

## EDUCATION

### **Royal College of Art (RCA, 영국왕립예술대학교), London, UK**

**PhD** 2014 - 2018

Innovation Design Engineering, School of Design  
Supervisors & Advisor: Dr. Dan Lockton, Dr. John Stevens and Professor Ashley Hall

Doctoral Thesis: Synaesthesia Materialisation: Approaches to Applying Synaesthesia as a Provocation for Generating Creative Ideas within the Context of Design

### **Goldsmiths, University of London (런던 대학교, 골드스미스), London, UK**

**MA** 2012 - 2013

Design Critical Practice, School of Design

### **Central Academy of Fine Arts (중앙미술학원), Beijing, China**

**BA** 2005 - 2009

Industrial Design, School of Design

### **Beijing Huijia Private School, Beijing, China**

**High School** 2003 - 2005

One year early graduation / Grade skipping

\* Born in Seoul, Korea; raised and studied in Hong Kong, Beijing, and London since the age of 5.

## ACADEMIC APPOINTMENTS

**KAIST (Korea Advanced Institute of Science and Technology)** *September 2021 - Present*

**Department of Industrial Design, College of Engineering**

**Director of Affective Systems and Cognition Lab**

**Assistant Professor (Tenure Track)**

—Director of Affective Systems and Cognition lab—explores future of wellbeing, future of senses and future of creativity

—Support research and teaching undergraduate, masters and PhD students.

—Develop departmental research and curriculums.

**Royal College of Art (RCA) & Imperial College London (ICL), UK** *October 2018 - August 2021*

**Innovation Design Engineering, School of Design (RCA) & Dyson School of Design**

**Engineering (ICL)** (\* this is a dual degree program run jointly by the two above institutions)

**Tutor (Non-Tenure Track Assistant Professor)**

**2<sup>nd</sup> year Programme Leader**

—Head of 2nd Year, overseeing all matters related to the 2nd year cohort

—Organise lectures, weekly tutorial schedules and events.

—Direct and curate exhibition spaces for the programme.

—Supervise PhD students

—Assess students' projects and thesis.

—Develop departmental research.

- Support design and technical aspects for students' projects.
- Run and coach project collaboration between RCA and CERN in Geneva.
- After moving to Korea (from August 2021), from September 2021 to the present, I have been supporting the Computer Science Research Centre (CSRC) at the Royal College of Art (RCA) as a Visiting Research Fellow to supervise PhD students.

**Royal College of Art (RCA), London, UK** *February 2020 – July 2020*  
**Design Product, School of Design**  
**Visiting Lecturer (equivalent to US Adjunct Faculty)**

- Supported tutorials-based teaching to postgraduate students.

**Royal College of Art (RCA) & Imperial College London(ICL), UK** *August 2016 – March 2017*  
**Innovation Design Engineering, School of Design (RCA) & Dyson School of Design Engineering (ICL)** (*\* this is a dual degree program run jointly by the two above institutions*)  
**Visiting Lecturer (equivalent to US Adjunct Faculty) / Casual Worker—initial request was to support the team as a Visiting Lecturer but had to take the role as a Casual Worker due to VISA issues.**

- Give and organise weekly tutorials to postgraduate students for the project—Grand Challenge
- Support design and technical aspects for students' projects.
- Create films for project briefs.
- Set up exhibition space.
- Record student activities.

## GUEST TEACHING

**Carnegie Mellon University, Pittsburgh, USA** *April 2017*  
**Guest Instructor, School of Design**

- Syllabus: Spring 2017: Environments Studio IV: The Invisible  
 (Workshop: creating robots using synaesthesia as provocation)

## HONORS / NOMINATIONS / AWARDS

Red Dot Award, Reddot Award, Germany 2024  
**Red Dot Design Award**

Korea Society of Design Science (한국디자인학회), Executive Director, Korea 2024  
**Nominated as an Executive Director (상임이사)**

Teaching Awards, KAIST, Daejeon, Korea 2024  
**Excellence in Teaching Awards (5.0/5.0)**

