# One-Page Brief CV -Yuguo Li

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#### **Education**

1982	B.S. in Refrigeration Engineering	Shanghai Jiaotong (China)
1990	M.Sc. in Thermal Engineering (passed, not awarded)	Tsinghua University (China)
1990	Tech. Licentiate in Heating and Ventilation	Royal Institute of Technology (Sweden)
1992	Ph.D. in Fluid Mechanics	Royal Institute of Technology (Sweden)

#### **Employment**

2006-	The University of Hong Kong	Professor
2005	The University of Hong Kong	Associate Professor (Tenured)
2000-2004	The University of Hong Kong	Associate Professor
2000	CSIRO, Australia	Principal Research Scientist
1997-2000	CSIRO, Australia	Senior Research Scientist
1994-1997	CSIRO, Australia	Research Scientist (Indefinite)
1993-1994	CSIRO, Australia	Post-doc Scientist
1992-1993	National Institute of Occupational Health, Sweden	Researcher
1991-1992	Swedish Institute for Building Research, Sweden	Guest Researcher

#### Awards

Outstanding Young Researcher Award of University of Hong Kong	2003
Fellow, American Society of Heating, Refrigerating and Air-conditioning Engineers	2007
Outstanding Young Researcher Award (Overseas), National Natural Science Foundation of China	2007
Best Paper Award of Indoor Air Journal 2005-2007 (First Prize)	2008
Fellow, International Society of Indoor Air Quality and Climate	2008
State Scientific and Technological Progress Award (SSTPA), Second Prize,	2010

## **Scientific Services**

Associate Editor, Indoor Air, 2007-, HKIE Transaction (2007-)

Editorial Board Member, Energy and Buildings (2006-), Indoor Air (2005-2006), Building Simulation (2008-), Indoor and Built Environment (2006-2009), Journal of the IEST (2003-2006), International Journal of Ventilation (2002-present).

#### **Community Services**

Member, Environmental Health Committee, ASHRAE, 2010-

Vice-President (Research), International Society of Indoor Air Quality and Climate, 2009-2011 Member, Assessment Panel, Hong Kong Gov Innovation and Technology Commission, 2009-

Temporary Advisors, World Health Organization in Geneva and Indonesia, 2008-2009

Vice-President, Chinese Society of Indoor Environment and Health, 2008-

Board of directors, Chinese Society of Building Physics, 2008-

Juror, Stockholm Challenge 2008 and 2010

Chairman, Task Force on Airborne transmission of infectious diseases in buildings, ISIAQ, 2006-Member, Working Group on Disease Modelling, Department of Health, Hong Kong Gov 2005-

#### **Research Grants since 2000**

Total as PI (2000-2009) HK\$9 million (7 RGC Grants and 5 RFCID Grants) Total as CI (2000-2009): HK\$35 million

#### **Publications**

About 100 SCI articles, total 1065 SCI citations, h-index = 20 by August 2010.

# Curriculum Vitae of Yuguo Li

Name Yuguo Li

Birth date/place 21 May, 1963, Liaoning, China

Marital Status Married with 2 children

Nationality Chinese (Hong Kong SAR)/Australian

Present position: Professor

Department of Mechanical Engineering

The University of Hong Kong

Pokfulam, Hong Kong

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E-mail: liyg@hku.hk

# **EDUCATION**

Feb 1990-Oct 1992

Ph.D. in fluid mechanics, Royal Institute of Technology (KTH),
Stockholm, Sweden

Tech. Lic in Heating and Ventilation, Royal Institute of Technology
(KTH), Stockholm, Sweden

Sep 1986-Oct 1988

M.Sc. in Thermal Engineering (Air conditioning) (defended in May 1989 and passed, but not awarded), Tsinghua University

Sep 1982-Jun 1986 B.Sc. in Refrigeration Engineering, Shanghai Jiaotong University

## AWARDS AND COMMUNITY SERVICES

2009-2011	Vice-President (Research), International Society of Indoor Air Quality and
	Climate.
2009-	Assessment Panel, Hong Kong Gov Innovation and technology Commission
2008	Best paper award (first prize), Indoor Air Journal 2005-2007
2008	Fellow of International Society of Indoor Air Quality and Climate (ISIAQ)
2007	Outstanding Young Researcher (Overseas), National Natural Science Foundation
	of China
2007	Fellow of American Society of Heating, Refrigerating and Air-conditioning
	Engineers (ASHRAE)
2006	Well-known alumni Award of Shanghai Jiaotong University 50th Anniversary of
	Refrigeration.
2005	Research Award for Foreign Specialists, National Institute for Land and
	Infrastructure Management, Japan
2003	Outstanding Young Researcher Award, the University of Hong Kong
1997	CSIRO Project Leadership program
1993	CSIRO Post-Doctoral Fellowship
1990-1993	Royal Institute of Technology PhD Scholarship
1987	Tsinghua Innovation Second Prize for invention of a breathing heat exchanger
1986	Shanghai City Outstanding University Student Prize

# **EDITORSHIP**

- 1. Associate Editor, Indoor Air, 2007-present
- 2. Associate Editor, HKIE Transactions, 2007-present

February 14, 2009

- 3. Editorial Board Member, Energy and Buildings, 2006 –
- 4. Editorial Board Member, Indoor Air, 2005 –2006
- 5. Editorial Board Member, Indoor and Built Environment, 2006 –present
- 6. Editorial Board Member (founding), Building Simulation An International Journal, 2008 –present
- 7. Editorial Board Member (founding), International Journal of Ventilation, 2002-present
- 8. Editorial Adviser, Journal of the IEST, 2003-2006
- 9. Invited Overseas Editorial Board Member, Building Energy and Environment, China, 2004-
- 10. Guest Editor for the Special Issue on Engineering Control of Respiratory Infectious Diseases such as SARS, HKIE Transactions, Vol. 12, No. 1, March 2005
- 11. Guest Editor for the special Indoor Air 2005 issue, International Journal of Ventilation, 2006
- 12. Special Issue Editor, Energy and Buildings, 2010

# **EMPLOYMENT/EXPERIENCE**

Jan 2006-present	Professor	The University of Hong Kong
Jan 2005-Dec 2005	Associate Professor (Senior Lecturer) (Tenured)	The University of Hong Kong
Sep 2000-Dec 2004	Associate Professor (Lecturer)	The University of Hong Kong
Jul 2000-Aug 2000	Principal Research Scientist	CSIRO
Jul 2000-Aug 2000	Team Leader	CSIRO Indoor Environments
Jul 1997-Jun 2000	Senior Research Scientist	CSIRO, Australia
		Building Construction & Engineering
Jul 1997-Jun 2000	Team Leader	CSIRO Ventilation and Heat
		Dispersion Technologies
Jul 1994-Jun 1997	Research Scientist (indefinite	CSIRO Advanced Thermal
	position)	Technologies Laboratory
Feb 1993-Jun 1994	Post-doctoral Research Fellow	CSIRO Advanced Thermal
		Technologies Laboratory
Nov 1992-Jan 1993	Researcher	National Institute of Occupational
		Health, Stockholm
Oct 1991-Feb 1992	Guest Researcher	Swedish Institute for Building
		Research (SIB), Gavle
Feb 1990-Oct 1992	Research Engineer	Royal Institute of Technology (KTH),
		Department of Mechanics
2008-09	Otto Mønsted Visiting Professor	Technical University of Denmark
2008-	Visiting Professor	Faculty of Mechanical Engineering at
		Kragujevac. University of Kragujevac,
		Serbia
2007-09	Guest Professor	Xian University of Architecture and
		Technology
2007-12	Visiting Professor	Central South University
2004-06	"Seasky Scholar" Visiting	Dalian University of Technology
	Professor	
2002-04	Adjunct Professor	Hunan University, China
2002-05	Guest Professor	Aalborg University, Denmark
1999-01	Guest Professor	Shanghai Jiaotong University, China
1997	Senior Visiting Research Fellow	Tokyo University, Japan

