

Curriculum Vitae



Dr Patrick Shi Chee Wai

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Education Qualifications

2006	PhD, University of Glasgow (UK)
2001	B.Eng (Mechanical) (Hons), University of Glasgow (UK)

Academic and Professional Experience

2019	Head of Programme (Facilities & Events Management)
2018 - 2019	Senior Lecturer, School of Science and Technology, Singapore University of Social Sciences
2013 - 2018	Principal Lecturer, Building & Construction Authority (BCA) Academy
2013 - 2014	Adjunct Lecturer, School of Electronic and Electrical Engineering, Singapore Polytechnic
2007 - 2013	Scientist, Singapore Institute of Manufacturing Technology (SIMTech), A*STAR
2003 - 2006	Tutor, Department of Mechanical Engineering, University of Glasgow (UK)
2001 - 2002	Energy Consultant, Energy Management Division, CPG Facilities Management Pte Ltd

Memberships and Professional Activities

2017 - Present	Singapore Certified Energy Manager (SCEM)
2015 - Present	Universal Design (UD) Assessor

Consultation and Executive Experience

- Design and implementation of BCA carbon footprint calculator for Green Mark Assessment of building's carbon emissions
- Energy Study and Carbon Footprint Quantification Training and Assessment for Greenpac's Greenhub Building
- Reliability & Life-cycle Assessment of high-power LEDs Street lightings for LTA

- Energy Study and Carbon Footprint Assessment of Precision Manufacturing for Process Improvements for Amtek Singapore
- Energy Study and Carbon Footprint Assessment for Coca Production for Cadbury Singapore
- Sustainability Analysis for Eco-efficiency Improvements and Development of Sustainable Materials from Organic By-product for Prima Limited

Research Interests

- Sustainability Assessment/Indexing
- Carbon Footprint Assessment
- Energy Efficiency/Green Buildings

Selected Publications

- Ruisheng Ng, Chee Wai Patrick Shi, Hui Xian Tan, Bin Song (2014). Avoided impact quantification from recycling of wood waste in Singapore: an assessment of pallet made from technical wood versus virgin softwood. *Journal of Cleaner Production*, Volume 65, Pages 447-457.
- Chee Wai Patrick Shi, Zhiquan Yeo, Ruisheng Ng, Hu Xian Tan, Tobias Bestari Tjandra and Bin Song (2013). Carbon Footprint Assessment of a Four Storey Industrial Building Constructed in Singapore. *Proceedings of the SB 12 Singapore – Realising Sustainability in the Tropics*, 2013, Pages 470 to 476.
- Zhiquan Yeo, Chee Wai Patrick Shi, Ruisheng Ng, Hong Kiat Kenneth Gwee, and Bin Song (2013). Method for Rapid Estimation of Carbon Footprint Involving Complex Building Inventory Data – A Case Study. *20th CIRP International Conference on Life Cycle Engineering*, Singapore, Page 447 to 453.
- Ruisheng Ng, Zhiquan Yeo, Chee Wai Patrick Shi, Fatida Rugrungruang, and Bin Song (2012). An Algorithmic Approach to Streamlining Product Carbon Footprint Quantification: A Case Study on Sheet Metal Parts. *International Journal of Automation Technology Vol.6 No.3*.
- Chee Wai Patrick Shi, Fatida Rugrungruang, Zhiquan Yeo, Kenneth Hong Kiat Gwee, Ruisheng Ng, Bin Song (2011). Identifying Carbon Footprint Reduction Opportunities through Energy Measurements in Sheet Metal Part Manufacturing. *Glocalized Solutions for Sustainability in Manufacturing: Proceedings of the 18th CIRP International Conference on Life Cycle Engineering*, Technische Universität Braunschweig, Braunschweig, Germany, Springer-Verlag Berlin Heidelberg
- Chee Wai Patrick Shi, Fatida Rugrungruang, Zhiquan Yeo, Bin Song (2011). Carbon Footprint Analysis for Energy Improvement in Flour Milling Production. *Glocalized Solutions for Sustainability in Manufacturing: Proceedings of the 18th CIRP International Conference on Life Cycle Engineering*, Technische Universität Braunschweig, Braunschweig, Germany, Springer-Verlag Berlin Heidelberg
- Gim Ching Jenny Ang, Joo Chuan Yeo, Chee Wai Albert Lu, Chee Wai Patrick Shi (2010). Flexible Fluid Storage and Warming Bag and a Fluid Storage and Warming System. Publication number: 20120063973. Patent Filed: 21 May 2010.

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