge Trino Cabadas, Amy Williams, Jeffrey Stull & **Park, H.**
Source of Funds: **DOD (Department of Defense) Technical Support Working Group**
Amount Requested: **\$1,328,642**
Period : September 1, 2013 – March 31, 2015

Development of Close-Fitting Firefighters' Boots to Improve Mobility

PIs: **Park, H.** & Ashdown, S.
Source of Funds: **Honeywell First Responders Inc.**
Amount Requested: **\$291,249**
Period : September 1, 2013 - August 30, 2016

Design Suggestions for Firefighters' Air Bottle and Harness System for Improved Mobility and Comfort

PIs: **Park, H.**
Source of Funds: **Honeywell First Responders Inc.**
Amount Requested: **\$194,750**
Period : September 1, 2013 - August 30, 2015

3D Fit Analysis of Firefighters' Boots to Improve Mobility and Comfort

PIs: **Park, H.**
 Source of Funds: **Honeywell First Responders Inc.**
 Amount Requested: **\$20,754**
 Period : June, 2013 – September, 2013

Innovative Sportswear Development based on Collaborative Research and Development

PIs: **Park, H.**
 Source of Funds: **MAS Holdings Inc.**
 Amount Requested: **\$132,384**
 Period : September 1, 2011 - August 30, 2012

5 PATENTS

- 2018 (*US patent: Approved*) "Adjustable shoe and method for adjusting a shoe" by Shi, M., **Park, H.**, Stager, J., Tapan, T., Liu, T., and Beach, C. US Patent App. 15/566,442
- 2015 (*Non-provisional patent: Approved*) "Tree-like Tube Networks in Garment" by Fan, J., Shou, D., and **Park, H.** Docket number 7264
- 2015 (*Provisional patent: Pending*) "Thermochromic Pigment based Apparel" by Potuck, A., Meyers, S., Levitt, A., Beaudette, E., Xiao, H., Chu, C.C., & **Park, H.**
- 2014 (*Non-provisional patent: Approved*) "Flexible Wearable Devices Having Embedded Actuators Providing Motion Stimulations" by Lal, A., **Park, H.**, Hosseinzadegan, H., Pandey, M., Gaeta, M., Beaudette, E., and Maida, M. EED ID: 16728289 / Application number: 61871866 / Docket number: 078554-8040.US00 / Registration number: 43,312
- 2014 (*Non-provisional patent: Approved*) "Temperature-regulating Garment" invented by Fan, J., **Park, H.**, and Yuenshing Wu. US Patent App. 15/127,073

DESIGN SCHOLARSHIP (12 JURIED EXHIBITIONS)

- Park, H.** (2010), The Dream of Dandelion, *The Art of Applied Design International Competition*, Oklahoma State University, Stillwater, OK.
- Park, H.** (2010), Female Mystique, *Fiber Works 2010 Design Competition*, Oklahoma City, OK.
- Park, H.** (2010), The Waltz of Spring, *Fiber Works 2010 Design Competition*, Oklahoma City, OK.
- Park, H.** (2010), Female Mystique, *Winners' Exhibition for The 24th Annual American Quilter's Society & Hobbs Bonded Fibers Fashion Show and Competition*, Paducah, KY.
- Park, H.** (2009), Magma, *2009 Annual Conference and Fiber Art Design Competition of International Textile and Apparel Association*, Bellevue, WA.
- Park, H.** (2009), Female Mystique, *2009 Annual Conference and Fiber Art Design Competition of International Textile and Apparel Association*, Bellevue, WA.
- Park, H.** (2009), Waterfall, *2009 Annual Conference and Fiber Art Design Competition of International Textile and Apparel Association*, Bellevue, WA.
- Park, H.** (2009), Female Mystique, *The 23rd Annual American Quilter's Society & Hobbs Bonded Fibers Fashion Show and Competition*, Paducah, KY.
- Park, H.** (2009), Female Mystique, *The National Little Black Dress Competition*, Kansas State University, Manhattan, KS.
- Park, H.** (2008), Fossil, *2008 Annual Conference and Fiber Art Design Competition of International Textile and Apparel Association*, Schaumburg, IL.
- Park, H.** (2008), Apocalypse, *2008 Annual Conference and Fiber Art Design Competition of International Textile and Apparel Association*, Schaumburg, IL.
- Park, H.** (2008), Joyful future, *The 22nd Annual American Quilter's Society & Hobbs Bonded Fibers Fashion Show and Competition*, Paducah, KY.

