

# Provides Ng

Designer & Lecturer  
Ph.D Candidate



Provides Ng is an architectural designer and researcher, who studies and applies digital tools in built environment design. Her work stands at the intersection of cybernetics theory, extended reality (XR), participatory design, and intergenerational community engagement.

Hong Kong (China)

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**Associate Member**, Hong Kong Institute of Architects (HKIA)

**Committee Member**, Leisure and Cultural Services Department, HKSAR

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## Skills

+ 3D modelling (Rhino, Sketchup, zbrush) + Geographical information system (GIS) + CG & animation (Houdini, Cinema 4D, Blender) + Photogrammetry (Reality Capture, Meshroom) + VR & AR (Mozilla Spoke, W3rld, 8XR) + Image processing (keyshot, Adobe After Effects, Photoshop, InDesign)

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## Languages

IELTS Academic: 7.5 overall + Mandarin: Fluent + Cantonese: Native

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## Awards

+ Commendation | Design Thinking x AI x Future Proof Education | 2024 + Second Runner-up in Information Technology | The 9th Hong Kong University Student Innovation and Entrepreneurship Competition | 2023 + Honourable Mention Award | CUHK Research Poster Exhibition | Hong Kong | 2023 + Silver Prize in Educational Technology Innovation | Teaching and Learning Innovation Expo | Hong Kong | 2022 + Outstanding Cultural Ambassador | Central & Western District Association for Culture & Arts | Hong Kong | 2022 + Best Popularity Awards | FutureTense | Hong Kong | 2022 + Digital Arts Honourable Mention | FutureTense HK | Hong Kong | 2022 + Finalist | World CAAD PhD | CuminCAD | 2022 + Best Presentation Award PGSC | SiGraDi | Latin America | 2021 + Researcher-led Initiative Awards | UCL | London | 2021

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## Grants

+ Design Trust Seed Grant | Hong Kong | 2024 + ICARE Social Service Projects Scheme | CUHK | Hong Kong | 2023 -24 + Funding Scheme to Enhance Student Engagement and Address Student Learning Needs | CUHK | Hong Kong | 2023-24 + ICARE Social Service Projects Scheme | CUHK | Hong Kong | 2022-23 + HKIA RAX Exhibition Stipend | Hong Kong | 2023 + SFSTR Grant | CUHK | Hong Kong | 2022 + UABB Exhibition Stipend | Hong Kong | 2022 + Strelka Institute Project Grant | Russia | 2019

## TEACHING EXPERIENCES

Lecturer & Thesis Tutor / **Bartlett School of Architecture, UCL**

SEP 2020 - PRESENT, LONDON

B-pro programmes (postgraduate): History, Culture, and Theory of Digital Technology in Architecture and Urban Design.

Seminar Lead (PGTA) / **Institute for Innovation and Public Purpose, UCL**

Spring Semester, 2021, LONDON

Transformation by Design (MPA): Introduce design thinking and toolboxes, facilitate group discussions, and work with students towards strategic public administration proposals.

## RESEARCH EXPERIENCES

Data Champion / **CUHK Library**

JAN 2024 - SEP 2024, HONG KONG

Providing immediate support to research data management enquiries in the faculty.

Researcher / **Strelka Institute of Media, Architecture & Design**

JAN 2019 - AUG 2019, MOSCOW

The New Normal Program: propose innovative urban strategies with innovative and technological design skills and thinking.