#### **TEACHING**

Subject Degree programme/Level Year

Building services	BEng (ME)Year 3	2000-present	
Utility services	BEng (BSE)Year 2	2002-present	
Interdisciplinary building services	BEng (BSE)Year 3	2001-present	
design	(founding)		
Fire protection engineering	B.Eng (BSE)Year 3	2005-present	
Computer Programming Project	B.Eng (BSE)Year 2 (project only)	2006-present	
Utility services	MSc (BSE)	2000-01	
Indoor pollution	MSc (BSE)	2000-01	
Environmental services I	MSc (BSE)	2001-02	
Environmental services II	MSc (BSE)	2001-02	
Indoor air quality	MSc (BSE)	2002-present	
Built environment	MSc (BSE)	2003-present	
Natural and hybrid ventilation	MSc (BSE) (founding)	2003-present	
Advanced finite difference/volume	PhD, MPhil, MSc (founding)	2010-	
methods			
Architecture design studio	MArch, Sustainability Consultant	2001-03	
Sustainability in Built Environment	Broadening course	2002-04	
Director of Studies	Master of Inter-disciplinary	2002-04	
	Design & Management		
Indoor and outdoor air quality	Broadening course	2003-04	

**Supervision of Postgraduate Students (Principal Supervisor)** 

Hugh Leung, MPhil	Enclosure flows driven by combined natural and mechanical forces	Jan 2001 – Mar 2003
Jimmy Yam, MPhil	Effects of thermal mass in naturally ventilated buildings	Sep 2001 – Jul 2003
Hua Qian, PhD	Hospital ventilation for controlling respiratory pollutants	Sep 2003 –Aug 2007
Xiaojian Xie, PhD	Evaporation and dispersion of respiratory droplets in indoor environment	Sep 2004-Aug 2008
Edward Tsui, MPhil	Neighbourhood ventilation of a cluster of buildings by combined forces	Jan 2005-Dec 2008
Zhuang Zhi*, PhD	Heat transfer and smoke flow mechanisms of Chinese Kangs	2004-2009
Lina Yang, PhD	City ventilation by thermal buoyancy	Sep 2005- Aug 2009
Hang Jian, PhD	Natural ventilation of high-rise dense cities by wind	Sep 2005- Aug 2009
Luo Zhiwen, PhD	Interaction of wall flows and slope flows in city ventilation	Sep 2006-Aug 2010
Gong Jian, PhD	Solution multiplicity in smoke movement and control	Sept 2006-Aug2010
Gao Xiaolei, PhD	Impact of built environment on transmission of infectious diseases	Jan 2007-Dec 2010
Li Liu, PhD	Engineering control of large droplet transmission of diseases	Sep 2007-Aug 2011
Jiayi Wu, MPhil	Natural ventilation and personalized ventilation for infection control	Sep 2008-Aug 2010
Zhang Lei, MPhil	Control of infection in crowded seated environments	Sep 2009-Aug 2011

Yang Xinyan, PhD Vegetation and urban thermal environment Sep 2009-Aug 2013 \* At Dalian University of Technology, as part of his duty as "seasky" visiting professor

# Co-supervisor in other universities:

Duan Shuangping,	Natural ventilation in buildings with	Hunan Uni. 2002-04
MPhil	multiple openings	(Supervisor Zhang Guoqiang)
Lina Yang, MPhil	Potential of natural ventilation for	Hunan Uni. 2003-05
	buildings in China	(Supervisor Zhang Guoqiang)
Zhou Junli, PhD	Hybrid ventilation in buildings	Hunan Uni. 2004- (Supervisor
		Zhang Guoqiang)
Mahesh Prakash,	Turbulent natural convection in porous	Victoria University of
PhD	media	Technology (1997-2000)

#### RESEARCH GRANTS

# 2009

1. UDF Initiative on computational science and engineering, UDF, HKU, HK\$10 million, Co-I, Team Leader – multi-scale computation.

# 2008

- 2. ConnectVent Ventilation of "connected" indoor environments in controlling airborne disease transmission. RGC, HK\$320,000, Sept 2008 Aug 2010, PI
- 3. WardVent: How movement and anteroom affect ventilation performance in a ward setting. RFCID/Hospital Authority, HK\$750,000, Oct 2008 Sept 2010, PI
- 4. NatVent: Use of Natural Ventilation as an Infection Control Measure. RFCID/Hospital Authority, HK\$750,000, Oct 2008 Sept 2010, PI
- 5. UDF Initiative on clean energy and environment, University Development Foundation, HKU, HK\$21 million, Co-I, Team Leader Energy utilization

## 2007

- 6. CityVent A Theory of Ventilation of a Dense and High-Rise City by Wind and Buoyancy Forces. RGC, HK\$970,000, Sept 2007 Aug 2010, PI
- 7. Investigating energy consumption and indoor air quality in rural homes in Northern China. National Science Foundation of China, RMB\$400,000, Jan 2008-Dec 2010. PI (collaborate with Prof. Liu Jiaping)

# 2006

- 8. BioPassVent A theory of enclosure ventilation for purging combined pollutants. RGC, HK\$884,850, Sept 2006 Aug 2009, PI
- 9. A Full-scale Mock-up Study of a New Air-conditioning System for SARS Wards by SARS Busters. The Hong Kong Institution of Engineers SARS Fund, HK\$135,000, 2006-2008, PI
- 10. Solution Multiplicity of Smoke Flows in Buildings. CRCG, HK\$120,000, 2006-2008, PI

# 2005

- 11. Interaction between natural ventilation and wind flow around a multi-storey building. GRC Hong Kong/Germany Collaboration Scheme, HK\$40,600, Jan 2005 Dec 2005, PI
- 12. Nonlinear coupling of thermal mass and natural ventilation in buildings. RGC, HK\$350,000, Sept 2005 Aug 2007, PI

# 2004

13. Wind-induced cross ventilation. Hong Kong/Germany Collaboration (extended), RGC,

February 14, 2009

- HK\$30,000, Jan 2004 Dec 2004, PI
- 14. Understanding Droplets due to the Use of Nebulizers and Respiratory Activities. RFCID/Hospital Authority, HK\$798,360, Aug 2004 Jul 2006, PI
- 15. Evaluating Factors that Affect Ventilation Effectiveness in SARS Wards. RFCID/Hospital Authority, RGC, HK\$731,824, Aug 2004 Jul 2005, PI
- 16. Dispersion and ventilation control of exhalation pollutants in hospital wards, PI, RGC, HK\$380.074, 2004-2006.

## 2003

- 17. Young Outstanding Researcher Award, HK\$300,000, Jul 2003 Jul 2005, PI
- 18. Ventilation Design for SARS Wards, Faculty of Engineering, HK\$210,000, 2003, PI (HKIE SARS Fund also laid HK\$130k grant in 2006).