AWARDS & HONORS

- 2020 **ITAA Mid-Career Excellence Award**
2020 Annual Conference of *ITAA (International Textile and Apparel Association)*,
Denver, Colorado
- 2018 **‘Paper of Distinction’ Award**
2018 Annual Conference of *ITAA (International Textile and Apparel Association)*,
Cleveland, OH.
Title of Paper: Different impacts of Boot Height and Air Bottles on the Mobility of Tall
and Short Firefighters (Textile and Apparel Science Track)
- 2016 **Oklahoma State University Rising Star Award**
College of Human Science, Oklahoma State University, Stillwater, OK
- 2015 **ITAA Rising Star Award**
2015 Annual Conference of *ITAA (International Textile and Apparel Association)*, Santa
Fe, New Mexico.
- 2015 **Nominated for Oklahoma State University Rising Star Alumni Award**
Oklahoma State University, Stillwater, OK
- 2015 **Listed in Who’s Who in America**
- 2014 **Nominated for KON/Alumni Advising Award**
College of Human Ecology, Cornell University
- 2014 **Honorable Mention: P3 Design Award**
Environmental Protection Agency
- 2012 **Oklahoma State University Graduate Research Excellence Award**
Oklahoma State University, Stillwater, OK
- 2011 **College of Human Science Outstanding Doctoral Student (\$ 500)**
College of Human Science, Oklahoma State University, Stillwater, OK.
- 2010 **‘Paper of Distinction’ Award**
2010 Annual Conference of *ITAA (International Textile and Apparel Association)*,
Montreal, Quebec, Canada.
- Title of Paper: Mobility Evaluation of Lower Body Movement Using Motion Capture
System while Wearing Ballistic Body Armor (Textile and Apparel Science Track)
- 2010 **Sarah Douglas Fellowship for Promising Doctoral Student (\$500)**
2010 Annual Conference of *ITAA (International Textile and Apparel Association)*,
Montreal, Quebec, Canada
- 2010 **Phoenix Award for Oklahoma State University Outstanding Doctoral Student
(\$ 700)**
Oklahoma State University, Stillwater, OK.
- 2010 **Marguerite Scruggs Research Enrichment Fellowship (\$ 1,000)**
Oklahoma State University, Stillwater, OK

- 2009 **ATEXINC Excellent Marketable Design Award (\$ 350)**
2009 Annual Conference and Fiber Art, Design Competition of *ITAA (International Textile and Apparel Association)*, Bellevue, WA.
- 2009 **Second Place (\$ 700)**
The 23rd Annual American Quilter's Society & Hobbs Bonded Fibers Fashion show and competition, Paducah, KY.
- 2009 **Marguerite Scruggs Research Enrichment Fellowship (\$ 2,000)**
Oklahoma State University, Stillwater, OK.
- 2009 **Nominated Candidate for Outstanding Doctoral Student Award of College of Human Environmental Science**
Oklahoma State University, Stillwater, OK.
- 2009 **Honorable Mention**
The National Little Black Dress Competition, Kansas State University, Manhattan, KS.
Member of Phi Kappa Phi Honor Society
Member of Golden Key International Honor Society
- 2008 **First Place in Paper Presentation, 19th Annual Research Symposium (\$ 100)**
Oklahoma State University, Stillwater, OK.
Title of Paper: Solar-powered Heating Jacket
(Human Environmental Science Track)

