

Leila Hyelip Lee

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RESEARCH INTEREST

My research interests are in Interactive&Adaptive space design and Human-Robot Interaction (HRI). My research tools are all across physical to virtual. In particular, I have been working on designing augmented space, tele-presence robots, interactive installation for art exhibition, and kinetic furniture.

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea
PhD student in Industrial Design since Mar. 2016
M.S. in Industrial Design Aug. 2013

- Thesis: The Effect of Kinetic Partitions Motion on User Emotional Experience in Space
- Advisor: Prof. Myung-suk Kim

Korea National Univeristy of Arts (K-Arts), Seoul, Korea
B.Arch. in Architecture Feb. 2011
Graduated with *Summa Cum Laude*

- Graduation project: Heterotopia, Newly Restore the Lost Area in Seochon
- Advisor: Prof. Christian Schweitzer

PUBLICATION (International)

1. **Hyelip Lee**, Seungwoo Je, Rachel Kim, Himanshu Verma, Hamed Alavi, and Andrea Bianchi. Partitioning open-plan workspaces via augmented reality. *Personal and Ubiquitous Computing*, pp.1-16. 2019.
2. Minkyong Lee, Okyu Choi, **Hyelip Lee**, Andrea Bianchi, Bum-Jae You, and Minsoo Han. Designing On-Body 2D Patterns to Enhance Subsidiary Communication for Telepresence Robots. In *2018 27th IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN)*, pp.222-227. IEEE, 2018.
3. Seungwoo Je, **Hyelip Lee**, Myung Jin Kim, and Andrea Bianchi. "Wind-Blaster: a Wearable Propeller-based Prototype that Provides Ungrounded Force-Feedback." In *ACM SIGGRAPH 2018 Emerging Technologies*, p.23. ACM, 2018.
4. **Hyelip Lee** and Andrea Bianchi. Augmented Peripheral Artifacts that Mediate Spatial Characteristics and Users Behavior in Space. *DIS2018 workshop Artifacts to Architecture*
5. **Hyelip Lee**, Myung Jin Kim, Byungjoo Lee, and Andrea Bianchi. An Artistic Provocation to Explore Effects and Opportunities of Virtual Surreal Spaces. In *Proceedings of the DIS 2018 Companion Publication of the 2018 Designing Interactive Systems Conference*, pp.81-85. ACM, 2018.
6. **Hyelip Lee**, Seungwoo Je, and Andrea Bianchi. All4One: A Moderated Sketching Tool for Supporting Idea-Generation with Remote Users. In *IASDR 2017, 7th international conference. International Association of Societies of Design Research*, 2017.

7. **Hyelip Lee**, Yeon-Ho Kim, Kwang ku Lee, Dae-Keun Yoon, and Bum-Jae You. Designing Appearance of a Tele-presence robot, M4K : A case study. In *Proceedings of Social HRI workshop at IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN)*, 2015.
8. **Hyelip Lee** and Hyungi Kim. Silhouette Interaction Translator. In *Museums and the Web Asia (MWA)*, 2014.
9. **Hyelip Lee**, Yunkyung Kim, and Myung suk Kim. Come on in! : A Strategic Way to Intend Approachability to a Space by Using Motions of a Robotic Partition. In *Proceedings of IEEE International Symposium on Robot and Human Interactive Communication (RO-MAN)*, 2013.
10. Yunkyung Kim, Jae eul Bae, Jimin Rhim, **Hyelip Lee**, Heeyun Ku, Saekyung Jung, and Myung suk Kim. The effect of interaction modality for facial-constrained robots in domestic environment. In *Proceedings of ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW)*, 2013.

PUBLICATION (Domestic)