#### 2002

- 19. Wind-induced cross ventilation. Hong Kong/Germany Collaboration, RGC, HK\$26,600, Jan 2003 Dec 2003, PI
- 20. A theory of enclosure ventilation, RGC, 1 Sep 2002 to 31 Aug 2005, HK\$711,404, PI
- 21. Developing an integrated construction technology teaching program, UGC-TDG, \$3,335,000, One of the Three PIs, 1/9/2002- 31/8/2004.

# 2001

- 22. A new dynamic theory for natural ventilation of buildings, RGC, \$470k, 01-03, PI
- 23. Problem-based teaching in BSE, TDG, \$220k 01-02, PI
- 24. Underfloor plenum system (ductless ventilation), AET, \$100k, 01-02, PI
- 25. Fine bubble methods, CRCG, \$120k, 01-02, PI
- 26. CFD study of the public transport interchange in Kowloon Tong, ASD HK Government, \$150k, 01-02, CI, 2000
- 27. Linking indoor/outdoor air quality, CRCG, \$120k, 00-02, PI
- 28. Mixed-mode air conditioning, ACRA Award, 30k, 01, PI

## 2000

- 29. Indoor Environments CSIRO Appropriation Fund, A\$1,000,000. (00-01) Project Leader
- 30. "The Quiet kitchen" a new generation of kitchen range hoods. DISR R&D Start program,
- \$A260,000 with additional A\$260,000 from Conday Pty Ltd. (00-01) (PI)

#### 1999

- 31. Ventilation and heat dispersion technologies CSIRO Appropriation Fund, A\$550,000. (99-00) Project Leader
- 32. Displacement ventilation for Paramatta's Laundry, Department of Public Works and Services, NSW, A\$45,000. (1999) (Project Leader)

# 1998

33. Carpark ventilation analysis - Westfield Shopping Centre, \$A60,000. (98-00) Project Leader

# 1997

- 34. Integrated Design Tools for Natural Ventilation Department of Industry, Science and Resources, \$A50,000. (97-02) (PI)
- 35. Integrated ventilation and indoor air quality technologies CSIRO Appropriation Fund, about \$A500,000 per annum for two years. (97-98) (CI)
- 36. Natural ventilation systems for smelter buildings WMC and H H Robertson, \$A60,000. (CI)

1996

37. International Collaboration on Advanced Ventilation Technologies - Department of Industry, Science and Resources, \$A40,000. (96-98) (CI)

1995

38. Design tools for grain storage in silos - Grain Research and Development Corporation and Victoria University of Technology, \$A150,000. (95-97) (CI)

# **Conference Committees**

- 37. Member, International Scientific Committee, IAQVEC2010 The 7<sup>th</sup> International Conference on Indoor Air Quality Ventilation and Energy Conservation in Buildings, August 15-18, 2010, Syracuse, USA
   36. Member, Scientific Committee, AIVC Conference, 26-28 October 2010, Seoul
  - 35. Member, Scientific Committee, International Infectious Disease Conference, 2010, Hong Kong
  - 34. Member, International Scientific Committee, Clima2010, Antalya/Turkey on May 09-12, 2010 (<a href="https://www.clima2010.org">www.clima2010.org</a>)
- 33. Member, International Scientific Committee, Healthy Buildings, Syracuse, Sept 13-17, 2009. http://www.hb2009.org/
  - 32. Member, International Scientific Committee, SuDBE2009/IAQ2009, 2009 International conference on sustainable development in built environment. 28-30 October 2009, Chongqing, China. http://www.sudbe2009.org/
  - 31. Member, International Scientific Advisory Committee, The 8th International Conference on Air Distribution in Rooms, <u>Roomvent 2009</u>, May, Korea
  - 30. Member: Organizing Committee, 2nd International Conference on Countermeasures to urban Heat Islands, September 21-23, 2009, Berkeley, California, USA
  - 29. Member, International Scientific Committee, The 40th Congress on Heating, Refrigerating and Air-Conditioning, Belgrade, December 2-4 2009.
- 28. Member: International Advisory Committee, first International Conference on Building Energy and Environment (COBEE), 13-16 July, Dalian, 2008 27. Member: Organization Committee, 9th International Symposium on Building and Urban Environmental Engineering, July 7-10, 2008, Hong Kong 26. Member: International Scientific Committee, The 29th AIVC2008 Conference, 14-16 October 2008, Japan http://www.aivc2008.jp/
  - 25. Member: International Scientific Committee, Indoor Air 2008, Denmark
  - 24. Member: International Scientific Advisory Committee, the 3rd International Conference on Cryogenics and Refrigeration (ICCR'2008), April 6-9 2008, Shanghai, China
  - 23. Member, International Scientific Committee, 2008 World Sustainable Building Conference, <u>SB08 Melbourne</u>, 21 to 25 September 2008, Melbourne Australia.
  - 22. Member, International Scientific Committee, The 39th Congress on Heating, Refrigerating and Air-Conditioning, Belgrade, December 3-5 2008.
- 2007 21. Member: Scientific Advisory Committee, the 16th Australian Fluid Mechanics Conference, 3 1 December 2007, The University of Queensland, Australia.

20. Member, Scientific Committee, The 5th HVAC International Symposium, <u>ISHVAC07</u>, Beijing, 7-8 September, 2007.

- 19. Member, International Scientific Advisory Committee, The 6<sup>th</sup> International Conference on Indoor Air Quality, Ventilation and Energy Conservation in Buildings, <u>IAQVEC 2007</u>, Sendai, Japan, 28-30 October, 2007.
- 18. Member, International Scientific Advisory Committee, The 8th International Conference on Air Distribution in Rooms, <u>Roomvent 2007</u>, 13-15 June 2007, Helsinki, Finland
- 17. Member. Scientific Committee. IAQ 2007. International Workshop Indoor Air Quality Research in China. Recent Progress and Future Prospects. April 23-24, 2007.
- 2006 16. Member: International Advisory Committee, <u>Healthy Buildings 2006</u>, the 8<sup>th</sup> International Conference, June 4-8, 2006, Lisboa
  - 15. Member: International Programme Committee, <u>ACRA2006</u>, Asian Conference on Refrigeration and Air-conditioning, May 21-23, 2006, Gyeongju, Korea
  - 14. Member: Scientific Advisory Committee, The 4th National Symposium on New Advances in Refrigeration and Air-conditioning (制冷空调新技术研讨会), Nanjing, China, April, 2006.
- 2005 13. Member: Technical Committee, Construction Industry Institute Hong Kong Conference on Healthy Buildings, 30 November, 2005.
  - 12. Member: Scientific Advisory Committee, The 10th International Conference on Indoor Air Quality and Climate, <u>Indoor Air 2005</u>, September 4 9, 2005 Beijing China
  - 11. Member: Scientific Advisory Committee, The Third National Symposium on New Advances in Refrigeration and Air-conditioning (制冷空调新技术研讨会), Hangzhou, China, April, 2005.
- 2004 10. Member: Scientific Advisory Committee, the <u>Fifteenth Australasian Fluid Mechanics Conference</u>, 13 17 December 2004, University of Sydney Australia.
  - 9. Member: SARS Forum Programme Committee, <u>Hong Kong SARS Forum</u> and Hospital Authority Convention 2004, 8-11 May 2004, Hong Kong.
  - 8. Member: Scientific Advisory Committee, The 8<sup>th</sup> International Conference on Air Distribution in Rooms, <u>Roomvent 2004</u>, 5–8 September 2004, Coimbra, Portugal.
  - 7. International Coordinator, The 2nd International Conference on Built Environment and Public Health (BEPH2004), December 6-8, Shenzhen, China
- 6. Member: International Scientific Advisory Committee, <u>Healthy Buildings</u> 2003, the 7<sup>th</sup> International Conference, 13-17 July, 2003, Singapore
  - 5. Member: International Scientific Advisory Committee, the 3rd International Conference on Cryogenics and Refrigeration (ICCR'2003), 2003, Hangzhou, China
  - 4. Member: Scientific Advisory Committee, The Second National Symposium on New Advances in Refrigeration and Air-conditioning (制冷空调新技术研讨会), Shanghai, China, November, 2003.
- 2002-3. Member: Scientific Advisory Committee, The  $7^{\rm th}$  International Conference on February  $14,\,2009$

Air Distribution in Rooms, **Roomvent**, 8-11 September 2002, Copenhagen.