Research Assistant / **Faculty of Architecture, HKU**

OCT 2018 - JAN 2019, HONG KONG

Curb Scale: The Street As Negotiated Infrastructure

## EDUCATION

PhD / **School of Architecture, CUHK**

SEP 2021 - PRESENT, HONG KONG

MRes in Digital Theory / **Bartlett School of Architecture, UCL**

SEP 2019 - SEP 2020, LONDON

MA Advanced Architecture Design / **Städelschule Architecture Class**

SEP 2015 - SEPT 2017, FRANKFURT

BSc Architecture / **School of Architecture, CUHK**

SEP 2011 - SEPT 2014, HONG KONG

## POLICY & PUBLIC SERVICES

Committee on Venue Partnership, **LCSO, HKSAR**

2022-2026, HONG KONG

Museum Advisory Committee, **LCSO, HKSAR**

Science Sub-committee, **LCSO, HKSAR**

2024-2026, HONG KONG

Organiser / Metaverse Booth / **STEM Experience, HKFYG**

2023, HONG KONG

Lecturer / General Studies Topical Lecture / **S.T.F.A. LKW Primary School**

2023, HONG KONG

## Professional Experience

+ Schneider and Schumacher Architecture (S+S)  
/ Architecture Assistant JAN 2018 - AUG 2018,  
FRANKFURT + Dennis Lau and Ng Chun Man  
Architects (DLN) / Architecture Assistant MAY  
2015 - AUG 2015, HONG KONG + Barrie Ho  
Architecture / Architecture Assistant JUN 2014  
- APR 2015, HONG KONG

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## Exhibition

+ Rijksmuseum Twenthe | Deep Truth |  
Netherlands | 2022 + HKIA Roving Architecture  
Exhibition | Kuala Lumpur-Nanjing-Hong Kong |  
2023 + Gerontech and Innovation Expo cum  
Summit | Hong Kong | 2023 + InnoCarnival |  
Hong Kong | 2023 + MOU Signing Ceremony,  
Exhibition and Mini-Workshops on Innovative  
Uses of Digital Technology | CUHK | Hong Kong |  
2023 + FutureTense HK | Hong Kong | 2023 +  
Hong Kong Shenzhen Bi-City Biennale of  
Urbanism \ Architecture (UABB) | 2022 +  
Athens Digital Arts Festival | The international  
Festival for Digital Arts of Greece | 2022 +  
Future of Art | Multimedia Art Museum Moscow  
(MAMM) | Russia | 2022 + GOGBOT Festival |  
Netherlands | 2021 + Fake Me Hard |  
Netherlands | 2021 + Art Machines 2 | CityU |  
Hong Kong | 2021 + Processing Community Day  
| Porto | 2021 + xCoAx (Conference on  
Computation, Communication, Aesthetics) |  
Austria | 2020 + DEEP FAKE | UCLA SciArt |  
USA | 2020 + Refest | CultureHub x UCLA Game  
Lab | 2019 + DA FEST (Digital Art Festival  
Bulgaria) | 2019 + ToBePerfect | 33 Town  
Museum | China | 2019 + CYBERIA New Media  
Playground | India | 2019

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## Workshops Teaching

+ Digital Skills | The Bartlett UCL | London |  
2022 + Volumetric Cinema | UABB | Hong Kong |  
2022 + Community Review | UABB | Hong Kong  
| 2022 + Co-creation | UABB | Hong Kong | 2022  
+ Casey Rehm Studio | SCI-Arc | USA | 2022 +  
Volumetric Cinema | ADAF | Greece | 2022 +  
Medialab Matadero | Madrid | Spain 2022 +  
Volumetric Persona studio | Futurly 2022 +  
GOGBOT FESTIVAL | Enschede 2021 + Media  
Ecology BAFTA | Bartlett 2021 + SiGraDi | Latin  
America | 2021 + CAADfutures | USC - USA |  
2021 + DigitalFUTURES 2021 | Tongji  
University + CAADRIA | CUHK - Hong Kong |  
2021

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## R&D Collectives

**AI in+form** / Co-founder  
Rational Energy Architects (@R.E.Ar\_)  
2020 - PRESENT, INTERNATIONAL

**Volumetric Cinema** / Co-founder  
The Current Team (@current.cam)  
2019 - PRESENT, INTERNATIONAL

## PUBLISHING & EDITORIAL EXPERIENCES

### Editor

Managing Editor (interim) / **Prospectives Journal, UCL**  
Spring - Summer Terms 2022, LONDON