Faculty Award, KAIST, Daejeon, Korea 2023  
**International Cooperation Award**

Nominated by the Royal Society of Arts (RSA), London, UK 2020  
**Fellow (Invited) of the Royal Society of Arts (FRSA)**

Awarded by ACM SIGCHI Designing Interactive Systems (DIS 2018), Hong Kong 2018  
**Best Provocation Award (Top 2%)—DIS 2018, PWIP**

Nominated by Overseas Korean Foundation (OKF), Seoul, South Korea 2016  
**Korean Future Leader**

Nominated by UK Design Council, London, UK 2015  
**70 Ones To Watch - 70 emerging design talent that will shape UK's design future.**

Nominated by Daum Media, Seoul, South Korea 2015  
**Today's Figure**

Awarded by International Design Award (IDA), Los Angeles, USA 2014  
**Silver Prize**

Awarded by A'Design Award, Milan, Italy 2013  
**Bronze A'Design Award**

## TALKS

**Hyundai Ondream Society, Seoul, Korea** *December 2023*  
Moderator for the collaborative exhibition between the KAIST ID and Hyundai Foundation

**KAIST's The First Wednesday Multidisciplinary Forum, Daejeon, Korea** *July 2023*  
Forum Main Speaker

**DDP (Dongdaemun Design Plaza), Korea** *Dec 2022*  
Moderator for the collaborative exhibition between the KAIST ID and DDP

**ACM SIGCHI Local Chapter, Seoul, Korea** *July 2022*  
Invited by the ACM SIGCHI Local Chapter event held at, University of Seoul

**Design Research Society (DRS) panellist, Bilbao, Spain** *June 2022*  
Design Research Society (DRS) PhD committee as a panellist

**Imperial College London & Royal College of Art, London, UK** *May 2022*  
Keynote Series | HCI DESIGN:Products, space travel, and delightful interactions.

**MIT Media Lab, Cambridge, Massachusetts, USA** *May 2021*  
Talk for the SpaceCHI 2021 workshop at the Conference on Human Factors in Computing Systems (CHI) of the Association for Computing Machinery (ACM)

**Harvard University, Cambridge, Massachusetts, USA** *October 2017*  
Guest speaker for the Twelfth National American Synaesthesia Association Conference.

**Institute of Philosophy, University of London, UK** *May 2017*  
Symposium contributor for the Open Senses Festival.

**Carnegie Mellon University, Pittsburgh, USA** *April 2017*  
Synaesthesia as inspiration

**Royal College of Art, London, UK** *December 2016*  
Synaesthesia as provocation

**University College London (UCL), London, UK** *September 2016*  
Guest speaker for workstations, Science has No Borders

**University College London (UCL), London, UK** *August 2016*  
Guest speaker for a film night – Film: Like Water for Chocolate

**Royal College of Art & University of Oxford, UK** *July 2016*  
Symposium organiser and presenter for the joint symposium between the Royal College of Art and the University of Oxford - Crossing Over: The Art & Science of Multisensory Perception.

**Future Leader Conference, Seoul, South Korea** *October 2015*  
Conference keynote speaker

**Camden Arts Centre & Kingsgate Workshop Trusts, London, UK** *June - July 2015*  
Symposium keynote speaker for the The Lab Project: Multisensory Perception and Synaesthesia

## REVIEWING & JUDGING

대전문화재단—Jury Member for Artience Daejeon (아티언스대전) 2024

Makerthon—Jury Member for KAIST 2023 & 2024

NYU x KAIST—Jury Member for Urban X young researcher day 2023

ACM CHI 2022—Reviewer for full paper 2022

Archive of Design Research 2022—Reviewer 2022

ACM TEI 2022—Associate Chair 2022

Ministry of Patriots and Veterans Affairs of Korea (국가보훈처) 2022—Jury Member 2022

IASDR 2021—Associate Chair 2021

DRS (Design Research Society)—Theme Chair & Reviewer 2021

Journal of Textile Design, Research and Practice—Reviewer 2020

ACM DIS2020—Jury Member for ACM DIS2020 Student Design Competition 2020

ACM DIS2019—Reviewer for Pictorial Papers for ACM DIS2019 2019

## CURRENT PHD STUDENTS

**Yoonji Lee**, Industrial Design Department, College of Engineering, KAIST. 2024 –  
Research Keywords: Materiality, Play, Interaction, Design, HCI, Senses