EXAMPLES OF MEDIA ATTENTION

- Discovery Channel Canada, Daily Planet* (aired on April. 18, 2013), "Future Tech: Fire Gear"
<http://watch.discoverychannel.ca/daily-planet/april-2013/daily-planet---april-18th-2013/#clip908686>
- NPR (National Public Radio) News* (aired through WSKG Innovation Trail on Jan. 18, 2013),
"Researcher looks to make firefighters' work a bit easier" (Jan., 2013)
http://www.wskg.org/wskg_news/researcher-looks-make-firefighters-work-bit-easier
- The Cornell Daily Sun* (Nov. 12, 2013), "Three Cornell Teams Given \$15,000 to Support Sustainability Research" <http://cornellsun.com/blog/2013/11/12/three-cornell-teams/>
- MIT Technology Review* (Dec. 2012), "How Technology Can Reduce Firefighter Injuries"
<http://www.technologyreview.com/view/508321/how-technology-can-reduce-firefighter-injuries/>
- Fire Apparatus magazine* (Dec. 5, 2012), "Building Firefighter PPE Using 3D Imaging",
<http://www.fireapparatusmagazine.com/articles/2012/12/building-firefighter-ppe-using-3d-imaging.html>
- Firehouse.com* (Dec. 6, 2012), "Project Aims to Design Better-Fitting Turnout Gear"
<http://www.firehouse.com/news/10838482/project-aims-to-design-better-fitting-turnout-gear>
- Fire Chief Publications* (Dec. 18, 2012), "Cornell studies protective gear to reduce injuries, fit women",
<http://firechief.com/turnout-gear/cornell-studies-protective-gear-reduce-injuries-fit-women>
- Ithaca Journal* (Jan. 16, 2013), "Cornell professor using 3-D technology to aid firefighters".
<http://www.theithacajournal.com/article/20130113/NEWS01/301130034/Cornell-professor-using-3-D-technology-aid-firefighters>
- Stargazette.com* (Jan. 16, 2013), "Cornell professor using 3-D technology to aid firefighters"
<http://www.stargazette.com/article/20130113/NEWS01/301130034/Cornell-professor-using-3-D-technology-aid-firefighters>
- Symposium spotlights cutting-edge fiber science*
<http://www.news.cornell.edu/stories/2015/05/symposium-spotlights-cutting-edge-fiber-science>

Beaudette '16 Honored For 3-D Printed Clothing

<http://cornellsun.com/2016/01/28/beaudette-16-honored-for-3d-printed-clothing/>

Lab Manager (Mar. 28, 2015) "USAID Taps Cornell to Advance Ebola Protective Garments"

http://www.labmanager.com/news/2015/03/usaaid-taps-cornell-to-advance-ebola-protective-garments?fw1pk=2#.V0_KSiN962w

COURSES TAUGHT (2011~2019)

- FSAD 1140: Fashion CAD
- FSAD 2660: Activewear Design and Product Development
- FSAD 3550: Active Sportswear Design
- FSAD 4010: Empirical Independent Study
- FSAD 4030: Teaching Apprenticeship
- FSAD 4990: FSAD Honor Thesis (Lauren Forstenhausler, Class of 2021)
- FSAD 6900: Functional Aspects of Clothing and Design

COURSES TAUGHT (2020)

- FSAD 1140: Fashion CAD (Spring 2020)
- FSAD 2660: Activewear Design and Product Development (Spring 2020)
- FSAD 3990: Smart Clothing: Design and Programming (Fall 2020)
- FSAD 4010: Empirical Independent Study (Hanna Norris, Fall 2020)
- FSAD 4030: Teaching Apprenticeship (Lauren Forstenhausler: Spring 2020)
- FSAD 4990: FSAD Honor Thesis (Lauren Forstenhausler, Fall 2020)