- 2. Member, International Scientific Advisory Committee, The 4<sup>th</sup> International Conference on Indoor Air Quality, Ventilation and Energy Conservation in Buildings, **IAQVEC 2001**, Changsha, China, 2-5 October, 2001.
- 2000 1. Member: Scientific Advisory Committee, The 6th International Conference on Air Distribution in Rooms, Roomvent 2000, Reading, UK.

# **Chairman of Conferences/Workshops**

- 1. Vice-Chairman: EERB and BEPH 2009. The Fifth International Workshop on Energy and Environment of Residential Buildings and The Third International Conference on Built Environment and Public Health, Gulin, China, May 28-31, 2009
- 2. Vice-Chairman: The 6th International Symposium on Heating, Ventilating and Air Conditioning. Nanjing, China, Nov 6-9, 2009
- 3. Chairman, Forum on natural ventilation for infection control in hospitals yes or no? Indoor Air 2008, Denmark, 2008.
- 4. Co-chairman, Special Session Building Energy in China the Present and the Future, The 6th International Conference on Indoor Air Quality, Ventilation and Energy Conservation in Buildings, IAQVEC 2007, Sendai, Japan, 28-30 October, 2007.
- 5. Chairman, A mini-symposium on Responsive Building Elements, Hong Kong, Oct 24-26, 2007.
- 6. Co-chairman, Workshop Respiratory flows and infection control, The 8th International Conference on Air Distribution in Rooms, <u>Roomvent2007</u>, 13-15 June 2007, Helsinki, Finland.
- 7. Chairman. WHO Multi-disciplinary consensus meeting on application of natural ventilation in health care facilities with a focus on infection control. 15-17 May 2007.
- 8. Co-Chairman. IAQ 2007. International Workshop Indoor Air Quality Research in China. Recent Progress and Future Prospects. April 23-24, 2007.
- 9. Chairman, Forum Energy and Indoor Air Quality in Rural Homes in Northern China, the 4th International Workshop on Energy and Environment of residential Buildings, January 15-16 2007, Harbin, China.
- 10. Chairman, Workshop: Airborne transmission of infectious diseases in buildings, Healthy Buildings 2006, the 8th International Conference, June 4-8, 2006, Lisboa.
- 11. Chairman, Forum series Forum series on infectious diseases and public health as related to indoor air environment I, II, III. The 10th International Conference on Indoor Air Quality and Climate, Indoor Air 2005, September 4 9, 2005 Beijing China
- 12. Chairman, Workshop SARS epidemics and Healthy Building Design. Healthy Buildings 2003, the 7th International Conference, 13-17 July, 2003, Singapore.
- 13. Chairman. Workshop 8: dynamics of natural ventilation systems at Roomvent 2002, Denmark, 7-12 September 2002.
- 14. Chairman. Discussion Forum Policy on IAQ and "Application on Energy Efficient Technology in IAQ". Symposium on indoor air quality and energy efficient technology. 29 Nov 2001.
- 15. Co-chairman and co-organiser, the First International Forum on Natural and Hybrid Ventilation, HybVent Forum, 28 September, Sydney, Australia, 1999.

# **Keynote speeches and Invited Speakers (Conferences)**

# 2010

53. Plenary speaker. Infection and hospital ventilation. ASHRAE IAQ 2010, Airborne Infection Control – Ventilation, IAQ & Energy, November 10-12, 2010, Malaysia

52. Technical plenary speaker: H1N1 – What can ventilation do. ASHRAE Winter Conference, Orlando, USA, January, 2010.

# 2009

- 51. Plenary speaker. Ventilation and Airborne Infections. Healthy Buildings 2009 Conference and Exhibition in Syracuse, NY, September 13-17, 2009.
- 50. Invited talk: Natural Ventilation for Infection Control Health Care Facilities. The 3rd international workshop on natural ventilation. March 15-16, Tokyo, Japan

# 2008

- 49. Keynote: City Ventilation of Hong Kong -Preliminary Studies, China-Hong Kong Symposium on Green Buildings, 22-23 December 2008, Hong Kong.
- 48. Invited talk: Design of Ventilation in Buildings and Cities, International Symposium on Integrated Approach for Sustainable Housing, Nov 27, 2008, Yonsei University, Korea.
- 47. Invited talk: SARS and Ventilation. Samsung Electronics and Hanyang University Joint International Symposium on Application and Evaluation of SPi System, 25 Nov 2008, Korea...
- 46. Keynote speech: Developing the New WHO Guidelines on Natural Ventilation for Infection, The 3<sup>rd</sup> Annual National Conference of Chinese Society of Indoor Environment and Health. 中国环境科学学会室内环境与健康分会第三届学术年会, 2-3 Dec 2008
- 45. Plenary speech: Ventilation and Health in Built Environment. COBEE 2008 The First International Conference on Building Energy and Environment, 13-16 July 2008.
- 44. Invited speaker. Droplets, ventilation and computer fluid simulations. HIMSS AsiaPac08 Conference & Exhibition, Hong Kong, 20-23 May 2008
- 43. Invited speaker. IAQ studies in the Mainland China and Hong Kong. IOHA 2008, the International Occupational Hygiene Association 7th International Scientific Conference, Taipei on 17-19 Feb 2008.

# 2007

- 42. Invited speaker: Building Ventilation Rates and Health, International Conference on Environment and Health Conference, Hong Kong, 6-8 December 2007.
- 41. Invited speaker: Natural Ventilation for Prevention of Airborne Transmission, International Conference on Environment and Health Conference, Hong Kong, 6-8 December 2007.
- 40. Keynote speaker: Current R&D and Policy of Indoor Environments in Hong Kong, 1st Asian Forum "Current R&D and Policy in Indoor Environments in Asian Countries", Hanyang University, Seoul, Korea, Sep. 13, 2007,.
- 39. Invited speaker: Towards an understanding of expiratory droplets and SARS ward ventilation, Health Research Symposium 2007, HK Academy of Medicine, Aberdeen, Hong Kong, 29 September 2007.
- 38. Invited speaker: Ventilation for Control of Infectious Diseases in Built Environment通风与人居环境内疾病传染控制 过去4年的启示. 2007台灣香港"醫療建築環境"論壇, April 26, 2007
- 37. Keynote speaker: Indoor Air and Infection. <u>IAQChina 2007</u>: <u>International Workshop of Indoor Air Quality Research in China the Next 20 Years, Changsha, April 23-24 2007</u>
- 36. Invited speaker: Respiratory droplets and ventilation of buildings. <u>Brisbane ISIAQ Workshop</u> on Expiratory Droplets, Their Properties and Impacts on Infection Transmission in Indoor Environments. 27 July 2007.
- 35. Plenary Speech: Ventilation and Infection, <u>25th Annual Conference of the Australian Institute of</u> Occupational Hygienists, 1-5 December 2007, Melbourne 3-5, December 2007.
- 34. Plenary Paper: Ventilation for Control of Infectious Disease in Built Environment. <u>The 9th International Conference on Air Distribution in Rooms, Roomvent 2007, Helsinki, Finland, 13-15 June 2007.</u>