### Reviewer

**The Journal of Asian Architecture and Building Engineering**  
**The Journal of Behaviour & Information Technology**  
Taylor & Francis, 2024 - PRESENT, INTERNATIONAL

**Association for Computer Aided Design in Architecture**  
**Computer-Aided Architectural Design Research in Asia**  
CumInCAD, 2023, INTERNATIONAL

**International Journal of Architectural Computing**  
SAGE, 2023, INTERNATIONAL

**Journal of Housing, Care, and Support**  
Emerald Publishing, 2023, INTERNATIONAL

**Architectural Intelligence**  
Springer, 2022, INTERNATIONAL

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## ACADEMIC SERVICES

### Committee Member

Recruitment & Selection Panel / B-pro, **The Bartlett, UCL**  
2024, LONDON

Treasurer / Executive Committee (EXCO) of **The Association for**  
**Computer-Aided Architectural Design Research in Asia (CAADRIA)**  
2024, ASIA

Campus Planning Committee, **CUHK**  
Art Steering Committee, **CUHK**  
2024, HONG KONG

Action Groups & Public Programming / **The Bartlett, UCL**  
2021 - 2022, LONDON

### Exhibitions & Events

Art Museum Ambassador / **CUHK**  
2024, HONG KONG

Metaverse Consultant / **VTL Innovation Expo in the Metaverse, CUHK**  
2023, HONG KONG

Coordinator & Exhibitor / **Marvel Digital Ai & CUHK MOU Ceremony**  
2023, HONG KONG

Designer / Virtual Exhibition / **Teaching & Learning Innovation Expo**  
2022, HONG KONG

### Seminar & Workshop Organiser

Co-creation Space Main Topic Organiser / **CAADfutures, CumInCAD**  
2023, DELFT

'Round-the-Table in VR' Lecture Series / **The Bartlett, UCL**  
2021 - 2022, LONDON

'Guest Seminar Series: Speculative Design' / **The Bartlett, UCL**  
2020 - 2021, LONDON

## JOURNAL PUBLICATION

Digitally-Gamified Co-Creation: Enhancing Community Engagement in Urban Design through a Participant-centric Framework, Published by: Cambridge University Press. **Provides Ng**, Shutong Zhu, Yuechun Li, and Jeroen van Ameijde. (2024). <https://doi.org/10.1017/dsj.2024.17>

Challenges and Opportunities of Using Metaverse Tools for Participatory Architectural Design Processes. In *Virtual Worlds* (Vol. 3, No. 3, pp. 283-302). MDPI. **Ng, P.**, Eloy, S., Raposo, M., González, A. F., da Silva, N. P., Figueiredo, M., & Zuberi, H. (2024, July).

Digital common(s): the role of digital gamification in participatory design for the planning of high-density housing estates. Journal: *Frontiers in Virtual Reality*. **Provides Ng**, Yuechun Li, Shutong Zhu, Bingge Xu and Jeroen van Ameijde. (2023). <https://doi.org/10.3389/frvir.2022.1062336>

Transitional Domesticity: Collectivisation and Fractionalisation in P2P Digital Citizenry - Learning from Socio-Innovations of Chinese-Asian Historical Contexts. Journal: *Hybrid Domesticities*. De Gruyter academic publishing. **Provides Ng**. (2023).

## CONFERENCE PUBLICATION

### Metaverse & Gamification in Co-Creation

Kit-of-Parts Design for Architecture Co-creation Games. In: Accelerated Design. Conference: CAADRIA 2024. Singapore. **Provides Ng**, Yuechun Li, Shutong Zhu, Jeroen Van Ameijde. (2024).

Structuring Gamified Participatory Public Space Design: Developing a Design Quality Evaluation System to Support Digital Co-creation Processes. In: Creativity in the Age of Digital Reproduction. xArch 2023. Lecture Notes in Civil Engineering, vol 343. Springer, Singapore. Zhu, Shutong, **Ng, Provides**. van Ameijde, Jeroen. (2024). [https://doi.org/10.1007/978-981-97-0621-1\\_32](https://doi.org/10.1007/978-981-97-0621-1_32)

Round The Table: Education without the 2d frame constraints - a WebVR experience from a glocal perspective. SIGraDi 2022. **Ng, Provides & Fernandez, Alberto**. (2022).

