

## THAM KWOK WAI (Dr)

*PhD (Architectural Science), MSc(Building Science) University of Sydney, BEng (Mech Eng)(Hons), NUS*



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### ACADEMIC QUALIFICATIONS:

- BEng (Mechanical Engineering) (Hons) (1982), National University of Singapore
- MSc (Building Science) (1985), University of Sydney, Australia
- PhD (Architectural Science) (1992), University of Sydney, Australia

### EMPLOYMENT RECORD:

- Fellow (March 1991); Lecturer (1991-1995); Senior Lecturer (1995-2000); Assoc. Prof (2000- present)  
National University of Singapore
- Lecturer, Ngee Ann Polytechnic (1983) Associate Professor, NUS (1983)
- Administrative Officer, Singapore International Airlines Ltd (1982)

### ADMINISTRATIVE LEADERSHIP:

- Co-Director, Building Energy Efficiency Hub@NUS, 2013 - present
- Head, Department of Building, NUS, 2007 – 2013
- Deputy Head (Research), Department of Building, NUS, 2002 – 2007
- Deputy Director, Centre for Total Building Performance (2000-2007), NUS
- Indoor Air Quality Research Group leader (1992-present), Department of Building, NUS

### PROFESSIONAL/CONSULTING ACTIVITIES:

- President (June 2006 – Sep 2009), Trustee (June 2012 – 2016), International Society of Indoor Air Quality and Climate (ISIAQ)
- Chairman, PSB TC Environmental Standard Testing (Singapore) (2002 to present)
- Chairman, Technical Expert Panel for Biological Terrain Decontamination (National Environmental Agency, MEWR) (2015 – present)
- Fellow, International Society for Indoor Air Quality and Climate (ISIAQ) Academy of Fellows (since 2005)
- Advisor, World Health Organisation, Indoor Air Quality Guidelines (2006)
- Visiting Professor (Technical U of Denmark, 2015 and 2016; Czech Technical U 2008 to present)
- Editorial Board Member (Indoor Air; Building and Environment; Energy and Buildings; Building Performance Simulation; Energies; Future Cities and Environment)
- President, Healthy Buildings (2003)

## **AWARDS/HONOURS**

- Uichi Inouye Memorial Asia-International Award (2017)
- ASEAN Energy Award (2011)
- Zero Energy Building - Minister for Nat Dev R&D Award 2011 (Distinguished Award) – Team prize
- The Enterprise Challenge (TEC) Awards - Public Service Division, PMO, Singapore. (2004)
- Commonwealth Fellowship, 1998 – 1999 in the field of Indoor Air Quality
- NUS Overseas Scholarship Award (1984 – 1990)
- Singapore International Airlines Scholarship (1978 – 1982)

## **PATENTS/COMPANIES**

- Single-Coil Twin Fan Variable-Air-Volume (VAV) System for Energy Efficient Conditioning of Independent Fresh and return Air Streams
- Energy Efficient Variable-Air-Volume (VAV) System with Zonal Ventilation Control
- Dual Compartment Ventilation and Air-conditioning System having a Shared Heating Coil
- Water Tank Storage System to Harvest Solar Energy (US patent granted (2010)
- A Building Façade System
- Dynamically Responsive Fan Filter Unit For Occupied Premises
- Enhanced Air Quality Pte Limited (Singapore, 2004) – Founding Director

## **KEYNOTE ADDRESSES**

- Healthy Buildings 2003; RoomVent 2004; RoomVent 2009; CLIMA 2013; 36th AIVC 2015; Healthy Buildings Asia 2017

## **UNDERGRADUATE TEACHING**

- PF1104 Environmental Science for Buildings
- PF4103 Total Building Performance
- PF3501 Intelligent facilities

## **GRADUATE TEACHING:**

- BPS5111 Integrated Building Design
- BPS5222 Indoor Environmental Quality
- BPS5226 Smart Building and Facilities

## **RESEARCH INTERESTS:**

- Indoor Air Quality and Human Effects
- Building Performance and Energy Efficiency

## **SELECTED PUBLICATIONS:**

- Tham KW (2016). Indoor air quality and its effects on humans – a review of challenges and developments in the last 30 years, Energy and Buildings, 130: 637-650.

- Tham KW and MO Fadeyi (2015). Towards whom should indoor environmental quality control be sympathetic towards - asthmatics or non-asthmatics? *Building and Environment*, 88:55-64.
- Pantelic J, Sze-To GN, Tham K W, Chao CYH and Khoo MYC. (2009). Personalized ventilation as a control measure for airborne transmissible disease spread. *Journal of the Royal Society Interface*, 6, no. 6 (Supplementary) (2009): 715-726, (United Kingdom).
- Tham KW (2004). Effects of temperature and outdoor air supply rate on the performance of call center operators in the tropics. *Indoor Air*, 14 (S7): 119-125. (Denmark).
- Tham KW (1993). Conserving energy without sacrificing thermal comfort. *Building and Environment* 28(3): 287-299.