

Zidong (Jerry) Lin

Design Researcher and Interaction Designer in IoT and Experience Design

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Zidong (Jerry) Lin is a design researcher and interaction designer whose research-through-design practice explores experience design for IoT products through socio-technical narratives and experimental design methods. His work spans pleasure-driven design, human-computer interaction (HCI), object-oriented ontologies, data-driven design and speculative design among other topics.

RESEARCH EXPERIENCE

Research Assistant, NEMO Explorer XR Project at the RCA SNAP Visualisation Lab, Royal College of Art, UK (2025-present)

- Awarded VIS LAB funding with Dr Bjorn Sommer.
- Designing and leading a co-design workshop at the RCA SNAP Visualisation Lab to apply NEMO Explorer XR, an immersive experience presenting bird data collected through the New Economic Models for the Ocean (NEMO) project, to explore bird-ocean relationships through speculative design.
- Producing academic outputs based on the findings of the workshop.

PhD Researcher, School of Design, Royal College of Art, UK (2019 –2025)

- Conducted research-through-design to explore pleasure-driven design in Internet of Things (IoT) transformations, utilising questionnaires, design workshops, technology probes, research products and co-speculation.
- Developed a novel framework based on experience design theories, connected object features and IoT networks to support ideation in designing pleasurable experiences through IoT transformations.
- Developed an IoT technology probe and research product using Arduino-based systems for an in-the-wild study, enabling co-speculation on future relationships between humans and networked objects.
- Organised a series of design workshops, co-designing with early-career designers and HCI researchers.
- Defined research methodology, formulated research questions and independently planned and led research projects.
- Collaborated with individuals from diverse cultural and professional backgrounds.
- Published and presented research findings in leading peer-reviewed conferences (e.g., DRS, ICED), developing academic writing and presentation skills throughout the PhD.

Group Member, Immersive Innovation Design (I²D) Research Group, Royal College of Art, UK (2021-)

- Worked within a multidisciplinary research group comprising professors, lecturers, postdocs and PhD/master's students on interactive systems research projects.
- Co-authored and published papers on immersive experiences, bioinformatics visualisation, emotional design and biophilic design.
- Contributed to research project development, attending group meetings and discussions.

Visiting Researcher, Open Lab, Newcastle University, UK (2022)

- Undertook a research placement at Open Lab, Newcastle University funded by the Royal College of Art.
- Collaborated with HCI researchers to co-design pleasurable experiences for IoT products.
- Developed tailored research tools and organised a design workshop to explore pleasurable experiences and interaction possibilities.

Design Research Consultant, GSK, UK (2022)

- Provided design consultancy for the development of a visualisation tool for hormonal health information in the context of women's healthcare and well-being.
- Supported contextual research and ideation during the discovery and definition phases of the design process.

Research Assistant, Helen Hamlyn Centre, Royal College of Art, UK (2019)

- Assisted in redesigning the working experience of an international airline's Operations Control Centre, with a focus on improving communication flow and supporting staff well-being.
- Participated in brainstorming sessions, developing design concepts and creating visual presentations to effectively communicate proposed solutions

Research Assistant, Institute for Design Informatics, University of Edinburgh, UK (2019)

- Contributed to the development of a wall installation for a music festival, aimed at creating interactive and engaging experiences for visitors.
- Built detailed CAD models and produced 3D-printed prototypes to test and refine components of the installation.

MFA Major Research Project, Institute for Design Informatics, University of Edinburgh, UK (2019)

- Investigated the "health" of IoT products through an object-oriented ontological perspective.
- Developed technology probes using Arduino-based systems to explore people's attitudes and perceptions of counterfactual interactions in IoT products.
- Designed a smart system enabling IoT objects to communicate faults and breakdowns through counterfactual interactions, enhancing user awareness and maintenance.
- Created an interactive installation featuring three exemplar domestic IoT products, showed at exhibitions to demonstrate the system.

TEACHING EXPERIENCE

PhD Researcher, School of Design, Royal College of Art, UK (2019 –2025)

- Organised and delivered workshops on experience design theories and methods for postgraduate students, guiding them in applying this knowledge to IoT-related design activities.
- Co-facilitated workshops with Dr. Bjorn Sommer on learning design engineering in virtual environments.
- Conducted one-to-one tutorials with postgraduate students in the MA/MSc Innovation Design Engineering programme, providing individual feedback on their projects.

