

Curriculum Vitae



Associate Professor Luke Peh Lu Chang

Vice Dean

School of Science and Technology

Tel : +65 6248 9648

Email : lukepehlc@suss.edu.sg

Education Qualifications

2011	PhD (Built Environment), National University of Singapore
2005	B.Sc. (Building), National University of Singapore

Academic and Professional Experience

2015 – Present	Vice Dean, School of Science and Technology
2016 – 2022	Academic Lead/Co-Chair/Chair, Academic Audit Committee
2012 – 2013	Head of Programme (Building and Project Management)
2010 – 2018	Head of Programme (Facilities and Events Management)

Membership and Professional Activities

Memberships

- Member, International Facility Management Association
- Member, Fire Safety Managers' Association
- Associate Director/Certified Facilities Management Expert, SIFMA CFME Scheme

Industry Certifications

- Achieving Workplace Safety and Health Excellence in Construction (BCA)
- Assessor for Universal Design (BCA)
- Best Practices for Green and Gracious Builder (BCA)
- BIM Planning and Management Certificate (BCA)
- BIM MEP Modelling Certificate (BCA)
- CONQUAS Manager (BCA)
- GreenMark Facilities Manager (BCA)

- Certified Fire Safety Manager (SCDF)
- Facility Management Professional (IFMA)
- Project Management Professional (PMI)
- SCRUM-Agile certificate (LinkedIn)
- Edward de Bono's Power of Perception (SIM-PD)
- Ivey Case Writing Workshop (SIM-PD)
- Analytics Seminar Series (SUSS)
- Entrepreneurship Education for Teachers Programme (NTU)
- Iterative Innovation Process (EDX)
- Blockchain Technology (EDX)
- Professional Certificate in Drones and Autonomous Systems (EDX)
- Professional Certificate in IBM Data Science & Machine Learning (EDX)
- Strategic Management – Connected Strategy (Wharlton, EDX)
- Circular Economy for a Sustainable Built Environment (EDX)
- User Experience Design Professional Certification (Udemy)
- Chief Information Officer Executive Certificate (Udemy)
- Chief Technology Officer Executive Certificate (Udemy)
- Executive Diploma for Vice President/ Chief Operating Officer (Udemy)
- Accredited Professional Life Coaching Certificate and Guide (Udemy)
- Management Consulting Essential Training (Udemy)

Professional Activities

- Cross-Sectors Leaders Programme (Institute of Public Leadership, Civil Service College)
- SUSS Mission Trips to Malaysia/ Thailand/ Hong Kong/ China
- Presentation and interviewed by Ministry of Personnel Management, Republic of Korea delegation on Meetings, Incentives, Conventions and Exhibitions
- Moderator for International Green Building Conference, Singapore
- Moderator for NLB-UniSIM Panel Discussion on “Staying Safe from the Haze: Green Buildings and Homes”, Singapore
- Session's Co-Chair for BIT's Annual Low Carbon & Green Growth Earth Summit, Seoul, South Korea
- Session's Technical Chair for International Conference on E-Business and Applications, Singapore
- Session's Chair for International Ireland Conference for Education, Dublin, Ireland
- Australasian Universities Building Educators Association Conference (AUBEA) International Technical Committee
- Scientific Committee for Sustainable Built Environment Sydney Conference
- Enterprise Resource Management Competition Organizing Committee, Singapore
- Judge for IFMA poster Competition

