

JEEEEUN KIM

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1B10 Discovery Learning Center (DLC)

430 UCB

Boulder, CO 80309

RESEARCH INTERESTS

Personal Interactive Fabrication and Rapid Prototyping, Tangible Interaction, Craft and DIY Technology
(in broad technical Human-Computer Interaction)

EDUCATION

- 2014 - Present **Ph.D. Student in Computer Science (Expected 2018)**
University of Colorado, Boulder
- Advisor: Dr. [Tom Yeh](#) & Dr. [Mark D Gross](#)
- 2014 **M.S. in Computer Science**
University of Colorado, Boulder
- Advisor: Dr. Tom Yeh, & Dr. [Ann Eisenberg](#)
- 2010 **B.E. in Computer Engineering**
Korea Aerospace University, South Korea
- Advisor: Dr. [Inbok Lee](#)
 - Summa Cum Laude (Top 1% of class), 1st Place Senior Capstone Project
- 2006 **Exchange student in Computer Engineering**
Yanbian University of Science & Technology, China

PROFESSIONAL EXPERIENCE

- 2017 Summer **Ericsson Research Silicon Valley, Santa Clara, CA**
Research Intern
- Hololens-Web hosting application to support remote collaborations between distant users using Augmented Reality
- 2016 Jan. – Sep. **Carnegie Mellon University**
Visiting PhD Scholar, HCI Institute, School of Computer Science
(Host: Dr. [Jennifer Mankoff](#), Dr. Scott Hudson)
- DIY Assistive Technology, 3D Printed real world objects adaptation design
- 2013 Summer **JumpCloud Inc., Boulder, CO**
S/W Engineering Intern
- Developed web service (and supporting DB collection) reporting IP reputation to provide security statistics for cloud storage service/business
- 2010-2012 **Korea Telecom, Seoul, Korea**
Project Manager, New Business Strategy Department, The Head Office
- Designed a video content delivery platform service on the Web (OTT)
- S/W Engineer, Fast Incubation Team, Enterprise Business Department**
- Developed an auto-synchronization based mobile application distribution system

- Managed iOS application development process for various small businesses, including menu ordering system for franchise restaurants, news article writing system for online newspaper business, customer service for real-estate business

2008-2009 **LG, Seoul, Korea**

Research Intern, HCI Group, Advanced R&D Center

- Implemented a haptic feedback feature-phone prototype and vibro-haptic patterns
- Designed an user interface to support custom haptic pattern/gesture generation

2007 **Samsung, Seoul, Korea**

Winter **Engineering Intern, Telecommunication/Network Division**

- Participated in Haptic feedback generating development process phone (in feature-phone firmware levels)

PEER REVIEWED CONFERENCE PAPERS (ORAL PRESENTATION)

[c.11] **Jeeun Kim**, Haruki Takahashi, Homei Miyashita, Daniel Ashbrook, & Tom Yeh. *HFI: Formalizing Interaction Model between Human Designer and Fabricator (Under Review)*

[c.10] **Jeeun Kim**, Xiang ‘Anthony’ Chen, Jennifer Mankoff, & Tom Yeh. *Kinemaker: Supporting Remix of Gearboxes with Off-the-shelf Models (Under review)*

[c.9] Tom Yeh & **Jeeun Kim**. *CraftML: 3D Modeling is Web Programming*. In Proceedings of Extended Abstracts of the 36th Annual ACM Conference on Human Factors in Computing Systems (CHI’18), Montreal, QC, Canada (Acceptance rate: 25%, *To appear*)

[c.8] **Jeeun Kim**, Anhong Guo, Tom Yeh, Scott E. Hudson, & Jennifer Mankoff. *Understanding Uncertainty in Measurement and Accommodating its Impact in 3D Modeling and Printing*, In Proceedings of ACM Conference on Designing Interactive Systems (DIS’17), Edinburgh, UK (Acceptance rate: 22%)

[c.7] **Jeeun Kim**, Haruki Takahashi, Homey Miyashita, Michelle Annet, & Tom Yeh. *Machines as Co-Designers: A Fiction on the Future of Human-Fabrication Machine Interaction*, (alt.chi) In Proceedings of Extended Abstracts of the 35th Annual ACM Conference on Human Factors in Computing Systems (CHI’17), Denver, CO (Acceptance rate: 20%)

