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Faculty of Society & Design  
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## Qualifications

Architecture & Design, PhD, Digital Material Practice: the Agency of Making, Royal Melbourne Institute of Technology University  
2014 → 2019

Diploma Professional Practice in Architecture (RIBA Part III), University of Westminster  
2003 → 2004

Architecture and Urbanism , Master, The Architectural Association (AA) School of Architecture  
2000 → 2002

Architecture, Diploma, University of East London  
1998 → 2000

Planning and Design (Architecture), Bachelor, University of Melbourne  
1995 → 1997

## Employment

### Professor &HOS - Architecture

Academic  
Faculty of Society & Design  
Australia  
1 Aug 2022 → 31 Dec 2049

### Senior Lecturer in Digital Architecture Design

University of Melbourne  
Melbourne, Australia  
1 Jan 2012 → 1 Jan 2022

### Senior Lecturer

University of East London  
London, United Kingdom  
1 Jan 2005 → 1 Jan 2011

## Research outputs

### Sandstone on Gold Coast: The Architecture of Bond University

Loh, P. L. L., Keniger, M. & Sarvimaki, S., 15 May 2024, Gold Coast: Bond University. 168 p.

### Designing Out Waste in Construction: Case Studies in Reducing Formwork for Concrete Casting

Loh, P., 15 Apr 2024, *Innovations, Disruptions and Future Trends in the Global Construction Industry*. Taylor & Francis, p. 156-169 14 p.

### Cross laminated plywood construction of a free-form roof

Loh, P. L. L. & Leggett, D., 10 Jul 2023, *Integration of Design and Fabrication: Proceedings of the International Association for Shell and Spatial Structures Annual Symposium 2023*. Xie, Y. M., Burry, J., Lee, T-U. & Ma, J. (eds.). Melbourne : IASS, Vol. 1. p. 2324-2333 10 p.

### **Suspended tensegrity: the anthropomorphic machine**

Loh, P. L. L., Leggett, D., Bohnenberger, S. & Tam, M., 10 Jul 2023, *Integration of Design and Fabrication: Proceedings of the International Association for Shell and Spatial Structures Annual Symposium 2023*. Xie, Y. M., Burry, J., Lee, T-U. & Ma, J. (eds.). Melbourne : IASS, p. 2113-2123 10 p.

### **Towards a Digital Repertoire: Design and Fabrication of a Robotically-Milled Brass Chandelier**

Loh, P. & Leggett, D., 4 Apr 2023, *Computational Design and Robotic Fabrication*. Yuan, P.F., Chai, H., Yan, C., Li, K. & Sun, T. (eds.). Singapore: Springer, p. 443-452 10 p. (Computational Design and Robotic Fabrication; vol. Part F1309).

### **3D Knitted Fabric Formwork for Concrete Casting**

Loh, P. L. L., Underwood, J. & Leggett, D., 24 Mar 2023, *HUMAN-CENTRIC: Proceedings of the 28th International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA 2023)*. Koh, I., Reinhardt, D., Makki, M., Khakhar, M. & Bao, N. (eds.). Hong Kong: The Association for Computer-Aided Architectural Design Research in Asia (CAADRIA), Vol. 2. p. 119-128 10 p.

### **Anthropomorphic Machine**

STELARC, Loh, P. L. L., Leggett, D., Hou, P. & Zhou, Q., 13 Aug 2022

### **Computational design and robotic fabrication of a self-supporting acoustic shell**

Loh, P., Mirra, G., Leggett, D. & Pugnale, A., 8 Jul 2022, *Structures and Architecture: A Viable Urban Perspective?*. Hvejsel, M. F. & Cruz, P. J. S. (eds.). Leiden: CRC Press, Vol. 2. p. 593-600 8 p.

### **Towards Digital Craft**

Loh, P., 1 Jun 2022, *Craft Shaping Society: Educating in the Crafts—The Global Experience. Book One*. Joubert, L. (ed.). Springer, p. 227-244 18 p. (Technical and Vocational Education and Training; vol. 35).