# 2006

33. Keynote speaker: 病毒颗粒物扩散. 中国环境科学学会室内环境与健康分会首届室内环境与 February 14, 2009

- <u>健康学术年会2006,</u> The Annual Conference of the Branch of Indoor Environment& health, CSES. Yantai, Shandong, Sep23-24, 2006.
- 32. Keynote speaker: 炕和北方农村室内环境. <u>中国环境科学学会室内环境与健康分会首届室内环境与健康学术年会2006</u>, The Annual Conference of the Branch of Indoor Environment& health, CSES. Yantai, Shandong, Sep23-24, 2006.
- 31. Invited speaker: Chinese Kangs Today's Rural Essential Home Heating System and Tomorrow's Sustainable Energy Technologies. The <u>37th Congress on Heating</u>, Refrigerating and Air-Conditioning, Belgrade, December 6-8 2006.
- 30. Invited speaker. Chinese kangs and the Residential Buildings with Resource Conservation in China. China-Japan High-Level Forum on Residential Buildings with Resource Conservation. 12-14 September 2006.
- 29. Invited speaker: Airborne Transmission of Infectious Diseases and Effectiveness of Isolation Room Ventilation. <u>The 3rd Annual Conference of the Korean Society for Indoor Environment (KOSIE)</u>, Seoul, Korea, 15 September 2006.
- 28. Invited speaker: Airborne Transmission of Infectious Diseases and Effectiveness of Isolation Room Ventilation. Preparing for the Next Pandemic: Controlling Transmission of Infectious Diseases in Hospitals, 2006 ASHRAE Annual Meeting, Quebec City, June 24-28, 2006.
- 27. Invited speaker: On isolation rooms negative pressure and open window. <u>Hong Kong Infection Control Nurses</u>' Association 2nd International Conference, Hong Kong, 17-18 June, 2006.
- 26. Invited speaker: The 2003 SARS Outbreak at Amoy Gardens Housing Estate (Hong Kong) What Have We Learned? <u>The 6th International Indoor Quality Symposium</u>: Infectious Disease and the Role of the IH in Preventing and Managing the Coming Epidemic, Sunday, May 14, 2006, Chicago, Illinois.
- 25.Invited speaker: (2 talks) The three elements of building ventilation and SARS. First Annual Meeting of the <u>Taiwan Society of Indoor Environment April 27, 2006, Tainan.</u>
- 24. Invited speaker. Will Chinese kangs stay or go the future of IAQ in rural homes in northern China? The Joint Conference of the Taiwan Occupational Health Association, and Taiwan Environmental and Occupational Medicine Association, First Regional Conference for the Southeastern Chapter of the International Society of Environmental Epidemiology April 28-29, 2006, Taibei.

## 2005

- 23. Invited speaker: Back-calculation and Environmental Modelling for the 2003 SARS Epidemic and Developing Effective Engineering Control Methods. Mathematical Modeling of Infectious Diseases Dynamics and Control (15 Aug- 9 Oct 2005) Clinical and public health applications of mathematical. International Workshop on Clinical and public health applications of mathematical modelling, September 26-30, 2005, Singapore.
- 22. Invited Speaker: Design for Thermal Mass and Night Ventilation in Buildings

   Heavy or Light? <u>The Second International Workshop on Natural Ventilation</u>, Tokyo, Japan, December, 2005
- 21. Specially invited speaker and participant: Ventilation Control,Movement and evaporation of droplets in indoor transmission of infectious diseases a review. Specially invited speaker and participant, Xiangshan Science Meeting (香山会议) No. 251 Indoor air quality and indoor contaminant control, 19-21 April 2005, China.
- 20. Keynote Speech: Indoor air transmission of infectious diseases droplet dispersion and ventilation control (in Chinese) <u>The Third National Symposium on New Advances in Refrigeration and Air-conditioning</u> (制冷空调新技术研讨会), Hangzhou, China, 22-23 April, 2005.

# 2004

19. Invited speaker: Probable Roles of Bio-Aerosol Dispersion in the Amoy Gardens SARS Outbreak. <u>International Workshop on Population Dynamics and Infectious Disease in Asia</u>, 27-29

October 2004, Singapore.

- 18. Invited speaker: Amoy Garden Stories The III Wind? <u>Hong Kong SARS Forum and Hospital Authority Convention</u> 2004, 8-11 May 2004, Hong Kong.
- 17. Invited speaker: Validating Environment Design & Performance Ventilation & Airflow. <u>Hong Kong SARS Forum and Hospital Authority Convention</u> 2004, 8-11 May 2004, Hong Kong.
- 16. Invited speaker. The effects of ventilation design on dispersion of virus particles in the 8a ward, Prince of Wales Hospital. Symposium on Advanced Technology for Health Care and Hygiene Control, Hong Kong, 4 March 2004.
- 15. Keynote Speaker. The Needs for an Inter-disciplinary Approach on Engineering Control of Infectious Diseases in Indoor Environments. The 2nd International Conference on Built Environment and Public Health, Shantou, December 6-8, 2004.

#### 2003

- 14. Invited Speaker: <u>The First International Workshop on Natural Ventilation</u>, Tokyo, Japan, Oct 31-Nov 1, 2003
- 13. Invited Paper: <u>Asian Pacific Conference on Built Environment</u>, 18, November, 2003, Hong Kong.
- 12. Keynote Speech: <u>the 3rd International Conference on Cryogenics and Refrigeration</u> (ICCR'2003), 28 October 2 Nov, 2003, Hangzhou, China
- 11. Keynote Speech: <u>National Natural Gas Air Conditioning and Fight against SARS</u>, Chengdu, Nov. 2003.
- 10. Keynote Speech: <u>The 2<sup>nd</sup> National Conference on New Advances of Refrigeration and Airconditioning</u>, 18-22 November, 2003, Shanghai, China.
- 9. Keynote speech. The 1st International Forum on Indoor Environment Safety and Sustainability in China, 13-14 Dec, 2003.
- 8. Invited talk. Experimental investigation of the SARS busters' new air-conditioning system for SARS wards. International Conference on Pollution in the Metropolitan and Urban Environment (POLMET 2003). 3 November, 2003.
- 7. Invited talk. Air-conditioning system in a SARS ward with multiple beds. Symposium on Legionnaires' Disease and other Respiratory Infections and their Prevention, Hong Kong, 2003.

