# Byungsoo Kim, Ph.D.

Assistant Professor of Interior Architecture and Industrial Design (IAID), Kansas State University byungsoo@ksu.edu

# **EDUCATION & CREDENTIALS**

North Carolina State University, Raleigh, NC

Doctor of Philosophy in Design, July 2020 (GPA: 4.0/4.0)

North Carolina State University, Raleigh, NC

Master's Degree in Industrial Design, December 2016 (GPA: 4.0/4.0)

Hong-ik University, Sejong, South Korea

Bachelor's Degree in Product Design, August 2012 (GPA: 3.83/4.5)

#### PROFESSIONAL EXPERIENCE

| Kancac | State | University | y, Manhattar     | KS       |
|--------|-------|------------|------------------|----------|
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Assistant Professor, Department of IAID

August 2020 – Present

## NC State University, Raleigh, NC

| • | Research | Assistant. | Research in | n Ergonom | ics and Des | ign (RED | ) Lab |
|---|----------|------------|-------------|-----------|-------------|----------|-------|
|---|----------|------------|-------------|-----------|-------------|----------|-------|

• Co-Instructor, Department of Industrial Design

Research Associate, Department of Industrial Design

Graduate Teaching Assistant, Department of Industrial Design

August 2017 - 2020

January 2019 – May 2019

April 2017 – August 2017

Spring 2015 - Fall 2016

Freelance Designer/Design Consultant, Raleigh, NC

May 2017 – July 2018

General Motors, Detroit, MI

• Creative Design Intern

May 2016 - August 2016

May 2015 – August 2015

JLG (Oshkosh Corporation), Hagerstown, MD

• Industrial Design Intern

Living Environmental Design Research Institute, Seoul, South Korea

December 2011 – July 2014

• Designer/Researcher/Instructor

Republic of Korea Armed Forces, Yeoncheon, South Korea

April 2006 – April 2008

Military Driver/Operation Staff

## TEACHING EXPERIENCE

| Assistant Professor | Kansas Sta     | te University  | Manhattan         | KS     |
|---------------------|----------------|----------------|-------------------|--------|
| Assistant Froncisco | T IXalibab Dia | re chinaetsira | . Iviaiiiiattaii. | . 17.) |

| • | (Assigned) INDD 500 Materials and Manufacturing Processes | Spring 2021 |
|---|---|-------------|
| • | (Assigned) ENVD 202 Design Studio                         | Spring 2021 |
| • | IAPD 430 Visual Communication 1                           | Fall 2020   |

• INDD 325 Human Factors and Industrial Design

Fall 2020

Co-Instructor | NC State University, Raleigh, NC

• ID 300 Design Studio

Spring 2019

### RESEARCH EXPERIENCE

Research Assistant | RED Lab, North Carolina State University

August 2017 – 2020

- 'The Role of Design in Technology-Driven Product Development' (Dissertation).
- 'Collaborative Report Generation Project' from the Laboratory for Analytic Science (LAS).
- 'Interaction Design for Drivers in Car-Sharing Systems' (Master's degree final project).
- 'Wearable Intervention for Laptop Users.'
- 'Aging Experience Suit Development'

Research Associate | RED Lab, North Carolina State University

April 2017 – August 2017

• 'A Simulator Development to Evaluate the Comfort of Garments' from the Hanes brand.

Research Assistant | Human-Centered Integrated Design Lab, Yonsei University March 2014 - April 2014

• 'Home Chat' from LG.

### Researcher/Designer/Instructor | LEDR Institute

December 2011 – June 2014

- 'Automatic Discharge Processing System Design for Patients Who Lives in Bed' from Korea Evaluation Institute of Industrial Technology.
- 'Public Facilities Standard Design' from Pyeongtaek City.
- 'Han River Fishing Village Building Project' from the Korea Rural Community Corporation.
- 'Research for National Park Facilities Universal Design Guideline' from Korea National Park Service.
- 'Public Signage Design Guideline' from the Gyeonggi Provincial Government.
- 'Artificial Light Pollution Management Plan and Nighttime Scene' from the Gyeonggi Provincial Government.

### **PUBLICATIONS**

#### Journal Articles, In Print:

• **B. Kim**, S. Joines, J. Feng, and R. Flinchum, "Usability Study to Improve Interaction Design for Drivers in Car-Sharing Systems," *Journal of Usability Study*, vol. 13, no. 4, pp. 220–247, 2018 (peer-reviewed).

# Journal Articles, In Preparation:

- **B. Kim**, S. Joines, and J. Feng, "Technology-Driven Design Process: Teaching and Mentoring Technology-Driven Design Process in Industrial Design Education," in preparation for *International Journal of Technology and Design Education*
- **B. Kim**, S. Joines, and T. Liu, "the Role of Design in the 4th Industrial Revolution. Case Studies of Designer's Role in Technology-Driven Organizations," in preparation for *The Design Journal*.
- **B. Kim**, S. Joines, and D. Ham, "Design Process, Method and Tool Evaluation: Technology to Product Design Process (TPDP) For Industrial Design Education," in preparation for the International Journal of Art and Design Education.