### **Freeform Volumetric Fabrication Using Actuated Robotic Hot Wire Cutter**

Loh, P., Hou, Y., Tse, C. T., Mo, J. & Leggett, D., 29 Jan 2021, *Proceedings of the 2020 DigitalFUTURES: The 2nd International Conference on Computational Design and Robotic Fabrication (CDRF 2020)*. Yuan, P. F., Yao, J., Yan, C., Wang, X. & Leach, N. (eds.). Springer, p. 280-289

### **Towards swarm construction**

Hou, Y. & Loh, P., 2021, *Projections - Proceedings of the 26th International Conference of the Association for Computer-Aided Architectural Design Research in Asia, CAADRIA 2021*. Globa, A., van Ameijde, J., Fingrut, A., Kim, N. & Lo, T. T. S. (eds.). Hong Kong: The Association for Computer-Aided Architectural Design Research in Asia (CAADRIA), p. 673-682 10 p. (Projections - Proceedings of the 26th International Conference of the Association for Computer-Aided Architectural Design Research in Asia, CAADRIA 2021; vol. 1).

### **Digital Stupefaction**

Holzer, D. & Loh, P., 2020, *RE: Anthropocene, Design in the Age of Humans - Proceedings of the 25th International Conference on Computer-Aided Architectural Design Research in Asia, CAADRIA 2020*. Holzer, D., Nakapan, W., Globa, A. & Koh, I. (eds.). The Association for Computer-Aided Architectural Design Research in Asia (CAADRIA), p. 351-360 10 p. (RE: Anthropocene, Design in the Age of Humans - Proceedings of the 25th International Conference on Computer-Aided Architectural Design Research in Asia, CAADRIA 2020; vol. 2).

### **Future prototyping Exhibition Catalogue**

Loh, P. L. L. (ed.), Qu, M. (ed.) & Leggett, D. (ed.), 2020, Melbourne: University of Melbourne. 116 p.

### **HOUSE #05 Incremental Construction in Digital Practice**

Loh, P. L. L. & Leggett, D., 2020, *Fabricate 2020: Making Resilient Architecture*. Burry, J., Sabin, J., Sheil, B. & Skavara, M. (eds.). UCL Press, p. 280-285

### **A Variable Shaping Form**

Loh, P. L. L., Leggett, D. & Prohasky, D., 8 Aug 2019, IPC No. B28B 7/02 2006.1, B28B 7/04 2006.1, B29C 33/30 2006.1, 1 G05B 19/4093 2006.1, Patent No. WO/2019/148242, 31 Jan 2019, Priority date 31 Jan 2018, Priority No. 2018900292

Robotic variable fabric formwork

Yang, X., Loh, P. & Leggett, D., Jul 2019, In: *Journal of Computational Design and Engineering*. 6, 3, p. 404-413 10 p.

Robotic fabrication of doubly curved façade system - Constructing intelligence in the digital fabrication workflow

Loh, P., Leggett, D. & Prohasky, D., 2019, *Intelligent and Informed - Proceedings of the 24th International Conference on Computer-Aided Architectural Design Research in Asia, CAADRIA 2019*. Haeusler, M. H., Schnabel, M. A. & Fukuda, T. (eds.). The Association for Computer-Aided Architectural Design Research in Asia (CAADRIA), p. 521-530 10 p. (Intelligent and Informed - Proceedings of the 24th International Conference on Computer-Aided Architectural Design Research in Asia, CAADRIA 2019; vol. 2).

Making as Pedagogy: Engaging Technology in Design Teaching

Loh, P. L. L., 18 Jul 2018, *Advanced Learning and Teaching Environments - Innovation, Contents and Methods*. Llevot-Calvet, N. & Bernad-Cavero, O. (eds.). IntechOpen, p. 137-155

CNC Adjustable Mould to Eliminate Waste in Concrete Casting

Loh, P., Leggett, D. & Prohasky, D., 2018, *Computing for a better tomorrow – Proceedings of the 36th International Conference on Education and Research in Computer Aided Architectural Design in Europe*. Kepczynska-Walczak, A. & Bialkowski, S. (eds.). Brussels: Education and research in Computer Aided Architectural Design in Europe, Vol. 1. p. 735-742 8 p. (Proceedings of the International Conference on Education and Research in Computer Aided Architectural Design in Europe; vol. 1).