**Manoj Kumar**, Industrial Design Department, College of Engineering, KAIST. 2022 – *Leave of Absence*  
Research Keywords: Robotics, Space Missions, Play, Human-Factors etc.

**Brendan Commane**, Helen Hamlyn Design Centre & School of Design, Royal College of Art. 2020 - On Leave

Research Keywords: Dementia, Assistive Technology, Design, Human-Interaction, Tool, Human Factors etc.

**Yuqian Sun**, Computer Science Research Centre (CSRC) & School of Design, Royal College of Art. 2021 -

Research Keywords: AI, Game, Interaction Design, Human-Computer Interaction, Design etc.

## **PUBLICATIONS (Conference & Journal)**

1. Lee, Y.J, and Lee, C.H (2024) ICY Interfaces: Exploration of Ice's Ephemeral Features for Digital Game User Experience. **DIS 2024** (Designing Interactive Systems 2024), DOI: <https://dl.acm.org/doi/10.1145/3643834.3660725>
2. Cho, H.N, Kim, G.R, and Lee, C.H (2024) Olfactory Puppetry: Merging Olfaction and Puppetry to Explore The Future of Olfactory Social Robots, **DIS 2024** (Designing Interactive Systems 2024), DOI: <https://dl.acm.org/doi/10.1145/3643834.3660733>
3. Cho, H.N, Lee, Y.J, Lee, W.H, and Lee, C.H (2024), Thermo-Play: Exploring the Playful Qualities of Thermochromic Materials, **TEI 2024**, DOI: <https://doi.org/10.1145/3623509.3633376>
4. Choi, Y.J, Brook, K, Hiromi, O, and Lee, C.H (2024) Transforming Food Waste into Natural Pigments: Raising Community School Awareness of Food Waste Recycling Opportunities through Co-design Methods, **DRS (Design Research Society) 2024**, Boston, 24 June - 28 June, DOI: <https://doi.org/10.21606/drs.2024.240>
5. Sun, Y., Tang, Y., Pan, Z., Chen, Y., Qian, K., Xu, C., Wang, Z., Braud, T., Lee, C.H, Gao, Z., and Asadipour, A. (2023). AI Nūshu: An Exploration of Language Emergence in Sisterhood Through the Lens of Computational Linguistics. **SIGGRAPH Asia 2023 Art Paper**, DOI: <https://doi.org/10.1145/3610591.3616427>
6. Jeon, J.I, and Lee, C.H (2023), SoundMist: novel interface for spatial auditory experience. **UIST 2023 Poster**, DOI: <https://dl.acm.org/doi/10.1145/3586182.3616622>
7. Tang, Y, Sun, Y, Pan, Z., Chen, Y., Qian, K., Xu, C., Wang, Z., Braud, T., Lee, C.H., Gao, Z., and Asadipour, A. (2023). AI Nūshu (Women's scripts) - An Exploration of Language Emergence in Sisterhood. **SIGGRAPH Asia 2023 Art Gallery**, DOI: <https://doi.org/10.1145/3610537.3622957>
8. Lee, C.H, Balint, T, Chin, B.C, Kumar, M, Lee, Y.J, and Cho, H.N (2023), Space-Grounded: A Drugless Antidepressant Inhalation Device. **SpaceCHI 2023**, MIT, Massachusetts, USA

9. Sun, Y.Q, Lee, C.H, and Asadipour, A (2023) Hyborg Agency: Cultivating Conversational AI Creatures through Community Connections. **SIGGRAPH 2023 Art Gallery**. DOI: <https://doi.org/10.1145/3588428.3593827>
  