- Pre-Judge for LTA-Engineering Competition

Consultancy and Executive Experience

- Audit and Risk Committee Member, Consumers Association of Singapore (CASE)
- Council Member, CaseTrust Advisory Council
- Member, Autonomous Universities' Curriculum Advisory Committee on 5G & Telecoms
- Technical Committee member, Building Management and Maintenance (under Building and Construction Standards Committee, appointed by IES and Enterprise Singapore)
- Research Committee, Pacific Association of Quantity Surveyors (PAQS)
- Member, Educational Sub-Committee of Association of Strata Managers
- Member, Built Environment SkillsFuture (Facilities Management) Workgroup
- Member, Consultancy team for evaluating the effectiveness of e-learning in Home Team Academy (HTA)
- Audit Panel for University of Warwick's MSC. Program and Project Management programme in Singapore Institute of Management
- Reviewer for Singapore Polytechnic's Hotel and Leisure Facilities Management Diploma programme
- Reviewer for Journals of Engineering, Construction and Architectural Management, Buildings, Energies, Sustainability, Environmental Research and Public Health, Electronics, Applied Science and Sustainability and Social Development.
- Mentor, NUS-NUSS Mentorship programme
- Member, SIM's People's Leader Workgroup
- Member, SIM's 50th Anniversary Celebration Sub-Committee working on Documentary and Commemorative Video
- Coach/Resource Person, SUSS Venture Building Programme
- Mentor/Academic Coach, Teaching & Learning Centre, SUSS
- SUSS's Strategic Planning for Capability Building for Staff and Associates
- School representative, Academic Audit Committee
- School representative, Student Affairs and Support Committee
- School representative, Alumni Steering Committee
- School representative, B.Sc. Mathematics Programme Advisory Committee (PAC)
- School representative, B.Sc. ICT PAC
- School representative, B.Sc. Digital Media PAC
- School representative, B.Sc. Events Management PAC
- School representative, B.Sc. Facilities Management PAC
- School representative, Bachelor in Building and Project Management PAC
- School representative, B.Eng. Aerospace Systems PAC
- School representative, B.Eng. Biomedical Engineering PAC
- School representative, B.Eng. Electronics Engineering PAC

- School representative, Masters in Built Environment PAC
- School representative, Industrial PhD PAC

Voluntary and Community Work

- Member of Ulu Pandan's Community Emergency and Engagement (C2E) Committee
- Member of Ulu Pandan's Active Aging Committee (2022-2024)
- Member of Ulu Pandan's Mental Wellness Taskforce (2022-2024)

Research Interests

- Quality Assurance
- Higher Education and EdTech
- Construction Economics and Management
- Integrated Digital Delivery for High-Performance, Sustainable and Smart Buildings
- Inclusive Built Environment

Selected Publications

Journal Papers:

- Ng, W.X. Cheng, Z.Y. and Peh, L.C. (2024). Application of VR in Facility Management Competency-Based Training in the Era of Industrie 5.0. *Interdisciplinary Journal for Applied Engineering/STEM Education*.
- Peh, L.C. and Thiagarajan, L.B. (2024). A Quality Assurance Framework for STEM Programmes and Courses in University. *International Journal for Cross-Disciplinary Subjects in Education*.
- Kwek A. Peh, L.C. and Tan, J. (2023). Distractions, Analytical Thinking and Falling for Fake News: A Survey of Psychological Factors. *Journal of Humanities & Social Sciences*.
- Ba, H. Wang, Q. Chen, C. Liu, Z.W. Peh, L.C. and Tiong, R. (2023). Change Management of Organizational Digital Transformation: A Proposed Roadmap for BIM-enabled FM. *Buildings*.
- Peh, L.C. Cerimagic, S. and Conejos, S. (2021). Challenges of running online exams and preventing dishonesty during Covid-19 pandemic. *Journal of Learning Development in Higher Education*.
- Liu, Z.W. Lu, Y.J. Nath, T. Wang, Q. Lee, K.T. and Peh, L.C. (2021). Critical Success Factors for BIM Adoption during Construction Phase: A Singapore Case Study. *Engineering, Construction and Architectural Management*.
- Liu, Z.W. Lu, Y.J. Shen, M. and Peh, L.C. (2020). Transition from Building Information Modeling (BIM) to Integrated Digital Delivery (IDD) in Sustainable Building Management: A Knowledge Discovery Approach Based Review. *Journal of Cleaner Production*.
- Liu, L.W. Wang, Q. Gan, J.L. and Peh, L.C. (2020). Envelope Thermal Performance Analysis Based on Building Information Model (BIM) Cloud Platform – Proposed Green Mark Collaboration Environment. *Energies*.

- Liu, Z.W. Lu, Y.J. and Peh, L.C. (2019). A Review and Scientometric Analysis of Global Building Information Modelling (BIM) Research in the Architecture, Engineering and Construction (AEC) Industry. MDPI-Buildings. Best Paper Award.
- Peh, L.C. Toor, S. and Leong, J. (2019). The Role of Scientific Terminology and Metaphors in Management Education. European Journal of Social Sciences Education and Research.
- Goh, J. and Peh, L.C (2017). The Challenge of Building & Sustaining a Green School in Singapore – UNCSEA's Corporate Sustainability Journey. Case and Teaching Notes. Case Centre.
- Peh, L.C. Low, S.P. and Adi, I. (2015). Regionalization Strategies of Singapore's Architectural, Engineering and Quantity Surveying Consultancy Firms: An Overview. International Surveying Research Journal.
- Low, S.P. and Peh, L.C. (2010). The Importance of Physical Presence in Overseas Markets: Sharing of Experiences from Singapore's Domiciled Construction-related Companies in Regional Markets. The Singapore Engineer.