Tutor, ACG International Art Education, Qingdao, China (2020-2022)

- Mentored undergraduate students in experience design, interaction design and product design projects.
- Guided students in preparing design portfolios for applications to master's programmes in the UK.

EDUCATION

PhD Design Research

School of Design, Royal College of Art, UK (2019-2025)

Design Informatics MFA with Distinction

Edinburgh College of Art, University of Edinburgh, UK (2017-2019)

Product Design BA (Hons), 2:1

Lincoln School of Design and Architecture, University of Lincoln, UK (2014-2017)

DESIGN RESEARCH SKILLS

Research Methods & Analysis

- **Quantitative Research:** Questionnaires, UX metrics, t-tests, ANOVA
- **Qualitative Research:** Action research, participatory design, autoethnography, unstructured & semi-structured interviews, co-design workshops, cultural probes, role-playing, research products
- **Experimental & Mixed Methods:** A/B testing, hypothesis testing
- **Data Analysis:** Data collection, cleaning & wrangling, visualisation

Academic Writing

- Published full papers in leading peer-reviewed design conferences (e.g., DRS, ICED, IASDR)
- Writing research documentation, grant proposals, and academic publications

Design Thinking & Innovation

- Problem framing, ideation, critical analysis, speculative design
- Iterative prototyping, user-centred and systems thinking approaches

Collaboration & Interdisciplinary Work

- Worked in various research centres with diverse professionals, including design researchers, HCI researchers, artists, designers, computer scientists, psychologists and product users

Visualisation & Presentation

- **Illustration & Sketching:** Freehand drawing, digital sketching, concept visualization, storyboarding, data comics
- **Prototyping:** Sketch modelling, laser cutting, physical computing (Arduino and Adafruit boards), 3D printing (PrusaSlicer, UltiMaker Cura)
- **Software:** Autodesk Sketchbook, Procreate, Rhinoceros, Keyshot, Adobe Photoshop, Illustrator, InDesign, Microsoft Office Suite (Word, PowerPoint, Excel), Miro, Zoom, Sony Vegas

Programming Skills

- **C++:** Skilled in using C++ within the Arduino environment to develop functional IoT prototypes.
- **Python:** Skilled in data analysis and visualisation.

Languages

- English (Fluent)
- Chinese (Native)

PUBLICATIONS

Sommer, B., **Lin, Z.**, Berry, Z., Agarwala, R., Saxena, A., Stephens, R., Hodson, E., Amaral, C., Anderson, P., & Hall, A. (2025) The XR Stream—Grand Challenges for Ocean and Cities from a London Perspective. *Electronic Imaging*, 37, 1–9.
<https://doi.org/10.2352/EI.2025.37.13.ERVR-160>

Lin, Z., Ahmed-Kristensen, S., Hall, A., and Sommer, B. (2023) Using Pleasurability to Compare Wristwatches and IoT Smartwatches: Providing Novel Insights into UX Design. *Proceedings of the Design Society*. 3, pp. 3761–

3770. <https://doi.org/10.1017/pds.2023.377>

Lin, Z., Bohra, S., Kayganaci, E., Sayuti, A., Zheng, C.Y., Hall, A., Anderson, P., and Sommer, B. (2023) Towards an immersive virtual studio for design engineering. *Electronic Imaging*, 2023, pp 226-1 - 226-7, <https://doi.org/10.2352/EI.2023.35.2.SDA-226>

Sayuti, N.A., **Lin, Z.**, and Sommer, B. (2023) From Bio-inspired Design to Microbiology-inspired Design: a Conceptual Model-based Case Study on biological Materials informed by Emotions. In: De Sainz Molestina, D., Galluzzo, L., Rizzo, F., Spallazzo, D. (eds.), *IASDR 2023: Life-Changing Design*, 9-13 October, Milan, Italy. <https://doi.org/10.21606/iasdr.2023.315>

Lin, Z., Hall, A., and Sommer, B. (2022) Designing experiences for IoT products: A case study testing existing UX frameworks. In: Lockton, D., Lenzi, S., Hekkert, P., Oak, A., Sádaba, J., Lloyd, P. (eds.), *DRS2022: Bilbao*, 25 June - 3 July, Bilbao, Spain. <https://doi.org/10.21606/drs.2022.593>