FOAM Custom Single Task Construction Robot

Cheang, J. J. R. & Loh, P., 2018, *Computing for a better tomorrow – Proceedings of the 36th International Conference on Education and Research in Computer Aided Architectural Design in Europe*. Kepczynska-Walczak, A. & Bialkowski, S. (eds.). Education and research in Computer Aided Architectural Design in Europe, p. 157-164 8 p. (Proceedings of the International Conference on Education and Research in Computer Aided Architectural Design in Europe; vol. 1).

Machining Aesthetics: Tool Making as Design Research

Loh, P., 2018, *Proceedings of the 1st Annual Design Research Conference (ADR18)*. Maxwell, D. W. (ed.). Sydney: University of Sydney, p. 517-529

PAM: Parametric Adjustable Mould

Loh, P., Leggett, D. & Prohasky, D., 2018, *Proceedings of the 1st Annual Design Research Conference (ADR18)*. Maxwell, D. W. (ed.). Sydney: University of Sydney, p. 723-733

Foreword

Janssen, P., Loh, P., Raonic, A. & Schnabel, M. A., 2017, *Proceedings of the 22nd International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA 2017): Protocols, Flows and Glitches*. Janssen, P., Loh, P., Raonic, A. & Schnabel, M. A. (eds.). Hong Kong: The Association for Computer-Aided Architectural Design Research in Asia (CAADRIA), p. xi

Protocols, Flows and Glitches: Proceedings of the 22nd International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA 2017)

Janssen, P. (ed.), Loh, P. (ed.), Raonic, A. (ed.) & Schnabel, M. A. (ed.), 2017, Hong Kong: The Association for Computer-Aided Architectural Design Research in Asia (CAADRIA). 924 p.

Robotic variable fabric formwork

Yang, X., Koh, S. J. S., Loh, P. & Leggett, D., 2017, *Protocols, Flows and Glitches: Proceedings of the 22nd International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA 2017)*. Janssen, P., Loh, P., Raonic, A. & Schnabel, M. A. (eds.). Hong Kong: The Association for Computer-Aided Architectural Design Research in Asia (CAADRIA), p. 873-882 10 p. (CAADRIA 2017 - 22nd International Conference on Computer-Aided Architectural Design Research in Asia: Protocols, Flows and Glitches).

Tools as agents in design and making processes

Loh, P. & Leggett, D., 2017, *Protocols, Flows and Glitches: Proceedings of the 22nd International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA 2017)*. Janssen, P., Loh, P., Raonic, A. & Schnabel,

M. A. (eds.). Hong Kong: The Association for Computer-Aided Architectural Design Research in Asia (CAADRIA), p. 799-808 10 p. (CAADRIA 2017 - 22nd International Conference on Computer-Aided Architectural Design Research in Asia: Protocols, Flows and Glitches).

Reconsidering pye's theory of making through digital craft practice: A theoretical framework towards continuous designing  
Loh, P., Burry, J. & Wagenfeld, M., 1 Sept 2016, In: Craft Research. 7, 2, p. 187-206 20 p.

Computing helps with the complex design of modern architecture  
Loh, P., 7 Jun 2016, In: The Conversation.

Smart assembly in digital fabrication: Designing workflow  
Loh, P., Leggett, D. & Cameron, T., 2016, *Living Systems and Micro-Utopias: Towards Continuous Designing - Proceedings of the 21st International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA 2016)*. Chien, S-F., Choo, S., Schnabel, M. A., Nakapan, W., Kim, M. J. & Roudavski, S. (eds.). Hong Kong: The Association for Computer-Aided Architectural Design Research in Asia (CAADRIA), p. 755-764 10 p. (CAADRIA 2016, 21st International Conference on Computer-Aided Architectural Design Research in Asia - Living Systems and Micro-Utopias: Towards Continuous Designing).

Workmanship of risk: Continuous designing in digital fabrication  
Loh, P., Burry, J. & Wagenfeld, M., 2016, *Living Systems and Micro-Utopias: Towards Continuous Designing. Proceedings of the 21st International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA 2016)*. Chien, S-F., Choo, S., Schnabel, M. A., Nakapan, W., Kim, M. J. & Roudavski, S. (eds.). Hong Kong: The Association for Computer-Aided Architectural Design Research in Asia (CAADRIA), p. 651-660 10 p. (CAADRIA 2016, 21st International Conference on Computer-Aided Architectural Design Research in Asia - Living Systems and Micro-Utopias: Towards Continuous Designing).