#### Trade Publications, In Print:

• **B. Kim** and S. Joines, "Universal Design for unfamiliar environments," *Design for All Institute of India*, vol. 13, no. 1, pp. 48–53, 2018.

## **CONFERENCES**

Reviewed Conference Proceedings with Oral Presentation:

- **B. Kim** and P. Panda, "Data Visualizations for Interdisciplinary Communication in HFE," submitted to *10th International Conference on Applied Human Factors and Ergonomics*, New York, USA, July 2021 (peer-reviewed)
- **B. Kim**, H. Liu, and S. Joines, "A Wearable Intervention for Laptop Users," *63rd Human Factors and Ergonomics Society*, Seattle, USA, November 2019 (peer-reviewed).
- **B. Kim** and S. Joines, "The Role of Design in Technology-Driven Ergonomics Product Development," *10th International Conference on Applied Human Factors and Ergonomics*, Washington D.C., USA, July 2019 (peer-reviewed).
- J. Park, B. **Kim, B**. Lee, R. Traci, and D. Hands, "Interdisciplinarity of Ph.D. students across the Atlantic: A Case of Interdisciplinary Research Team Building," *the 13th European Academy of Design Conference*, Dundee, Scotland, April 2019 (peer-reviewed).
- **B. Kim**, H. Liu, and S. Joines, "Designing for Empathy: Research Expanding Aging Experience Suit for Educational Purposes," *Industrial Designers Society of America Education Symposium*, Seattle, USA, August 2015. (peer-reviewed).

Conference presentation and workshop facilitation, abstract refereed:

- S. Joines, **B. Kim**, H. Liu, and C. Salamanca, "Design Thinking: Training, Support, and Investigations for LAS/IC," 2020 LAS Virtual Symposium, December 2020 (online).
- **B. Kim** and J. Park, "Online Collaboration for Interdisciplinarity: A Journey towards Interdisciplinarity in Design Research from Doctoral Design Students," Digitally Engaged Learning Conference, September 2020 (online, peer-reviewed).
- C. Yi, J. Park, **B. Kim**, "Interdisciplinary research team workshop: bottom-up approach," *12th Annual International Science of Team Science Conference*, Durham, USA, June 2020.
- J. Park, **B. Kim**, C. Yi, and S. Joines, "Evaluating a Workshop for Interdisciplinarity in Environmental Design Research," *Proceedings of Conference for 51th Environmental Design Research Association (EDRA)*, Tempe, USA, April 2020.
- B. Kim, J. Park, C. Yi, and S. Joines, "Workshop of Interdisciplinary Research Team Building," 2020 KSEA-NC Interdisciplinary Research Conference, Raleigh, USA, February 2020.
   B. Kim, S. Joines, J. Feng, and R. Flinchum, "Car Interaction Design for Car-Sharing Systems," 10th International ACM Conference on Automotive User Interfaces and Interactive Vehicular Applications, Toronto, Canada, September 2018.
- **B. Kim** and S. Joines, "The Use of a Wearable Intervention for Laptop Users," *12th International Conference on Design Principles & Practices*, Barcelona, Spain, March 2018.

#### Poster Presentation:

- S. Joines, **B. Kim**, H. Liu, J. Dorsett, C. Salamanca, J. Peavey, "Design Thinking through Research Course," *Laboratory for Analytic Sciences Research Symposium*, Raleigh, NC, USA, December 2018.
- S. Joines, F. Tellez, **B. Kim**, C. Liu, H. Liu, J. Peavey, C. Salamanca, "Design Thinking through Research Course," *Laboratory for Analytic Sciences Research Symposium*, Raleigh, NC, USA, December 2017.
- S. Joines, H. Goodell, **B. Kim**, "Breast Motion Simulation Project," *Hanesbrands poster presentation session*, Winston-Salem, NC, USA, April 2017.
- S. Joines, F. Tellez, **B. Kim**, H. Liu, W. Ginn, J. Peavey, A. Walker, "Design Thinking through Research Course," *Laboratory for Analytic Sciences Research Symposium*, Raleigh, NC, USA, December 2016.
- **B. Kim**, "Car Sharing and Interaction Design," 2015-2016 Korean American Scientist and Engineers Association (KSEA) South-Atlantic Regional Conference Poster Competition (NC Chapter), April 2016.
- **B. Kim**, S. Joines, J. Feng, and R. Flinchum, "Interaction Design Guidelines for Drivers," *11th Annual Graduate Student Research Symposium*, Raleigh, NC, USA, March 2016.
- **B. kim** and S. Joines, "Universal Design checklist for control panel Microwave oven," Universal Design Symposium, Raleigh, NC, USA, March 2015.