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., Lenzi, S., Hekkert, P., Oak, A., Sádaba, J., Lloyd, P. (eds.), *DRS2022: Bilbao*, 25 June - 3 July, Bilbao, Spain. <https://doi.org/10.21606/drs.2022.735>

Sommer, B., Sayuti, A., Lee, C.H., **Lin, Z.**, Hu, J., Hall, A. (2022). Immersive Exploration of Cell Localization Scenarios Using VR, Spatialized Video Communication, and Integrative Bioinformatics. In: Chen, M., Hofestädt, R. (eds) *Integrative Bioinformatics*. Springer, Singapore. https://doi.org/10.1007/978-981-16-6795-4_14

Lin Z., Sommer B. and Ahmed-Kristensen S. (2021). IoT Product Pleasurability - Investigating the Pleasurable User Experiences Between Conventional Products and IoT Products Through Watches. In: Brooks A., Brooks E.I. and Jonathan D. (eds) *Interactivity and Game Creation. ArtsIT 2020. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering*, vol 367. Springer, Cham. https://doi.org/10.1007/978-3-030-73426-8_24

RESEARCH FUNDING

Royal College of Art SNAP VIS LAB Research Fund (£4,750)

Co-Investigator, research project "NEMO Explorer XR Development and Workshop", 2025

Royal College of Art Student Conference Fund

Recipient, published conference paper "Using Pleasurability to Compare Wristwatches and IoT Smartwatches: Providing Novel Insights into UX Design", Presenter & First Author, ICED 2023 Conference, costs and travel expenses, 2023

Royal College of Art Summer Placement Scheme (£2,000)

Recipient, Research project "Co-designing Pleasurable Experiences through IoT Transformations with HCI Researchers", Visiting Researcher at Open Lab, Newcastle University, salary support, 2022

Royal College of Art Student Conference Fund

Recipient, published conference paper "Designing Experiences for IoT Products: A Case Study Testing Existing UX Frameworks", Presenter & First Author, DRS2022 Conference, costs and travel expenses, 2022

CONFERENCES

'Using Pleasurability to Compare Wristwatches and IoT Smartwatches: Providing Novel Insights into UX Design', ICED23: The 24th International Conference on Engineering Design, University of Bordeaux, France, 2023

'Designing Experiences for IoT Products: A Case Study Testing Existing UX Frameworks', DRS2022, University of the Basque Country. Bilbao, Spain, 2022

'Investigating the Pleasurable User Experiences Between Conventional Products and IoT Products Through Watches', 9th EAI International Conference: ArtsIT, Interactivity & Game Creation, Aalborg, Denmark, 2020

EXHIBITIONS

Data Play: Festival 2019. Design Informatics Pavilion. Edinburgh, UK, 2019

MFA Design Informatics Degree Show. University of Edinburgh. Edinburgh, UK, 2019

New Designers. Business Design Centre. London, UK, 2017

BA Product Design Graduate Show. University of Lincoln. Lincoln, UK, 2017

WORKSHOPS

Designing Pleasurable Experiences through IoT Transformations, Open Lab, Newcastle University, Newcastle upon Tyne, 2022

Designing Pleasurable Experiences through IoT Transformations, School of Design, Royal College of Art, London, UK, 2022

Designing novel Pleasurable Experiences for Smartwatches, Online, MA/Msc Innovation Design Engineering Programme, School of Design, Royal College of Art, London, UK, 2021

Designing Novel Pleasurable Experiences for Smartwatches, Online, Qingdao, China, 2020

REFEREES

Professor Ashley Hall, Postgraduate Research Lead, Design MPhil/PhD, Head of Programme, Healthcare & Design MRes, Royal College of Art, ashley.hall@rca.ac.uk

Dr Bjorn Sommer, Research Tutor, 1st-year Programme Leader Innovation Design Engineering MA/MSc, Royal College of Art, bjorn.sommer@rca.ac.uk

Professor Gareth Loudon, Professor of Creativity, Innovation Design Engineering MA/MSc, Royal College of Art, gareth.loudon@rca.ac.uk