# 2002

6. Invited paper: World Renewable Energy Congress VII & Expo, Cologne, Germany, 29 June - 5 July 2002

#### 2001

5. Keynote Speech, <u>The First National Symposium on New Advances in Refrigeration and Airconditioning</u>, Shanghai, China, November, 2001

# 2000

4. Invited Participant and Speaker, "Third Pacific-Rim Thermal Sciences and Energy Engineering Workshop (PaRTSEE-3), The University of New South Wales, Sydney, Australia, January 5-7, 2000

# 1999

- 3. Invited speaker, "Advanced Australian Fare Food Related Innovation in the 21<sup>st</sup> Century", 6-7 December, 1999
- 2. Invited speaker, the First Australian Minerals & Energy Environment Foundation Innovation Conference, "On the Threshold: Research into Practice", Melbourne, 31 March 1 April, 1999
- 1. Keynote speaker, the 3<sup>rd</sup> International Symposium on HVAC, Shenzhen, November, 1999

## **COMMUNITY SERVICES**

# Local (Hong Kong) Service

- 1. Assessor of the Project Assessment Panel for the Innovation and Technology Fund (ITF), the Innovation and Technology Commission of the Government of the HKSAR, 2009-
- 2. Member, Mandatory Implementation of Building Energy Codes Technical Task Force. Electrical & Mechanical Services Department, Hong Kong Government, 2008-2010
- 3. Member, Appeal Board Panel Under Builder's Lifts and Tower Working Platforms (Safety) Ordinance (Cap. 470), Department of Electrical and Mechanical Services, Hong Kong Government, 2006-
- 4. Chairman (Founding), Technical Working Group on Ventilation and Health, ASHRAE HK Chapter, 2004-
- 5. Member, Working Group on Promoting the Use of Disease Modelling, Centre for Health Protection, Department of Health, 2005-
- 6. Chairman, Chapter Technology Transfer Committee, ASHRAE HK Chapter, 2004-05, 2005-2006

# National (China) Service

- 1. Member, Board of Directors, Chinese Society of Indoor Environment and Health, 2008-,
- 2. Member, Board of Directors, Chinese Society of Building Physics, 2008-
- 3. Principal Investigator, Field studies of Chinese kangs for Chinese Ministry of Agriculture, Jan 2006.
- 4. Principal Investigator, SARS transmission in Hotel 301, Beijing. 2006-2006.

# **International Services**

- 1. **WHO Temporary Advisor** to the Ministry of Health of the Republic of Indonesia and Review the isolation room design in 15 avian influenza referral hospitals on Feb 2-4, 2009
- 2. Participant, International Energy Agency Annex 53 project on building consumption data, 2009-
- 3. **WHO Temporary Advisor** on new WHO guidelines of using natural ventilation for infection control, 17-21 November 2008. WHO Geneva
- 4. Member, Scientific Steering Committee. Advise the Office of Public Health and Environmental Hazards at the U.S. Department of Veterans Affairs on Engineering Infection Control Research Agenda.
- 5. **Juror, Stockholm Challenge** 2008 (Environment Category)
- 6. **Member, ISO Technical Committee (TC)**, TC 163, Thermal performance and energy use in the built environment, 2008-
- 7. Member, Airborne Infectious Disease (AID) Position Document (PD) Committee, ASHRAE, 2007-
- 8. Chair, Task Force on Airborne transmission of infectious diseases in buildings, International Society of Indoor Air Quality and Climate (ISIAQ), 2006-
- 9. Panel member, ASHRAE systematic literature review on association between ventilation and health, 2006.
- 10. Coordinator, Thermal Mass, International Energy Agency Annex 44 project, 2005-
- 11. SubTask Leader, International Energy Agency Annex 35 project, 1998-2003
- 12. Coordinator Working Group B1 on Integrating Thermal Stratification in Natural Ventilation Analysis, International Energy Agency Annex 35 Project Hybvent (1998-2002).
- 13. Member, International Council for Research and Innovation in Building and Construction, CIB, Working Commissions W77 Indoor Climate, 2000-
- 14. Australian Representative, International Council for Research and Innovation in Building and

Construction, CIB, Working CommissionsW77 – Indoor Climate, 1997-2000

# RESEARCH AND PUBLICATIONS

(from 1990-)

With a fluid mechanics and engineering background (environment aerodynamics), my research has been focused on building energy efficiency, ventilation of spaces of different scales ranging from a person (respiration), a building to a city. I have applied both experimental and computational fluid dynamics techniques to ventilation. Building and city ventilation is determinant of or relevant to air quality, energy efficiency and health in the spaces concerned. Hence I named my research team at HKU as built environment and energy efficiency group.

I have 112 journal and 150 conference publications with 1065 SCI citations, and my SCI h-index = 20. My most recognised work appears to be the investigation of ventilation roles in SARS outbreaks. A paper published in NEJM in 2004 on Amoy Gardens SARS outbreak has 146 SCI citations. A paper on the 8A ward outbreak was elected the Best Paper Award of Indoor Air Journal. My work on natural ventilation since 1995 has also been well recognized, in particular on the multiple solution phenomena that I discovered. I contributed to two WHO guidelines for infection control and ventilation, and was the lead author for one of them.

# **Summary**

I	Refereed journal papers	112
II	Refereed conference papers	150
III	Un-refereed papers and confidential reports	37
IV	Book chapters and Editorships	8
V	Other outputs – media coverage of his work	6 subjects

Level of contribution for co-authored papers:

- As the first author, between 50-90% and.
- for other co-author papers, between 10-50%.

# I Refereed journal papers

#### Accepted

- J112 Yang Y and Li Y. Thermal conditions and ventilation in an ideal city model of Hong Kong. Energy and Buildings, to appear, 2010. doi:10.1016/j.enbuild.2010.06.005
- J111 Hang J and Li Y. Ventilation strategy and air change rates in idealized high-rise compact urban areas Building and Environment, to appear, 2010 (doi:10.1016/j.buildenv.2010.06.004)

# **2010 (7 papers so far)**

- J110 Qian H and Li Y. Removal of exhaled particles by ventilation and deposition in a multibed airborne infection isolation room. **Indoor Air** 20(4), 284-297, 2010.
- J109 Zhuang Z, Li Y, Yang X, Chen B and Liu J. Thermal and energy analysis of a Chinse kang. Front. Energy Power Eng. China, 4(1), 84-92, 2010.
- J108 Nielsen PV, Li Y, Buus M and Winther FV. Risk of cross-infection in a hospital ward with downward ventilation. Building and Environment, 45(9), 2008-2014, 2010. (IF=1.192, SCI Citations = 0)

- J107 Qian, H; Li, YG; Zhang, XS; Liu, JP Surface Temperature Distribution of Chinese Kangs. International Journal of Green Energy 7 (3): 347-360 2010
- J106 Hang J and Li Y. Wind Conditions in Idealized Building Clusters: Macroscopic Simulations Using a Porous Turbulence Model. **Boundary-Layer Meteorol**, 136, 129-159, 2010.
- J105 Luo Z, Li Y and Nazaroff WW. Intake fraction of nonreactive motor vehicle exhaust in Hong Kong. **Atmospheric Environment**, 44(15), 1913-1918, 2010. (IF=2.890, SCI Citations = 0)
- J104 Hang J, Sandberg M and Li Y: Wind conditions and ventilation in high-rise long street models. **Building and Environment** .45, 1353–1365, 2010. (IF=1.192, SCI Citations = 0)
- J103 Hang J, Sandberg M, Li Y and Claesson L: Flow mechanisms and flow capacity in idealized long-street city models. **Building and Environment**, 45, 1042–1053, 2010. (IF=1.192, SCI Citations = 0)
- J102 Qian H, Li Y, Seto WH, Ching P, Ching WH, Sun H: Natural ventilation for reducing airborne infection in hospitals. **Building and Environment**, 45, 559–565, 2010. (IF=1.192, SCI Citations = 0)