Conference Papers and Presentations:

- Peh, L.C. and Thiagarajan, L.B. (2023). Lessons Learnt from Implementing a Quality Assurance Framework for STEM Programmes – a Singapore University's 10-year Journey. Ireland International Conference on Education, Dublin, Ireland.
- Wu, H.J. Kiam, C.H. Yong, T.L. Toh, H.L. Tiong, B.S. Ong, B.G. Tan, J.Y. Liu, Z.W. Conejo, S. Peh, L.C. and Zhu, Y.Q. (2023). Virtual Lab Workspace for Programming Computers – Towards Agile STEM Education. International Conference in Learning Technologies for Education Challenges, Bangkok, Thailand
- Chee, Y.L. Peh, L.C. and Liu, Z.W. (2023). Exploring the Transformative Impact of Integrated Digital Delivery on the Built Environment: A Case Study of Additional and Alternative Projects. International Conference on E-Education, E-Business, E-Management and E-Learning (IC4E), Shenzhen, China.
- Chee, Y.L. Peh, L.C. and Liu, Z.W. (2023). Integrated Digital Delivery in Built Environment - the Paradigm Shift and Value Creation it brings. International Conference on E-Business and Applications, SUSS, Singapore.
- Peh, L.C. Lin, S.J. Liu, Z.W. and Tan, K. (2022). Leveraging on Contactless Technology to Track and Locate Prefabricated Components: A Digital Platform-based Approach. South East Asia Iron and Steel Institute (SEAISI) Expo, Singapore.
- Seghier, T.E. Wong, J. Peh, L.C. and Liu, Z.W. (2022). Transition from BIM to IDD in Quantity Surveying (QS) sector: A comprehensive Comparison between Traditional Quantity Surveying (QS) Practices vs BIM-based Quantity Take-off (BIM-QTO). Pacific Asia Quantity Surveyor Congress (PAQS), Singapore
- Ong, M. Liu, Z.W. Peh, L.C. and Mohd Kassim, N.F. (2022). Driving Digital Transformation in the Built Environment Industry: A Proposed Holistic Digital Transformation Strategy (HDTs) Framework. PAQS

Congress, Singapore.

Kwek, A. Peh, L.C. and Tan, J. (2020). Justifying a Disinformation Response Competency Test Instrument. ELearning Forum Asia 2020, HongKong.

Thiagarajan, L.B. Li, J.Z. Peh, L.C. and Low, W.P. (2020). Continuing STEM Education amid Disruption due to Pandemic. ELearning Forum Asia 2020, HongKong.

Li, J.Z. Low, W.P. Thiagarajan, L.B. and Peh, L.C. (2019). Data Analytics for Student Profiling and Academic Counselling. Ascilite 2019 Personalized Learning. Diverse Goals. One Heart Conference, Singapore.

Liu, Z.W. Chen, K.Y. Peh, L. and Tan, K.W. (2017). A Feasibility Study of Building Information Modeling for Green Mark New Non-Residential Building (NRB): 2015 Analysis. World Engineers Summit – Applied Energy Symposium & Forum: Low Carbon Cities & Urban Energy Joint Conference, Singapore.

Peh, L.C. (2016). Green, Gracious and Smart Housing in Singapore. BIT Low Carbon Green Growth Conference, Seoul, South Korea.

Peh, L.C. and Low, S.P. (2012). Case-based Reasoning Decision Support System for Architectural and Engineering Firms. Creative Construction Conference, Budapest, Hungary.

Peh, L.C. and Low, S.P. (2008). Using Dunning's Eclectic Paradigm to Review the Relationship between Flight-time and Organization Structures of Architectural and Engineering Firms in International Markets. 13th International Chinese Research Institute of Construction Management (CRIOCM) Symposium, Beijing, China.