### Diversity & Digitalisation

Decolonial Urbanism in Datafied Society. Conference: IFOU 2022. **Ng, Provides**. Fernandez, Alberto. Kalema, Nai. (2022)

Collaborative Intelligence: The Tao of DAO. Conference: IFoU 2021. **Ng, Provides**. (2021). DOI: 10.24404/6155EB7A504BB200083200BA

### Blockchain & Decentralisation

21E8: Coupling Generative Adversarial Neural Networks (GANS) with Blockchain Applications in Building Information Modelling (BIM) Systems. PROJECTIONS - Proceedings of the 26th CAADRIA Conference - Volume 2, The Chinese University of Hong Kong and Online, Hong Kong, 29 March - 1 April 2021, pp. 111-120. **Ng, Provides**. (2021). <https://doi.org/10.52842/conf.caadria.2021.2.111>

Applying Satoshi's Vision to Brownfield Sites Revitalisation in Hong Kong. Conference: 13th International Forum of Urbanism (IFoU) Congress 2020 9-12 October 2020 in Nanjing, China. **Ng, Provides**. (2020).

Disrupting The Information Economy of Architecture With Satoshi's Vision - How can blockchain applications in BIM help to support a circular economy inclusive to local independent and small-scale actors?. Conference: DC I/O 2020 Conference | DesignComputation.org . London, UK. **Ng, Provides**. (2020). DOI:10.47330/DCIO.2020.RGSP3865.

### Architecture Technology & Speculative Design

Performative Architecture as a Theatrical Performer: A Technological Extension to Dancers' Movements. 12th Conference on Computation, Communication, Aesthetics & X Fabrica, Treviso, Italy. Aya Meskawi, **Provides Ng**, Valentina Soana (2024).

Control and Communication: A System Study of Platform Economics and Digital Archives in Architectural Design. Conference: Art Machines 2: International Symposium on Machine Learning and Art 2021. **Ng, Provides**. (2021).

Platform Urbanism: Residency Planning Towards Hyper Personalisation. Conference: DeepCity 2020-21 International Latsis Symposium. **Ng, Provides**. (2021).

Preemptive Futures: Entropic and Negentropic Information in Speculative Design. xCoAx 2022. **Ng, Provides**. (2022). DOI 10.24840/xCoAx\_2022\_16

Collaborative Vision: Livestream, Volumetric Navigation, AI Image Processing, and Algorithmic Personalisation. Conference: xCoAx 8th Conference on Computation, Communication, Aesthetics & X. 8-10 July, Graz online. **Ng, Provides**. (2020).

Circular Insurance: Risk Resilience in Speculative Urbanism. Conference: RESPONSIVE CITIES: DISRUPTING THROUGH CIRCULAR DESIGN SYMPOSIUM 2019. IAAC, Barcelona, Spain.: **Ng, Provides**. (2019).

## Artificial Intelligence (AI) & Bio-Design

AI In+form: Intelligence and Aggregation for Solar Designs in the Built Environment Gomez, P and Braida, F (eds.), *Designing Possibilities - Proceedings of the XXV International Conference of the Ibero-American Society of Digital Graphics (SIGraDi 2021)*, Online, 8 - 12 November 2021, pp. 203–215. Provides & Fernandez, Alberto & Dória, David & Odaibat, baha. (2021).