#### **2009 (13 papers)**

- J101 Hang J, Sandberg M, Li Y and Claesson L: Pollutant dispersion in idealized city models with different urban morphologies. **Atmospheric Environment**, 43, 6011–6025, 2009. (IF=2.890, SCI Citations = 0)
- J100 Eames I, Tang JW, Li Y and Wilson P. Airborne transmission of disease in hospitals. **J. R. Soc. Interface**, 6:S697-S702, 2009. (IF=3.621, SCI Citations = 0)
- J99 Xie, X.J., Li, Y.G., Sun, H.Q. and Liu, L. Exhaled droplets due to talking and coughing. **J. R. Soc. Interface**, 6:S703-S714, 2009. (IF=3.621, SCI Citations = 3)
- J98 Gao X, Li Y and Leung GM: Ventilation control of indoor transmission of airborne diseases in an urban community. **Indoor and Built Environment**, 18(3), 205-218, 2009. (IF=0.629, SCI Citations = 2)
- J97 Qian H, Li Y, Nielsen P and Huang X.: Spatial distribution of infection risk of SARS transmission in a hospital ward. **Building and Environment**, 44(8), 1651-1658, 2009. (IF=1.192, SCI Citations = 3)
- J96 Zhuang Z, Li Y and Chen, B.: Smoke flow in Chinese kangs. **Indoor and Built Environment**, 18(3), 219-233, 2009. (IF=0.629, SCI Citations = 1)
- Yang L and Li Y. City ventilation of Hong Kong at no-wind conditions. **Atmospheric Environment** 43(19), 3111-3121, 2009. (IF=2.890, SCI Citations = 1)
- J94 Hang J, Sandberg M, Li YG. Age of air and air exchange efficiency in idealized city models. **Building and Environment**, 44(8), 1714-1723, 2009. (IF=1.192, SCI Citations = 2)
- J93 Morawska L, G.R. Johnson, Z.D. Ristovski, M. Hargreaves, K. Mengersen, S. Corbett, C.Y.H. Chao, Y. Li, D. Katoshevski. Size distribution and sites of origin of droplets expelled during expiratory activities. Journal of Aerosol Science, 40(3), 256-269, 2009. (IF=2.239, SCI Citations = 6)
- J92 Chao CY H, M. P. Wan, L. Morawska, G. R. Johnson, Z.D. Ristovski, M. Hargreaves, K. Mengersen, S. Corbett, Y. Li, X. Xie, D. Katoshevski. Experimental characterization of expiration air jets and size distribution of expiratory droplets. **Journal of Aerosol Science**, 40(2), 122-133, 2009. (IF=2.239, SCI Citations = 8)
- J91 Li Y, Zhuang Z and Liu J.: Chinese kangs and building energy consumption. **Chinese Science Bulletin**, 54 (6): 992-1002, 2009. (IF=0.683, SCI Citations = 2)
- J90 Hang J, Sandberg M and Li Y: Effect of urban morphology on wind condition in idealized city models. **Atmospheric Environment**, 43(4), 869-878, 2009. (IF=2.890, SCI Citations = 7)
- J89 Zhuang Z, Li Y and Chen B: Thermal storage performance analysis on Chinese kangs. Energy and Buildings, 41(4), 452-459, 2009. (IF=1.590, SCI Citations = 2)
- J88 Zhuang Z, Li Y and Chen B: Chinese Kang as a Domestic Heating System in Rural Northern China A Review. **Energy and Buildings**, 41(1), 111-119, 2009. (IF=1.590, SCI Citations = 3)

# **2008 (4 papers)**

- Yang, L. and Li Y: Cooling load reduction by using thermal mass and night ventilation. **Energy and Buildings**, 40 (11):2052-2058, 2008 (IF=1.590, SCI Citations = 3)
- Ching W-H, Leung, MKH, Leung DYC, Li Y, Yuen PL. Reducing Risk of Airborne Transmitted Infection in Hospitals by Use of Hospital Curtains. **Indoor and Built Environment,** 17 (3):252-259, 2008 (IF=0.629, SCI Citations = 2)
- J85 Zhou J, Zhang G, Lin Y and Li Y: Coupling of thermal mass and natural ventilation in buildings, **Energy and Buildings**, 40 (6):979-986, 2008 (IF=1.590, SCI Citations = 5)
- J84 Qian, H., Li Y, Nielsen, P.V., Hyldgaard, C.E., Wong, T.W.: Dispersion of Exhalation Pollutants in a Two-Bed Hospital Ward with a Downward Ventilation System. **Building and Environment**, 43:344-354, 2008. (Impact Factor, 0.427) (IF=1.192, SCI Citations = 9)

#### **2007 (5 papers)**

- Tang, J and Li Y: Transmission of influenza A in human beings. Reflection and Reaction. **Lancet Infect Dis,** 7: 1, 2007. (IF=13.165, SCI Citations = 4)
- J83 Li Y, Ching, WH, Qian H, Yuen PL, Seto WH, Kwan JK, Leung JKC, Leung M and Yu SCT: An evaluation of the ventilation performance of new SARS isolation wards in nine hospitals in Hong Kong. **Indoor and Built Environment**, 16 (5):400-410, 2007. (IF=0.629, SCI Citations = 0)
- J82 Sun W, Ji J, Li Y and Xie X: Dispersion and settling characteristics of evaporating droplets in ventilated room. **Building and Environment**, 42:1011-1017, 2007. (IF=1.192, SCI Citations = 9)
- J81 Xie, X., Li Y, Chwang, ATY, Ho, PL and Seto, WH: How far droplets can move in indoor environments Revisiting Wells evaporation-falling curve of droplets. Indoor Air, 17 (3): 211-225, 2007. (IF=3.151, SCI Citations = 20)
- \*J80 Li Y, GM Leung, JW Tang, X Yang, CYH Chao, JZ Lin, JW Lu, PV Nielsen, J Niu, H Qian, AC Sleigh; H-J J Su, J Sundell, TW Wong, PL Yuen. Role of ventilation in airborne transmission of infectious agents in the built environment a multidisciplinary systematic review. **Indoor Air**, 17 (1):2-18, 2007. (IF=3.151, SCI Citations = 59)