STUDENTS' SUCCESS THROUGH TEACHING & MENTORING

- 2020 **Lauren Forstenhausler** (my advisee, class of 2021) received the **2020 Blanche Payne Scholarship** at the ITAA Conference.
- 2020 **Jenny Leigh Du Puis** (my PhD student) received the 2020 ITAA Outstanding Graduate Student in the Study of Historic Textiles or Costume **Robert C. Hillestad Fellowship** at the ITAA Conference.
- 2020 **Jeyeon Jo** (my PhD student) received the **Roberta G. 1957 and the John B. 1956 De Vries Graduate Student Award**.
- 2020 **Lauren Forstenhausler** (in **FSAD2660** Activewear Design and Product Development): Blitz, accepted for 2020 *ITAA Design Competition* (Virtual Conference)
- 2020 **Lauren Forstenhausler & Audrey Perlman** (in **FSAD2660** Activewear Design and Product Development): Pen Umbra, accepted for 2020 *ITAA Design Competition* (Virtual Conference)
- 2020 **Quinn Guthrie** (class of 2022) received **CHE Undergraduate Summer Research Stipend (\$6,000)**, completed 3D Virtual Prototyping and Animation of Figure Skating Outfits. She had the solo exhibition from outcomes of this summer research project mentored by me. Link to the project: [Quinn Guthrie, creating figure skating sportswear using 3D. - YouTube](#)
- 2019 **Jenny Leigh Du Puis** (my PhD student) received the **ITAA Outstanding Beginning Doctoral Student Marjorie Joseph Fellowship**.

- 2019 **Ryan Platt** (in **FSAD2660** Activewear Design and Product Development): Pristine accepted for 2019 *ITAA Design Competition* (Las Vegas, NV)
- 2018 **Kaya Middleton** (in **FSAD2660** Product Development for Active Sportswear): Glacial Fracture accepted for the 2018 *ITAA Design Competition* (Cleveland, OH)
- 2018 **Mananchaya Phisphahutharn** (in **FSAD2660** Product Development for Active Sportswear): Ethereal accepted for the 2018 *ITAA Design Competition* (Cleveland, OH)
- 2016 **Rachel Powell** (in **FSAD2660** Product Development for Active Sportswear): Outsider accepted for the 2016 *ITAA Design Competition*.
- 2016 **Caroline Donelan: Fourth Place** at the Herman and Myrtle Goldstein Student Paper Competition, the 2016 AATCC International Conference
- 2015 **Eric Beaudette: First Place** in the **2015 ITAA Undergraduate Research Paper Competition** (Santa Fe, NM); Eric's research project conducted in **FSAD4030 Empirical Study**
- 2014 **Eric Beaudette:** Smart Clothing Design with embedded EL wire accepted for 2014 International Symposium of Wearable Computer Design Competition
- 2014 **Eric Beaudette and Linnea Fong** (in **FSAD2660** Product Development for Active Sportswear): Pearlscale accepted for 2014 *ITAA Design Competition*.
- 2014 **Rachel Powell** (in **FSAD 1140** Intro to CAD): **First Place** in 2014 Summer Magazine Cover Design Competition by International Textile Marketing Association 2013
- 2013 **Rae Dagdagan** (in **FSAD 1140** Intro to CAD): **Honorable Mention** in 2013 Summer Magazine Cover Design Competition by International Textile Marketing Association 2012
- 2012 **Lam Chi Wai** (in **FSAD1140** Intro to CAD), an Exchange student from HongKong Polytech: Won "Lampo Zipper Traveling Scholarship Graphic Design Competition" (5 Days travel to Italy was awarded)
- 2012 **Sandy Flint & Kristen Morris** (in **FSAD6000** Graduate Independent Study): "Migration to a New Habitat" accepted for 2012 *ITAA Design Competition*. The same design also exhibited in 2012 Cornell Council for Art award project exhibition.
- 2012 **Lesley Young** (in **FSAD3550** Active Sportswear Design): Outfit entitled "Light Out" accepted by the 2013 *ITAA Design Competition*

MENTORING

- **Mentoring Graduate Students as Major Advisor:**

- M.S. & M.A. students

- Sandy Flint (M.S./ Graduated in 2015),
 - Mary Claire Nemeth (M.A./ Graduated in 2015),
 - Qinwen Xu (M.A./ Graduated in 2016),
 - Jie Pei (M.A. Graduated in 2016),
 - Manwen Li (M.A. Graduated in 2017),
 - Menglin Jia (M.A. Graduated in 2017),
 - Eric Beaudette (M.S. Graduated in 2019),

Yoojin Chung (M.A. Graduated in 2020)

Ph.D. Students

Sanjay Guaria (in progress),
Jenny Leigh Du Puis (in progress),
Jeyeon Jo (in progress)

Miao Tian (Visiting Ph.D. student from Donghua University)

• **Mentoring Graduate Students as a Minor/Field Committee members:**

Nancy Elizabeth Allen, Kristen Morris, Catherine Bluemenkamp, Helen Trejo, Sarah Portway, Lun Lou, Jie Pei, and Namranta Patil

• **Mentoring Visiting Scholars and Post-Docs:**

Eunyoung Lee (Ph.D.) Jie Luo (Ph.D.) and Seonyoung Kim (Ph.D.)