[c.6] Anhong Guo, **Jeeun Kim**, Xiang ‘Anthony’ Chen, Tom Yeh, Scott E. Hudson, Jennifer Mankoff, & Jeffrey P. Bigham *Façade: Auto-generating Tactile Interfaces to Appliances*, In Proceedings of the 35th Annual ACM Conference on Human Factors in Computing Systems (CHI’17), Denver, CO (Acceptance rate: 25%)

[c.5] Hyunjooh Oh, **Jeeun Kim**, Cory Morales, Mark D. Gross, Michael Eisenberg, & Sherry Façade *FoldMecha: Exploratory Design and Engineering of Mechanical Papercraft*. In Proceedings of International Conference on Tangible, Embedded, and Embodied Interaction (TEI’17), Yokohama, Japan (Acceptance rate: 27%)

[c.4] Xiang ‘Anthony’ Chen, **Jeeun Kim**, Stelian Coros, Jennifer Mankoff, & Scott E. Hudson, *Reprise: A Design Tool for Specifying, Generating, and Customizing 3D Printable Adaptations on Everyday Objects*, In Proceedings of Annual Symposium on User Interface Software and Technology (UIST’16), Tokyo, Japan (Acceptance rate: 21%)

[c.3] Claudia D. Roquet, **Jeeun Kim**, & Tom Yeh, *3D Folded PrintGami: Transforming Passive 3D Printed Objects to Interactive by Inserted Paper Origami Circuits*, In Proceedings of ACM Conference on Designing Interactive Systems, (DIS'16), Brisbane, Australia (Acceptance rate: 26%)

[c.2] **Jeeun Kim**, & Tom Yeh, *Toward 3D-Printed Movable Tactile Pictures for Children with Visual Impairments*, In Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems (CHI'15), Seoul, Korea (Acceptance rate: 23%)

[c.1] Abigale Stangl*, **Jeeun Kim***, Tom Yeh, *3D Printed Tactile Picture Books for Children with Visual Impairments: A Design Probe*, In Proceedings of conference on Interaction design and children (IDC'14), Aarhus, Denmark (*Both authors equally contributed) (Acceptance rate: 30%)

PUBLICATION OTHERS (DOCTORAL SYMPOSIUM, POSTER, DEMO)

[d.9] **Jeeun Kim**, *Shall We Fabricate? Collaborative, Bidirectional, Incremental Fabrication*, In Proceedings of Adjunct Annual Symposium on User Interface Software and Technology (UIST'17), Quebec city, QC, Canada

[d.8] Anhong Guo, **Jeeun Kim**, Xiang 'Anthony' Chen, Tom Yeh, Scott E. Hudson, Jennifer Mankoff, & Jeffrey P. Bigham, *Façade: Auto-generating Tactile Interfaces to Appliances*, In Proceedings of 18th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS'16), Reno, NV

[d.7] **Jeeun Kim**, Swamy Ananthanarayan. & Tom Yeh, *Seen Music: Ambient Music Data Visualization for Children with Hearing Impairments*, In Proceedings of conference on Interaction design and children (IDC'15), Boston, MA

[d.6] **Jeeun Kim**, Hyunjoo Oh, & Tom Yeh, *A Study to Empower Children to Design Movable Tactile Pictures for Children with Visual Impairments*, In Proceedings of International Conference on Tangible, Embedded, and Embodied Interaction (TEI'15), Palo Alto, CA

[d.5] **Jeeun Kim**, Abigale Stangl, & Tom Yeh, *Using LEGO to Model 3D Tactile Picture Books by Sighted Children for Blind Children*, In Proceedings of ACM symposium on Spatial user interaction (SUI'14) Honolulu, HI

[d.4] **Jeeun Kim**, Michael Kasper, Tom Yeh, & Nikolas Correll, *SikuliBot: Automating Physical User Interface Using Images*, In Proceedings of Adjunct Annual Symposium on User Interface Software and Technology (UIST'14), Honolulu, HI