### **SPEAKING ENGAGEMENTS**

#### Invited Presentation:

- **B. Kim**, H. Liu, and S. Joines, "A Wearable Intervention for Laptop Users," *College of Design Leaders Council Student/Faculty Presentations*, Raleigh, NC, USA, October 2019.
- R. Tayloe, S. Joines, **B. Kim**, and H. Liu, "Human Subjects Research: NCSU IRB and HRPO Review for LAS Research," *Laboratory for Analytic Sciences WRM*, Raleigh, NC, USA, October 2017.

### TECHNOLOGY TRANSFER: PATENTS PENDING AND DISCLOSURES FILED

Hanes Breast Motion Simulator Combine (NCSU File 19-19242), USA

2019

• Submitted (fees for both the international and US filings were paid for by Hanes).

Shampoo Container Design (Design Registration Number: 0673350), South Korea.

2012

• Designing an easy-to-use and eco-friendly shampoo Container (the Korean Intellectual Property Office).

July 2019 - Current

May 2020 - Current

# **AWARDS & RECOGNITION**

| HFES Student Paper Award, Human Factors and Ergonomics Society   | 2019                    |
|--|-------------------------|
| Student Scholarship, First Korean Baptist Church   | 2019                    |
| NCSU Graduate Research Assistantship, North Carolina State University  | 2017 - 2018             |
| NCSU Graduate Fellowship, North Carolina State University  | 2017 - 2018             |
| L. Franklin Bost Industrial Design Scholarship, North Carolina State University  | 2015 - 2016             |
| The Honor Society of Phi Kappa Phi, Phi Kappa Phi  | 2016                    |
| Car Design News and GM interactive Design Competition, 1st Place, General Motor  | rs 2016                 |
| NCSU Graduate Student Research Symposium, Winner, North Carolina State University  |                         |
| <ul> <li>NCSU Chapter Graduate Research Award, Recognition of Superior Achievement<br/>Research, Sigma Xi</li> </ul>               | s in Scientific<br>2016 |
| <ul> <li>KSEA Poster Competition (NC Chapter), 1st Place, Korean American Scientists a<br/>Association</li> </ul>                  | and Engineers<br>2016   |
| <ul> <li>Asian Smart Living International School, the Best Practice &amp; the Most Popular Aw<br/>Ministry of Education</li> </ul> | ard, Taiwan's<br>2014   |
| • iF Universal Design Award, Winner & Consumer Favorite, iF International Forum D  | esign 2013              |
| <ul> <li>Spark Concept Design Award, Finalist, Spark</li> </ul>  | 2012                    |
| <ul> <li>Design to Business Fair, Bronze Prize, Korean Intellectual Property Office</li> </ul>                                     | 2012                    |
| Reddot Concept Design Award, Winner, Design Zentrum Nordrhein Westfalen  | 2012                    |
| <ul> <li>Design for Social, Finalist, Utilità Manifesta</li> </ul>   | 201                     |
| • Social Enterprise Excellent Item Contest, Excellence Prize, Gyeonggi Government  | 2012                    |
| CHOLARLY & PROFESSIONAL HONORS   |                         |
| Reviewer, 63rd Human Factors and Ergonomics Society  | 2019                    |
| • Co-chair, Applied Human Factors and Ergonomics and the Affiliated Conferences  | 2019                    |
| • Invited Presenter, Carolina Chapter of the Human Factors and Ergonomics Society  | 201                     |
| Invited Drawing Performer, North Carolina Museum of Art  | 201                     |
| • Invited Facilitator, Defense Advanced Research Projects Agency Design Boot Camp  | 201                     |
| ESIGN EXHIBITS:  |                         |
| DRIM, Reddot Design Museum, Singapore  | 2012                    |
| DRIM, Utilita Manifesta Exhibition, Milan, Italy   | 2012                    |
| <ul> <li>Souvenir Design, Exhibition, Jeju-do, South Korea</li> </ul>  | 2012                    |
| • DRIM, Undergraduate Graduation Exhibition, Seoul, South  | 2012                    |
| EADERSHIP  |                         |
| Ph.D. Student Association members in Design, North Carolina State University   | 2018                    |
| ANGUAGES   |                         |
| Inglish: Proficient, Korean: Native, Japanese: Beginner  |                         |
| PROFESSIONAL MEMBERSHIPS & AFFILIATION   |                         |
| • The Human Factors and Ergonomics Society, Student Member July 2  | 2019 – Curren           |
|  |                         |

# **TECHNICAL SKILLS**

Research: Mendeley (Reference Manager), driving simulator, eye-tracking, R, Tracker (video analysis & modeling tool), Tableau

Design: Adobe Creative Cloud (Illustrator, Photoshop, and InDesign), Sketch, XMind, Rhinoceros 3D,

Industrial Designers Society of America, Student Member

Industrial Designers Society of America, Young Professional Member

SolidWorks, 3ds Max, Unity, Keyshot, 3d printing, Storyboarding Others: Microsoft Office (Word, Excel, PowerPoint, Outlook), Google Suite