• **Mentoring Undergraduate Researchers:**

Lauren Forstenhausler, Erica Hyunji Lee, June Kim, Caroline Donelan, Emelia Black & Eric Beaudette

2014 **Caroline Donelan** (FSAD, class of 2016): I advised her summer internship. Caroline's undergraduate research was funded by the College of Human Ecology (\$4,000). As an undergraduate student researcher, she completed a series of thermal manikin tests to investigate three different cooling technologies (convective cooling, evaporative cooling and phase change material cooling). The manuscript from this research project has been published at AATCC Research Journal.

2013 **Eric Beaudette** (FSAD, class of 2016) with his two teammates in ECE won Cornell ECE (Electrical and Computer Engineering) Innovation Award with \$10K jump-start fund
- Project title: De-stress functional vest development
- My role: Faculty advisor for the team & Co-designer of the vest

SERVICE TO SCIENCE & ENGINEERING COMMUNITY

- Associate Editor of *Clothing and Textile Research Journal (Textile Science Track)*
- Chair of Apparel and Textile Science Track at ITAA (2018 – present)
- Editorial Board Member of *Fashion and Textiles*
- Editorial Board Member of *International Journal of Textile Science and Engineering*
- Editorial Board Member of *The Korean Society of Living Environmental System*
- Chair of Textile & Apparel Science Track at ITAA (*International Textile and Apparel Association*)
- Reviewer of following peer review journals:
Ergonomics,
Applied Ergonomics,
Textile Research Journal,
Clothing and Textile Research Journal,
Research Journal of Textile and Apparel,
Fire Science,
International Journal of Clothing Science and Technology,
AATCC Review (American Association of Textile Chemists and Colorists Peer Review Journal)
- ITAA Reviewer for Textile and Apparel Science track, Aesthetics, Design and Product Development track, and Pedagogy track
- Invited textbook reviewers for *Functional Apparel Design, & Fashion and Technology* (Publisher: Fairchild Books Inc.)

SERVICE & LEADERSHIP

<i>2020 - present</i>	DEA – FSAD Integration Committee Cornell University
<i>2020 - present</i>	Cornell Design & Technology Innovation Committee Cornell University
<i>Spring 2018 - present</i>	University Appeals Panel Cornell University
<i>Fall 2017 – present</i>	Diversity Committee Member College of Human Ecology, Cornell University
<i>Summer 2017- Spring 2018</i>	Director of Undergraduate Studies Dept. of Fiber Science & Apparel Design, Cornell University
<i>Fall 2016- Spring 2018</i>	FSAD Faculty Search Chair Dept. of Fiber Science & Apparel Design, Cornell University
<i>Fall 2016 - Spring 2017</i>	Faculty Advisor of Cornell Fashion Collective Dept. of Fiber Science & Apparel Design, Cornell University
<i>Fall 2016 - present</i>	Faculty Advisor of Geoffrey Beene Competition Dept. of Fiber Science & Apparel Design, Cornell University
<i>2014-2018</i>	Faculty Advisor of Cornell Student Chapter of AATCC (American Association of Textile Chemists and Colorists) Cornell University
<i>2014-2016</i>	Member of Committee on Academic Status College of Human Ecology, Cornell University
<i>2012-2019</i>	Human Ecology CAD committee member College of Human Ecology, Cornell University
<i>2014-2015</i>	A member of Search Committee for Apparel Design Faculty Positions Dept. of Fiber Science & Apparel Design, Cornell University
<i>2014-present</i>	Co-Faculty Advisor of YMA Fashion Scholarship Fund Dept. of Fiber Science & Apparel Design, Cornell University
<i>2012-present</i>	Co-Organizer of Cornell Design Award Dept. of Fiber Science & Apparel Design, Cornell University
<i>2012-present</i>	Faculty Lead of ITAA Design Competition Dept. of Fiber Science & Apparel Design, Cornell University
<i>2012-2017</i>	Faculty Lead of ITMA Textile Design Competition Dept. of Fiber Science & Apparel Design, Cornell University
<i>2009-2010</i>	Graduate Student Liaison & Representative <i>International Textile and Apparel Association (ITAA)</i>