10. Sun, Y.C, Xu, Y, Cheng, C.H, Li, Y.H, Lee, C.H, and Asadipour, A, (2023). Explore the Future Earth with Wander 2.0: AI Chatbot Driven By Knowledge-base Story Generation and Text-to-image Model. In Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems (**CHI Interactivity '23**). ACM, New York, NY, USA, Article 450, 1–5. <https://doi.org/10.1145/3544549.3583931>
  
11. Sun, Y.Q, Lee, C.H, Cheng, C.H, Asadipour, A, Xu, Y, and Li, Y.H, (2022) Wander [001]. **SIGGRAPH Asia Art Gallery** 2022 DOI: <https://dl.acm.org/doi/abs/10.1145/3550470.3558441>
  
12. Lee, C.H, Balint, T, Chin, B.R, Lee, Y.J, and Cho, H.N, (2022) Space-Grounded, **IAC 2022 (International Astronautical Congress 2022)**, Paris, France. <https://iafastro.directory/iac/paper/id/69102/summary/>
  
13. Sommer, B., Sayuti, A., Lin, Z., Bohra, S., Kayganaci, E., Hu, J., Zheng, C.Y., Lee, C.H., O'Donoghue, S., Hall, A., and Anderson, P. (2022) Spatialized video communication platforms: Applications in design education and conferencing, in Lockton, D., Lloyd, P., Lenzi, S. (eds.), **DRS (Design Research Society) 2022**, Bilbao, 25 June - 3 July, Bilbao, Spain, DOI: <https://doi.org/10.21606/drs.2022.735>
  
14. Lockton, D, Lallemand, C, Menheere, D, Lee, C.H, Lean, M, Offenhuber, D, Robbins, H, Giaccardi, E, and Huron, S. (2022) Editorial: Valuing the qualitative in design and data, in Lockton, D., Lloyd, P., Lenzi, S. (eds.), **DRS (Design Research Society) 2022**, Bilbao, 25 June - 3 July, Bilbao, Spain. <https://doi.org/10.21606/drs.2022.1082>
  
15. Lee, C.H and Balint, T (2021). Martian Delight: Exploring Qualitative Contact for Decoupled Communications, **Acta Astronautica**, ISSN 0094-5765, DOI: <https://doi.org/10.1016/j.actaastro.2021.06.051>
  
16. Ferrarello, L, Fiadeiro, R.P.C, Hall, A, Galdon, F, Anderson, P Grinyer, C, Stevens, J, and Lee, C.H (2021). Learning Remotely through Diversity and Social Awareness. The Grand Challenge approach to tackle societal issues through diversity and creative thinking, **DRS 2021**
  
17. Kim, R, Pschetz, L, Linehan, C, Lee, C.H, and Poslad, S. (2021). Archives in DNA: Workshop Exploring Implications of an Emerging Bio-Digital Technology through Design Fiction. **Mindtrek 2021 (Mindtrek '21)**, June 1–3, 2021, Tampere/Virtual, Finland. ACM, New York, NY, USA, 4 pages. <https://doi.org/10.1145/3464327.3464966>
  
18. Lee, C.H, Balint, T, Kim, R, and Sommer, B. (2021). Decoupled Communication System for Long-Duration Space Missions?. **SpaceCHI'21: Human-Computer Interaction for Space Exploration (CHI Workshop Position Paper)**, May 14, 21. ACM, New York, NY, USA.

19. Lee, C.H., and Balint, T, (2020). Martian Delight: Exploring Qualitative Contact for Decoupled Communications, **IAC 2020 (International Astronautical Congress)**, Dubai, UAE.
  
20. Gong, W.L, Xiao, L, Wang, X.H, and Lee, C.H. (2020). Dots — An Inclusive Natural User Interfaces (NUI) for Spatial Computing, **MobileHCI EA 20**, Oldenburg, Germany. DOI: <https://doi.org/10.1145/3406324.3410715>
  
21. Sommer, B, Lee, C.H., Nat, M, and Torrasi, V.S, (2020) Immersive Design Engineering, **Electronic Imaging**, (SD&A), XXXI, pp. 265-1-265-16(16).
  