[d.3] Abigale Stangl, **Jeeun Kim**, & Tom Yeh, *Technology to Support Emergent Literacy Skills in Young Children with Visual Impairments*, In Proceedings of Extended Abstracts of the 32nd Annual ACM Conference on Human Factors in Computing Systems (CHI'14), Toronto, Canada

[d.2] **Jeeun Kim**, Abigale Stangl, Ann Eisenberg, & Tom Yeh, *Tactile Picture Books for Young Children with Visual Impairment*, International Conference on Tangible, Embedded, and Embodied Interaction (TEI'14) Works-in-Progress, Munich, Germany

[d.1] **Jeeun Kim**, Abigale Stangl, Ann Eisenberg, & Tom Yeh, *Printing Tactile Picture Books for Blind children*, Extended Abstracts for Poster at ACM Grace Hopper Celebration 2013, Minneapolis, MN

WORKSHOP PAPERS

[w.3] **Jeeun Kim**, Abigale Stangl, & Tom Yeh. *Learning Underlying Principles of Physicalization by Tangible, Embodied, and Iterative Fabrication*, In Pedagogy and Physicalization: Designing Learning Activities around Physical Data Representations Workshop on DIS 2017, Edingburgh, UK

[w.2] **Jeeun Kim**, *Co-Designer Robot: Envisioning Human-Fabrication Machine Interaction (HFI)* – In What Actors can Teach Robots Workshop on CHI 2017, Denver, CO

[w.1] **Jeeun Kim**, Abigale Stangl, Ann Eisenberg, & Tom Yeh, *Evaluating Tactile User Experience with Tactile Picture Books for Children with Visual Impairment* - In "Touch Me" Tactile Evaluation Methods Workshop on CHI 2014, Toronto, Canada

PATENTS

[p.2] **Jeeun Kim**, Chae Eun Oh, Heyjung Kim, *Method and system for distributing business application and content for mobile equipment using application store and wireless AP*, Patents, United States Patent and Trademark Office, USA (US Patent [9,092,812](#))

[p.1] **Jeeun Kim**, Chae Eun Oh, Heyjung Kim, *Method and system for distributing business application and content for mobile equipment using application store and wireless AP*, Patents, Korea Patent and Trademark Office, Korea

AWARDS AND HONORS

- 2018 **Adobe Research Fellowship**
Special Recognition for the Excellent Review, CHI'18 Paper
- 2017 **Rising Stars in EECS**
Special Recognition for the Excellent Review, UIST'17 Paper
CRA-W Grad Cohort, CRA-W
- 2015 **The Best User Experience Award**, Hack CU, Boulder
- 2014 **Research Community Development Award**, University of Colorado Boulder
Dean's Fellowship, University of Colorado Boulder
- 2013 **Winner of US Entries**, for Typhlo & Tactus Tactile Book Contest, The American Printing House for the Blind (APHB)
Grace Hopper Scholarship, Anita Borg Institute for Women in Computing and Tech
The 1st Place Pitch Cash Prize, Startup Summer (Startup Colorado)
Outreach Award, Office for University Outreach, University of Colorado Boulder
- 2012 **Beverly Sears Graduate Student Research Grant**, Colorado Research Administration,
Dean's Fellowship, University of Colorado Boulder
- 2010 **Presidential Award, the Best Contributor of the Year**, Korea Telecom(KT Corp.), Korea
Best Business Model Strategy Award, Korea Telecom(KT Corp.), Korea
Chancellor's Recognition Award, Korea Aerospace University, Korea
- 2009 **Best Undergrad Thesis (Capstone Project) Award**, Korea Aerospace University, Korea
- 2007, 2009 **Jeong-Seok Foundation Fellowship**, Korea

- 2004 - 2009 **Scholarship for Excellent Academic Records**, Korea Aerospace University, Korea
 2007 **ISTAT International Fellow**, ISTAT Foundation, United States
 2006 **Honorary Alumnus**, Yanshan University of Science and Technology, China
 2005 **Han-Jin Foundation Fellowship**, Korea