- 2010 **Vice President**
Graduate Student Organization in Human Environmental Science (GSHEs),
Oklahoma State University, Stillwater, OK.
- 2009-2010 **DHM Graduate Student Representative to GPSGA (Graduate and Professional Student Government Association)**
Department of Design, Housing and Merchandising, Human Environmental
Science, Oklahoma State University, Stillwater, OK.
- 2009 **Activity Chair Officer**
Graduate Student Human Environmental Science (GSHEs), Oklahoma State
University, Stillwater, OK.

PROFESSIONAL DEVELOPMENT

- 2014 & 2019 **CLO3D Apparel CAD Training**
- 2013 **Rhinoceros 3D Design and Modeling Software Training**
by Magnetic Vision Inc., Brooklyn, NY.
- 2013 **Optitex Apparel Pattern CAD Training**
- 2010 **Siemens Product Line Management Program Training**
Oklahoma State University, Stillwater, OK.

OUTREACH

- 2018 *“Greenhouse Pesticide Applicators and Personal Protective Equipment: Assessment of Greenhouse Applicator Needs”*
Sanjay Guria and **Huiju Park**
2018 Cornell Pesticide Applicator Update (March 13, 2018)
146 Morrison Hall, Cornell University
Audience: About 60 Greenhouse pesticide applicators
- 2013 *“4H Career Explorations: The Activewear Advantage”* (Summer 2013)
Funded by New York State 4-H Foundation
Charlotte Coffman & **Huiju Park**
- My Responsibility:** Develop proposals and activity plan with Charlotte Coffman, Deliver presentations about the latest sportswear technologies, Demonstrate a sweating thermal manikin and 3D motion capture technologies, Support 4H youth groups’ hands-on experience and Support educational film-making about sportswear technology and design approaches.
- Outcomes:**
- 1) Four videos were produced (links below), which will be posted by the end of January, 2014 on the FSAD Youth Webpages.
Mobility in activewear and protective clothing: <http://youtu.be/fOunMHEKgzQ>
Thermal regulation: <http://youtu.be/rDT89pFNUo>
Fit and Construction: <http://www.youtube.com/watch?v=Eh-j3vNRm0U>
Impact protection: <http://www.youtube.com/watch?v=gLYXdM4xxfs>
 - 2) 3-day campus experience for teens, focusing teen’s career explorations at Cornell Campus
 - 3) 2-day campus experience for Citizen University at Cornell Campus
 - 4) Two poster presentations shown below:

“Engaging Youth in STEM Learning; Exploring the Innovations of Sportswear Development”, Eric Beaudette, Charlotte Coffman, & **Huiju Park**, CHE/CCE Intern Presentations, Cornell University (September 24, 2013).

“Active Youth; Activewear; Active Learning”, Charlotte Coffman, **Huiju Park**, & Eric Beaudette, New York State Association of Cornell Cooperative Extension 4-H Educators Conference, Lake Placid, NY. (October 15-17, 2013).

2008

“Building a Sustainable Oklahoma” Workshop (March 29, 2008)

Funded by Environmental Protection Agency, Norman, OK.

My Responsibility: Completed literature review, edited presentation material, and developed evaluation questionnaire

PROFESSIONAL MEMBERSHIP

- Faculty Fellow of Atkinson Center for a Sustainable Future
- Member of International Textile and Apparel Association (ITAA)
- *ITAA* Design Award Committee Member
- Member of CFFI (Cornell Institute of Fashion and Fiber Innovation)
- Member of NC170 Multi-State Research Group
- Member of AATCC (American Association of Textile Chemists and Colorists)