22. Lee, C.H., Lockton, D, Stevens, J, Wang, S.J, and Ahn, S.H. (2019). Synaesthetic-Translation Tool: Synaesthesia as an Interactive Material for Ideation, **CHI LBW 19**, Glasgow. DOI: <https://doi.org/10.1145/3290607.3312849>
  
23. Balint, T and Lee, C.H., (2019). Pillow Talk—Curating Delight for Astronauts, **Acta Astronautica**, Volume 159, Pages 228-237. DOI: <https://doi.org/10.1016/j.actaastro.2019.03.048>
  
24. Wang, S.J, Zhang, L, Lee, C.H., and Moriarty. P. (2019) The Scope of Innovative Design In Enhancing Energy Efficiency, **International Conference on Applied Energy (ICAE)**, Västerås, Sweden.
  
25. Lee, C.H., Lockton, D and Kim, J.E, (2018). Exploring Cognitive Playfulness Through Zero Interactions, **DIS'18 Companion**, Hong Kong. DOI: <https://doi.org/10.1145/3197391.3205413> **\*\* (Best Provocation Award—top 2%)\*\***
  
26. Lee, C.H. and Lockton, D, (2018). Silent Scene, **ACM Interactions'18 Demo**, 25, 6, 10-13. DOI: <https://doi.org/10.1145/3279993>
  
27. Balint, T and Lee, C.H., (2018). Pillow Talk—Curating Delight for Astronauts, **69th International Astronautical Congress (IAC)**, Bremen, Germany.
  
28. Lee, C.H., (2018). Synaesthesia Materialisation: Approaches to Applying Synaesthesia as a Provocation for Generating Creative Ideas within the Context of Design, **PhD Thesis**, Royal College of Art, School of Design, Innovation Design Engineering Research, UK.
  
29. Lockton, D., Ricketts, D, Chowdhury, S.A and Lee, C.H., (2017). Exploring Qualitative Displays and Interfaces, **CHI'17 LBW**, Denver, CO, USA. DOI: <http://dx.doi.org/10.1145/3027063.3053165>
  
30. Ferrarello, L., Hall, A, Kann, M and Lee, C.H., (2017). Collaborating Design Risk, **International Association of Societies of Design Research (IASDR)**, Ohio, USA.

31. Lee, C.H., (2017). Three Studies of Synaesthesia, *ACM Interactions '17 Demo*, 24, 3, 8-11. DOI: <https://doi.org/10.1145/3068337>