TEACHING EXPERIENCE

- 2017 **Guest Lecture, CS Department, University of Colorado Boulder**
- Title: Collaborative, Iterative, Bidirectional Digital Fabrication
 - In class: Principles in User Centered Design and Prototyping (Junior/Senior Course: Human Centered Computing and Development)
- 2014- 2015 **Guest Lecturer, CU Science Discovery, Boulder**
- Teaching “Emergent Technology to develop emergent literacy for blind children, with 3D printed tactile picture books” in various summer science camps for K-12
- 2013- 2014 **Teaching Assistant, CS Department, University of Colorado Boulder**
- Teaching Introductory Linux and Python/Java/C++ (Computer Science 1: Programming)
 - Teaching Introductory Linux and C++ (Introduction to Programming)
- 2013 Spr. **Grader, CS Department, University of Colorado Boulder, USA**
- Grading for *"Big Data-Human Computer Interaction"*(Graduate Only Class)
- Instructor, Korea Foreign Migrants Center, Seoul, Korea**
- 2009-2010
- Lectured *"How to use Windows OS and MS Office"* for Immigrants Workers
 - Lectured *"How to use Korean e-Commerce"* System
- 2009 **Afterschool Teacher, Dukyang Middle School (7-9th Grade), Gyunggi-do, Korea**
- Served after schooling program for middle school students
- 2005-2009 **Instructor, Intrusion Defense Team, Korea Aerospace University, Korea**
- Lectured Data Structures and Network Programming in C/C++

MENTORING EXPERIENCES

- 2015 Fall **Claudia Dauden Roquet**, *"3D Folded Printgami"*,
 Balsells Mobility Scholarship Program for Senior Students (Result received 1st place with honor for the undergrad dissertation, Now PhD Student at Lancaster University, UK)
- Caleb Hsu**, *"CraftML, Web-programming for 3D Modeling"*,
 Senior Capstone Project
- 2014-2015 **Srinjita Bhaduri**, *"Audible Texture: Sensor-less Sound Generator on Tactile Pictures for Children with Visual Impairments"*
 Master’s level Independent Study (Now PhD Student at University of Colorado Boulder)
- 2015 **Lindsey Welch, Chantelle Humphries**, *"3D Printed braille"*
 Summer **Dinah Bowman, Nueka Lo**, *"Post-processing Techniques to Enhance Tactile Textures"*
 Summer Research Mentor Program (REM) for high school students.
 (Results were invited and presented at the White House)

- 2014 Fall **Thomas M Erickson**, *“Haptic Feedback Development for 3D Printed Books”*
Undergrad level Independent Study
- The team of 4 freshmen in the College of Engineering.** *“Designing Interactive Picture Books by Arduino and 3D Printing”*
Planning and Designing the Integrated Teaching and Learning Lab project (part of GEEN160)
- 2014 **Ian Char**, *“SikuliBot-Automating Physical Interface using Images”*,
Summer Undergraduate Discovery Learning Apprenticeship Scholarship Program (Result was demoed at UIST’14)

INVITED EXHIBITIONS, WORKSHOPS (ORGANIZER) & DEMO

- 2018 **Exhibition**, Cooper Hewitt, Smithsonian Design Museum, New York, NY
As part of “Design for the Senses” (To appear)
- 2017 **Demo**, ATLAS Research Showcase, ATLAS Institute, University of Colorado Boulder
“Kinemaker: Supporting Mechanical Design by Remixing Gearboxes and 3D Models”
- Demo**, Diverse Learners Awareness Week, University of Colorado Boulder
As part of “Assistive Technology”
- 2016 **Exhibition (Permanent)**, King Abdulaziz Center, Riyadh, Saudi Arabia
As part of “World Culture Exhibition”
- Exhibition**, Lyons Regional Library, Lyons, CO
“Crowd Sourced 3D Printed Tactile Pictures – Harold and the Purple Crayon”
- 2015 **Workshop**, CU Science Discovery Summer Camp, Boulder, CO
“Designing 3D Pictures like Building a Web Page”
- Workshop**, CU EFRI REM Project, Boulder, CO
“Designing 3D Printed Tactile Picture Books for Children with Visual Impairments”
- Workshop**, Family IdeaLAB, Denver Public Library, Denver, CO
“Part 1: Tangible 3D Design with Craft Materials”
“Part 2: Web-Programming 3D Pictures”
- 2014 **Exhibition**, FoST(Future of Story Telling), New York, NY
Part of “Reinventing the Way Stories Are Told”
- Demo**, Computer Science Education Week, Boulder, CO
“Emergent Technologies with 3D Printing in Classroom”
- Demo**, CU Home Coming Day, Boulder, CO
“Tactile Picture Books to Enhance Reading Experience for Blind Children”
- Exhibition**, Gemmille Engineering Library, University of Colorado, Boulder, CO
“Crowd sourced 3D Printed Tactile Pictures – Harold and the Purple Crayon”
- Workshop**, Colorado Talking Book Library, Denver, CO
“Design Tactile Map to Guide People with Visual Impairments”
- Workshop (3 Groups)**, Teen's Science Cafe, Denver, CO
“Designing Tactile Pictures with Craft Materials for 3D Printing”