Decentralised Solar Economy: Unattended and Smart Solar Energy Urban System (UnSSEUS). In *POST-CARBON - Proceedings of the 27th CAADRIA Conference*, Sydney, 9-15 April 2022, pp. 759-768. Ng, Provides, David Doria, and ALBERTO FERNANDEZ. (2022). <https://doi.org/10.52842/conf.caadria.2022.2.759>

An Info-Biological Theory Approach to Computer-Aided Architectural Design: UnSSEUS. In *Computer-Aided Architectural Design. Design Imperatives: The Future is Now: 19th International Conference, CAAD Futures 2021*, Los Angeles, CA, USA, July 16–18, 2021, Selected Papers, pp. 436–455. Singapore: Springer Singapore, Ng, Provides, Baha Odaibat, David Doria, and Alberto Fernandez. (2022).

An Information Theory Application to Bio-design in Architecture. Conference: *Art Machines 2*. Hong Kong. Ng, Provides & Dória, David & Odaibat, baha. (2021)

## INVITED PUBLICATION

What is a Collage of Media Architecture?. In: *Provocations on Media Architecture*. Ng, Provides & Joteva, Eli & Ya Nzi & Konevskikh, Artem. & GPT2. (2023)

The Algorithmic Form in Isa Genzken What's the hook? Social Architecture?. In: *The Bartlett Prospectives Journal*. Issue 2. Spring-Summer 2022. Ng, Provides (2022)

CurrenSee: A Ecological Attention Economy. In: *Monumental Wastelands Magazine*. Ng, Provides & Joteva, Eli & Ya Nzi & Konevskikh, Artem. (2020)

## EDITORIAL

Editor's Note: *Climate F(r)ictions*. Issue 03. The Bartlett Prospectives Journal. UCL. **Provides Ng**. (2022 Summer).

Editor's Note: *Algorithmic Form*. Issue 02. The Bartlett Prospectives Journal. UCL. **Provides Ng**. (2022 Winter).

## CONFERENCE POSTER

Digital Common(s): The Role of Gamification and Immersive Technology in Co-Design of Public Spaces. CAADRIA 2023. Provides Ng, Yuechun Li, Shutong Zhu, Bingge Xu & Jeroen van Ameijde. (2023).

Co-Learning Space: Collective Design of Learning Spaces Using Immersive Digital Twins and Virtual Reality Technologies. Virtual Teaching and Learning Innovation Expo in the Metaverse. CUHK. Provides Ng, Jimmy HO, Yuechun LI, Paul LAM. (2023).

AI in+form: AI application in Participatory Solar Design. Design Computing and Cognition'22. Ng, Provides & Fernandez, Alberto & Dória, David. (2022).

Round-The-Table: A Sustainable Academia Via Phygital Exchanges. Conference: CAADRIA 2022. Project Category. Provides Ng & Alberto Fernandez (2022)

Current: A Platform for Urban Archive. Conference: DC I/O 2020 Conference | DesignComputation.org . London, UK. Ng, Provides & Joteva, Eli & Nzi, Ya. (2020). DOI:10.47330/DCIO.2020.VWEG6251.

Preemptive Futures: The Application of Preemption in a Computational Data Market for Architecture. Conference: SiGraDi2020 PHD Workshop Virtual. Ng, Provides. (2020).

## SYMPOSIUM ABSTRACT

Urban Cultural Inheritance: Generative Adversarial Networks (GANs) Assisted Street Façade Design Based on Indigenous Hakka Settlements in Hong Kong. Conference: International Conference on Advances in Design, Materials and Manufacturing Technologies 2022 (ICADMMT 2022). DONG, Jia-Hua & NG, Provides. (2022)

Universal Basic Service: Land Collectivisation, De-collectivisation and Scalability. Conference: Mediating scale 2022. Ng, Provides. (2022)

Archives And Platforms: A Sustainable Economy Of Information. Conference: AA x SAHGB x RIBA Annual Symposium 2020 'Arch/tectures Arch/ves'. Ng, Provides. (2020).

The Architecture of De-carbonisation: Spaces that Teach. AA School of Architecture Open Call. Ng, Provides. (2020). Carbon Derivatives: Decentralising Urban Vegetation. Conference: Future Architecture. Ng, Provides. (2019).