Peh, L.C. (2008). Supply Chain Management in Singapore's Construction Industry. BRSNet Research Symposium, School of Design and Environment Symposium, National University of Singapore. Best Presentation Award.

Book/Chapter in Book:

卢昱杰、刘子文、Shen, M. Peh, L.C. (2022). 从BIM走向IDD：一种全局协同的可持续建筑发展路径. 建筑智能工业化 第5卷第4期 2022年12月. Transition from BIM to IDD: A Holistic and Interoperable Building Approach Towards Sustainability. Architectural Intelligence Industrialization 2022.

Peh, L.C. Low, S. and Attallah, S. (2017). Technology Advances, Societal Impact and Local Responses. SUSS Commemorative Book.

Peh, L.C. and Low, S.P. (2013). Organization Design for International Construction Business. Springer.

Low, S. P. and Peh, L.C. (2011) Using Case-based Reasoning Decision Support System (CBRDSS) for Organization Design by International Construction Firms, Chapter in Book, Rashid, K. A. et al. (Eds.) International Readings in Construction Business and Marketing, IIUM Press

Lecturing Experience

Teaching

- Lecture – FEM107 Planning and Budgeting for Operations
- Lecture – FEM201 Risk Management and Business Continuity
- Lecture – FEM211 Project and Operations Management
- Lecture – FEM213 Security Management for Built Environment
- Lecture – EMT301e Customer Relationship Management
- Lecture – Sctp317 Smart FM
- Lecturing – FMT506 Managing Smart and Autonomous Buildings
- Lecturing – RES517 PhD Seminar on Future of The Building and Construction Industry and Research Gaps
- Resit Revision for FMT306 Strategic Asset, Property and Facilities Management
- Resit Revision for FMT313 BIM for FM

Course Development

- Course Development – BPM201 Construction Economics
- Course Development (jointly) – FMT504 Asset Management For FM
- Course Development – FMT506 Managing Smart and Autonomous Buildings
- Course Development (jointly) – FMT511 Planning and Managing Healthcare FM
- E-course Development – FEM211e Project and Operations Management

Capstone Supervision and Examination

- “Green, Universal and Smart Adoption in Singapore’s Landed Houses” (supervisor)
- “Data Analytics in FEM” (supervisor)
- “Training and Educational Videos for FM – Compliance and CONQUAS” (supervisor)
- “Educational Mobile App on Sustainability for Buildings and Events” (supervisor)
- “Technology Advances and Impact on Singapore’s AEC Firms” (supervisor)
- “Leveraging on Internet of Things for a Smart Connected Household” (co-supervisor)
- “Analyzing How Managing Agents Manage Contractor’s Performance in FM Industry” (examiner)
- “Workplace Safety and Health in Facilities Management” (examiner)

Masters Project Supervision (now defunct M.Sc. Environmental Science)

- “Battery Disposal in Singapore” (supervisor)

PhD Supervision

- “BIM as an Enabler for Green Building Certification and Assessment” (supervisor)

Media/Press

- Commentary on Channel News Asia on “Takeaways for Singapore Event Organizers as Extreme Heat Disrupts Concerts Worldwide”.
- Provided “Expert Comment” to Today’s newspaper on “House-hold Consumption of Energy”
- Provided “Expert Comment” to Today’s newspaper on “Newer Structures Shaping Singapore’s Identity too”
- Provided “Expert Comment” to Straits Times’ on “Singaporeans Using Less Electricity, Water”
- Interviewed by NHK (Japanese Broadcaster) on Meetings, Incentives, Conventions and Exhibitions
- Featured in Today’s Advertorial for the Building and Project Management programme

Awards

Honorable Mention Award (Transformative Delivery Category) for paper presented at Pacific Asia Quantity Surveyor Congress Singapore 2022. For paper “Driving Digital Transformation for the Built Environment Industry: A Proposed Holistic Digital Transformation Framework in Cost Management”.

Best Paper Award for MDPI-Buildings Journal. For Paper “A Review and Scientometric Analysis of Global Building Information Modeling Research in the Architecture, Engineering and Construction Industry”.

Best Presentation Award at Inaugural National University of Singapore, School of Design and Environment’s Building Research Network Symposium. For paper “Supply Chain Management in Singapore’s Construction Industry”.

Inaugural Best Facilities Management Education Service Provider awarded by Singapore International Facility Management Association.

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