Articulated timber ground, making pavilion as pedagogy  
Loh, P., 2015, *Proceedings of the 20th International Conference of the Association for Computer-Aided Architectural Design Research in Asia CAADRIA 2015: Emerging Experiences in the Past, Present and Future of Digital Architecture*. Ikeda, Y., Herr, C. M., Holzer, D., Kaijima, S., Kim, M. J. & Schnabel, M. A. (eds.). Hong Kong: The Association for Computer-Aided Architectural Design Research in Asia (CAADRIA), p. 23-32 10 p. (CAADRIA 2015 - 20th International Conference on Computer-Aided Architectural Design Research in Asia: Emerging Experiences in the Past, Present and Future of Digital Architecture).

## **Prizes**

### **2018 Tongji International Construction Festival**

Loh, Paul Ling Leong (Recipient), 10 Jun 2018

### **AIA Victorian Architecture Award Sustainable Architecture**

Loh, Paul Ling Leong (Recipient), 7 Jun 2024

### **Australian Interior Design Award: Best of State Residential Design (VIC)**

Loh, Paul Ling Leong (Recipient), 14 Jun 2024

### **Best Paper Award**

Loh, Paul Ling Leong (Recipient), Underwood, Jenny (Recipient) & Leggett, David (Recipient), 20 Mar 2023

### **Premier Award for Australian Interior Design**

Loh, Paul Ling Leong (Recipient), 14 Jun 2024

### **Research Impact and Industry Collaboration / Innovation Award**

Loh, Paul Ling Leong (Recipient), 6 Feb 2020

**The Australian Interior Design Award: Residential Design**  
Loh, Paul Ling Leong (Recipient), 14 Jun 2024

## **Press/Media**

### **Advancing the manufacture of curved concrete**

Paul Ling Leong Loh  
30/03/22  
1 item of Media coverage

### **A house for all seasons made entirely of concrete and plywood**

Paul Ling Leong Loh  
3/06/24  
1 item of Media coverage

### **ANAT Alumnus :: Stelarc**

Paul Ling Leong Loh  
31/10/22  
1 item of Media coverage

### **Artist Stelarc's 'creature' comes to life at Science Gallery**

Paul Ling Leong Loh  
4/08/22  
3 items of Media coverage

### **Cite Industrielle 4.0: Zoning for the latest Revolution**

Paul Ling Leong Loh  
18/01/23  
1 item of Media coverage

### **Design technology in contemporary architectural practice**

Paul Ling Leong Loh  
1/08/23  
1 Media contribution

### **Experiments, Disruptions, Affordances – Practices for Future Innovations**

Paul Ling Leong Loh  
12/09/21  
1 item of Media coverage

### **Knitting a sustainable future for concrete construction**

Paul Ling Leong Loh  
24/01/24  
1 item of Media coverage

### **Northcote House by LLDS**

Paul Ling Leong Loh  
7/06/24 → 14/06/24  
4 items of Media coverage

### **Prototyping the future with Melbourne Design Week 2020**

Paul Ling Leong Loh  
12/03/20  
1 item of Media coverage

## **Wool Formwork May Help Reduce Construction Waste**

Paul Ling Leong Loh

28/01/24

1 item of Media coverage

## **Projects**

### **2023 FSD Deans Award Research Grant**

Loh, P. L. L., Yu, L., Talebian, N., Miller, D., Ghanbaripour, A. & Ottmann, D.

1/03/23 → 31/12/23

### **Designing Learning Spaces for Diversity, Inclusion and Participation**

Loh, P. L. L., Cleveland, B., Imms, C., Imms, W., Clinton, J., Graham, L., Aston, R., Candido, C., Tregloan, K., LeNepveu, S., Robinson, L. & Connell, J.

9/07/24 → ...

## **Impacts**

### **Anthropomorphic Machine**

Paul Ling Leong Loh (Researcher)

### **House 5 / Northcote House**

Paul Ling Leong Loh (Researcher)

### **Parametric Adjustable Mould**

Paul Ling Leong Loh (Researcher)