## **PUBLIC KNOWLEDGE EXCHANGE**

Hyundai Foundation Ondream Society, Seoul 2023

**Blueprint: Feasible Blue (curated the entire show)**

Shinsegae, Daejeon Art & Science 2023

**Nexperium**

DDP (Dongdaemun Design Plaza), Seoul 2022

**Inventive Minds and Ideas: Living In the Future (curated the entire show)**

HACKAIST, Daejeon, Korea 2022

**Organized a hackathon between KAIST and Imperial College London (ICL)**

Shinsegae, Daejeon Art & Science 2022

**Nexperium**

SHOW RCA 2019

**Curated the whole show for the IDE programme**

ACM CHI2019 2019

**Poster Presentation**

ACM DIS2018 2018

**Poster Presentation**

The Center SF, San Francisco, USA 2018

**Synaesthesia: Art, Love & Science**

Rebecca Hossack Gallery, London, UK 2017

**Open Senses Festival**

ACM CHI2017 2017

**Poster Presentation**

Lloyd's Register Foundation Headquarter, London, UK 2017

**Design For Safety at Sea**

University College London (UCL), London, UK 2016

**Doing It Together Science (DITOs)**

Royal College of Art (RCA), London, UK 2016

**Crossing Over: The Art & Science of Multisensory Perception**

Royal College of Art (RCA), London, UK 2016

**Amnesty of Rejection Redux**

Royal College of Art (RCA), London, UK 2016

**Work in Progress Show**

Henry Moore Gallery, Royal College of Art (RCA), London, UK 2015

**Work in Progress Show**

Former BBC Headquarter, London, UK 2013



## **Touch Art Fair**

Hoxton Gallery, London, UK *2013*

### **London Design Festival**

Mood Museum of Design, Milan, Italy *2013*

### **A'Design Award Exhibition**

Mumbai, India *2013*

### **Product Design Days**

Gdansk, Poland *2013*

### **About Design Expo**

Central Academy of Fine Arts, Beijing, China *2009*

### **Graduation Exhibition**

## **RESEARCH GRANTS AWARDED**

Research Name: Development of Synesthetic-Based Music Experience Scenarios and Forms for the Hearing Impaired

Fund Source: Electronics and Telecommunications Research Institute (ETRI), South Korea *2024*

Amount: **40K \$** (Principal Investigator)

Research Name: Development of Synesthetic-Based Music Experience Scenarios and Forms for the Hearing Impaired

Fund Source: Electronics and Telecommunications Research Institute (ETRI), South Korea *2023*

Amount: **45K \$** (Principal Investigator)

Research Name: Digital sleep aid device development

Fund Source: Ministry of Trade, Industry and Energy, South Korea *2023*

Amount: **50K \$** (Principal Investigator)

Research Name: Developing AI camera design direction

Fund Source: Industry, South Korea *2022*

Amount: **20K \$** (Principal Investigator)

Research Name: Human talent fostering project

Fund Source: KAIST, South Korea *2022*

Amount: **25K \$** (Principal Investigator)

Research Name: Space-Grounded: a drugless antidepressant inhalation device

Fund Source: Creative Challenge (C2) KAIST, South Korea *2022*

Amount: **30K \$** (Principal Investigator)

Research Name: Development of Tools for Human Well-being, Sensory Perception, and Creativity

Fund Source: KAIST, South Korea *2021*

Amount: **100K \$** (Principal Investigator)

## **PORTFOLIOS & PRESS & NEWS**

[asc.kaist.ac.kr](http://asc.kaist.ac.kr)

## **SKILLS**

**Embedded Systems:**

Atmel AVR, PCB Design, EAGLE, Arduino IDE, Raspberry PI etc.

**Software:**

Python, C++, HTML, Rhino 3D, Xcode, Swift, 3ds Max, Blynk, V-Ray, Photoshop, Filmora, etc.

**Fabrication:**

3D Printing, CNC, Laser Cutting, Carpentry, etc.

**LANGUAGES****English**

Fluent

**Chinese**

Fluent

**Korean**

Fluent

**OTHER EXPERIENCE & ACTIVITIES****Swimming indoor marathon for people with diabetes**

22miles (equivalent of swimming length from the UK to France), UK

*February - May 2018*

**Civilian Document Analyst Assistant**

Mandatory Military Service, Seoul, South Korea

*October 2009 - October 2011*

**REFERENCES**

**Dr. Dan Lockton**—Director of Imaginaries Labs & Assistant Professor at Eindhoven University of Technology & Courtesy Appointment at Carnegie Mellon University (CMU).  
Contact Address: [d.j.g.lockton@tue.nl](mailto:d.j.g.lockton@tue.nl)

**Dr. Bjorn Sommer**—Head of 1<sup>st</sup> Year Programme & Tutor (Assistant Professor) in Innovation Design Engineering at the Royal College of Art & Imperial College London.  
Contact Address: [ashley.hall@rca.ac.uk](mailto:ashley.hall@rca.ac.uk)

**Dr. Tibor Balint**—Principal Researcher / Designer / Engineer at JPL NASA.  
Contact Address: [tibor.balint@jpl.nasa.gov](mailto:tibor.balint@jpl.nasa.gov)