MEDIA COVERAGE (Selected)

MetaTrend (Korea), Tangible Context 손으로 전달되는 컨텍스트 (Vol.57)
DNA India (India), Picture books for the visually-impaired get a 3D boost
New Scientist, 3D-printed books make pictures real for blind children (Issue 2984)
A book and a good lie down (Australia), A Few Stories for Children's Books Week
NPR: National Public Radio, Beyond Braille: 3-D Printed Books For The Blind
Women Makes Waves (UK), The Tactile Picture Books Project. Bringing Books Alive For Visually-Impaired Children
3D Imprimalia (Spain), Libros táctiles impresos en 3D para niños ciegos
Mashable, Imagining a New Way to Read, One 3D-Printed Book at a Time
Pink Giraffe (Russia), Printed on a three dimensional printer. It's a Revolution in Education!
3ders, 3D Printed Tactile Picture Books for Visually Impaired Kids
ScienceDaily, Picture books for visually impaired kids go 3-D
3DPrint.com, 3D Printed Tactile Books For Blind Children
9 News, CU Creates 3D Book Program for Blind Children
Magazine of Artikel A-Welle (Switzerland), Gibt es den benutzerfreundlichen Billettautomaten wirklich? (Is There a Really User-Friendly Ticket Machine?)

ACADEMIC SERVICES / VOLUNTEERING

Associate Chair, SIGCHI Human Factors in Computing (CHI'18), *Late Breaking Work*
Faculty Search Committee, PhD Student member (2017), Computer Science Department, CU Boulder
Conference Paper Review, CHI (2014 - 2018), UIST (2013 - 2017), TEI (2014 - 2018), CSCW (2015 - 2017), DIS (2014 - 2017), C&C (2015/2017), IDC (2014 - 2017), CHI Play (2014 - 2016), Mobile HCI (2014 - 2016), TVX(2014 - 2016)
Journal Article Review, Special Issue of ACM TACCESS on *Fabrication Technologies and Do-It-Yourself Accessibility* (2017),
Research in Developmental Disabilities (RIDDD)
Guest Editor, ODYSSEY Magazine: Adventures in Science
(Special Issue on "3D Printing in the World". Feb.2015)
Consulting Editor, Android SDK Reference Book (ISBN: 9788909189026)
Student Volunteer, CHI 2015/2017, IDC 2015, NAGC 2012,
Onnuri Campaign (Teaching basic IT skills for Senior Citizens in Seoul) at Korea Governmental Communication Commission
Club President, Intrusion Defense Team (IDT), Korea Aerospace University, Korea

LANGUAGES

(Proficient) C/C++, JavaScript/Node.js, Python, HTML5/CSS, Open(J)SCAD
(Experienced) Java, Objective-C/Swift, Perl, PHP, Puppet Script

RELEVANT SKILLS

3D Design (SketchUp, Fusion360/Maya, Open(J)SCAD, 123D Suites), 3D Modeling Web based UI development skills (WebGL, THREE.js, CSG.js), 3D Printing (FDM, SLS) & Scanning, Laser Cutting, Circuit Design and Microcontrollers, Silhouette/Vinyl Cutting, Digital Embroidery, Adobe Image Suite (Photoshop, Illustrator, Premier, InDesign)

REFERENCE

(Available Upon Request)