1. Andrea Bianchi, Seungwoo Je, **Hyelip Lee**, Ian Oakley. Enhancing Spatial Input on the Body with a Smart-Ring. In *Proceedings of HCI KOREA 2018*, pp. 381-384. Best Paper Award
2. **Hyelip Lee**, YunKyung Kim, and Andrea Bianchi. A Survey on Medical Robotic Telepresence Design from the Perspective of Medical Staff. *Archives of Design Research* 30, no. 1 (2017): 61-71.
3. **Hyelip Lee** and Myung suk Kim. Examples and Design Direction for Kinetic Adaptive Space. In *Proceedings of Korea Institute of Spatial Design (KIDS)*, 2013.
4. **Hyelip Lee**, Kyunghyun Kim, Hyojin Kang, Hyungkeun Park, Yunkyung Kim, and Myung suk Kim. How to Express Robots Emotion through Artificial Subtle Sound Feedback. In *Proceedings of Korea Society of Design Science Spring International Conference*, 2012.
5. **Hyelip Lee**, Youngwook Jung, Jimin Rhim, and Myung suk Kim. State Feedback Design for the Future Robotic Computer. In *Proceedings of HCI Korea*, 2011.
6. Youngwook Jung, Jimin Rhim, **Hyelip Lee**, and Myung suk Kim. Appearance Design for the Future Robotic Computer based on Scenario Analysis. In *Proceedings of Korea Society of Design Science Autumn International Conference*, 2011.

PATENTS

Sangmin Bae, **Hyelip Lee**.
Versatile Furniture.
Korean Patent Registration Num.101327563.

Myung-suk Kim, **Hyelip Lee**.
Kinetic Partition.
Korean Patent Application Num.1020130101242.

ACADEMIC EXPERIENCES

Lecture - Inviting talk Nov. 6. 2018
Physical computing class, Interior design department, Hanyang University, Seoul

- Adaptive architecture from kinetic space to AR space

Research Assistant Mar. 2016-
Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea

- Using virtual partitions to foster collaboration and personal productivity in future office workspaces with the Korea National Research Foundation (NRF, Jan 2017- Dec 2018) as a Project Manager
- Emotional and functional state expression design for M4K platform with the Korea Institute of Science and Technology (KIST, Jul 2017-Jan 2018)
- Kinesthetic haptic wearable interface based on propeller for virtual and augmented reality
Engineering school collaborative Research (Jul 2017- Dec 2017)
- Appearance and interaction design for telepresence robots with the Korea Institute of Science and Technology (KIST, Mar 2016-Aug 2016) as a Project Manager

Research Assistant Feb. 2011 - Aug. 2013
Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea

- Development of future robotic computer-concept product model with the Electronics and Telecommunications Research Institute (ETRI)
- Emotional appearance design for cleaning robots with Youjin Robotics

WORK EXPERIENCE

Robot Interaction and Appearance Designer Feb. 2015 - Jun. 2015
Korea Institute of Science and Technology, Center of Human-Centered Coexistence (KIST-CHIC), Seoul, Korea

- Designing appearance of telepresence robots and conducting a user study

Coordinator (Assistant Curator) Feb. 2014 - Oct. 2014
LeeUngno Museum, Daejeon, Korea
Exhibition design, Collecting materials from abroad, Publishing a workbook.
Organizing the following exhibition and international conference:

- Exhibition Lee Ungno, *Estranger in West Germany*
- MWA (Museum and the Web) ASIA conferenc

EXHIBITIONS

SIGGRAPH 2018 Experience Presentation 2018
Title: Wind-Blaster: a Wearable Propeller-based Prototype that Provides Ungrounded Force-Feedback
Location: Vancouver Convention Centre, Vancouver, Canada, 16 August 2018

London Design Festival 2011
Title: Reuse Project
Exhibition item: Puzzle furniture

PRESS

Seungwoo Je, **Hyelip Lee**, Myung Jin Kim, Minkyong Lee, Yoonji Kim, Youngkyung Choi, and Andrea Bianchi. 2018. Wind-blaster. *Interactions* 26, 1 (December 2018), 14-15.

Seungwoo Je, **Hyelip Lee**, Myung Jin Kim, Minkyong Lee, Yoonji Kim, Youngkyung Choi, Andrea Bianchi. 2018. Demo hour. Interactions 26, 1 (December 2018), 8-11.

HONORS AND AWARDS

- **Best Presentation Award** at 2013 Korean Institute of Spatial Design Spring Conference, 2013.
- **Red Dot Best Award:** *Puzzle Furniture*, 2011.
- **Summa Cum Laude**, Korea National University of Arts, 2011.
- **Winner** of POSCO Steel Structure Design Competition, 2009.

PROFESSIONAL SKILLS

- **Designing Tool:** Photoshop, Illustrator, AutoCAD
- **3D Rendering Tool:** Rhino
- **Programming Language:** Unity 3D(C#), Processing, Arduino

ADDITIONAL INFORMATION

- **Country of citizenship:** United States
- **Languages Proficiency:** Korean (Native), English (Fluent), Chinese (Novice)