#### **2006** (9 papers)

- J79 Xie, X., Li Y, Zhang, T., Fang, H.H.P.: Bacterial Survival in an Evaporating Deposited Droplet on a Teflon-coated Surface. **Applied Microbiology and Biotechnology**, 73(3):703-12, 2006. (IF=2.569, SCI Citations = 6)
- J78 Li, Y. and Xu, P.: Thermal mass design in buildings heavy and light? **International Journal of Ventilation**, 5(1):143-149, 2006. (SCI Citations: NA)
- J77 Liddament M, Axley A, Heiselberg P, Li Y, and Stathopoulos T: Achieving natural and hybrid ventilation in practice. **International Journal of Ventilation**, 5(1):115-130, 2006. (SCI Citations: NA)
- J76 Seifert J, Li Y, Axley J and Rösler M: Calculation of wind-driven cross ventilation in buildings with large openings. **Journal of Wind Engineering and Industrial Aerodynamics**, 94(12):925-947, 2006 (IF=0.752, SCI Citations = 4)
- J75 Tang JW, Li Y, Eames I, Chan PKS, Ridgway GL: Factors involved in the aerosol transmission of infection and control of ventilation in healthcare premises **Journal of Hospital Infection**, 64(2):100-14, 2006. (IF=2.956, SCI Citations = 39) (Received the Best Review Article Award of JHI, Jan 2007)
- \*J74 Li Y, Xu P, Qian H, Deng Q and Wu J: Flow bifurcation due to opposing buoyancy in two vertically-connected open cavities, **International Journal of Heat and Mass Transfer**, 49:3298-3312, 2006. (IF=1.894, SCI Citations = 3)
- Yang L, Xu P and Li Y: Nonlinear Dynamical Analysis and Solution Multiplicity Study of Natural Ventilation in a Two-zone Building: Part B CFD Simulations. **HVAC&R Research**, 12 (2):231-256, 2006. (IF=0.637, SCI

#### Citations = 0

- Yang L, Li Y, Xu P and Zhang G: Nonlinear Dynamical Analysis and Solution Multiplicity Study of Natural Ventilation in a Two-zone Building: Part A Theoretical Analysis. HVAC&R Research, 12(2):257-278, 2006. (IF=0.637, SCI Citations = 2)
- J71 Qian H, Li Y, Nielsen PV, Hyldgaard CE, Wong TW, Chwang ATY: Dispersion of exhaled droplet nuclei in a two-bed hospital ward with three different ventilation systems, **Indoor Air**, 16:111-128, 2006. (Correction, 16 (3): 256-256; JUN 2006) (IF=3.151, SCI Citations = 33)

# 2005 (8 papers)

- J70 Tang JW, Eames I, Li Y, Taha YA, Wilson P, Bellingan G, Ward KN, Breuer J, Door-opening motion can potentially lead to a transient breakdown in negative-pressure isolation conditions: An introduction to the importance of vorticity and buoyancy airflows, **Journal of Hospital Infection**, 61:283-286, 2005. (IF=2.956, SCI Citations = 11)
- J69 Duan S and Li Y: An Example of solution multiplicity in a building with bidirectional flow openings. **Indoor and Built Environment**, 14 (5):359-369, 2005. (IF=0.629, SCI Citations = 3)
- J68 Li Y, Duan S and Zhang G: Multiple Solutions in a building with four openings ventilated by combined forces. **Indoor and Built Environment**, 14(5):347-358, 2005. (IF=0.629, SCI Citations = 1)
- J67 Zheng Z, Xu P, Li Y, Chen G, Nonlinear resonance and quasi-periodic solutions for ventilation flows in a single opening enclosure. **International Journal of Bifurcation and Chaos**. 15 (5):1801-1808, 2005. (IF=0.870, SCI Citations = 0)
- Yang LN, Zhang Q, Li Y and Chen Y: Investigating potential of natural driving forces for ventilation in four major cities in China. **Building and Environment**, 40:738-746, 2005. (IF=1.192, SCI Citations = 9)
- Yu ITS, Wong TW, Chiu YL, Lee N, Li Y: Spatio-temporal Analysis of SARS among Hospital Inpatients. Clinical Infectious Diseases, 40:1237-1243, 2005. (Impact Factor, 5.393) (IF=8.266, SCI Citations = 22)
- Li Y, Duan S, Yu ITS and Wong TW: Multi-zone modeling of probable SARS virus transmission by airflow between flats in Block E, Amoy Gardens. **Indoor Air**, 15:96-111, 2005. (IF=3.151, SCI Citations = 22)
- \*J63 Li Y, Huang X, Yu ITS, Wong TW and Qian H: Role of air distribution in SARS transmission during the largest nosocomial outbreak in Hong Kong. **Indoor Air**, 15:83-95, 2005. (IF=3.151, SCI Citations = 49) (Received the Best Paper Award of Indoor Air Journal 2005-2007)

# 2004 (9 papers)

- J62 Li Y, Sandberg M and Hui S: Robustness of Air Distribution in Plenum-Based Ductless Ventilation Systems. **International Journal of Ventilation**, 3:105-118, 2004. (Impact Factor, N/A) (SCI Citations: NA)
- J61 Chan, F., Cheung, V., Law, V., Li Y, Wong, A. and Yau, R.: Air Distribution Design in a SARS Ward with Multiple Beds(多病床非典病房的气流分布研究). **Building Energy and Environment** (建筑热能通风空调) 23:21-33, 2004. (In Chinese) (Impact Factor, N/A) (SCI Citations: NA)
- \*J60 Li, Y., Yu, I.T.S., Xu, P., Lee, J.H.W., Wong, T.W., Ooi, P.P. and Sleigh, A.: Predicting super spreading events during the 2003 SARS epidemics in Hong Kong and Singapore, **American Journal of Epidemiology**, 160:719–728, 2004. (IF=5.454, SCI Citations = 24)
- J59 Seifert, J., Rösler, M., Richter, W. and Li Y: Windinduzierte Lüftung in Gebäuden mit großen Öffnungen, **HLH**, 55(7):30-33, 2004. (in German) (Impact Factor, N/A) (SCI Citations: NA)
- Yu, I.T.S. and Li Y: Correspondence on "Evidence of Airborne Transmission of SARS" Authors reply. **New England Journal of Medicine**, 351:609-611, 2004. (IF=50.017, SCI Citations = 0)
- J57 Li, Y. and Yam, Y. Designing thermal mass in naturally ventilated buildings. **International Journal of Ventilation**, 2(4):313-324, 2004. (Impact Factor, N/A) (SCI Citations: NA)

- Yu, I.T.S, Li Y G., Wong, T.W., Tam, W., Chan, A., Lee, J.H.W., Leung, D.Y.C., Ho, T. Evidence of Airborne Transmission of the Severe Acute Respiratory Syndrome Virus. New England Journal of Medicine, 350:1731-1739, 2004. (IF=50.017, SCI Citations = 146, ranked as one Highly Cited Paper by SCI in August 2006)
- Wong, T.W., Li, C.K., Tam, W., Lau, J.T.F., Yu, T.S., Lui, S.F., Chan, P.K.S., Li Y G., Bresee, J.S., Sung, J.Y.,
   Parashar, U.D., Cluster of SARS among medical students exposed to single patient, Hong Kong, Emerging
   Infectious Diseases, 10:269–76, 2004. (IF=6.449, SCI Citations = 51)
- J54\*. Heiselberg, P., Li Y, Andersen, A., Bjerre, M. and Chen, Z.: Experimental and CFD evidence of multiple solutions in a naturally ventilated building, **Indoor Air**, 14:43-54, 2004. (IF=2.887, SCI Citations = 13)

## **2003 (8 papers)**

- J53. Gong, G., Li, H. and Li Y: A review of application and current status of natural ventilation. 自然通风的应用和研究。**Building Energy & Environment** (建筑热能通风空调), 22:4, 2003 (In Chinese). (Impact Factor, N/A) (SCI Citations: NA)
- J52. Li, Y. and Chen, Z.D.: A balance-point method for assessing the effect of natural ventilation on indoor particle concentrations. **Atmospheric Environment**, 37:4277-4285, 2003. (IF=2.890, SCI Citations = 8)
- J51. Chen, Z.D., Bandopadhayay, P., Halldorsson, J., Byrjalsen, C., Heiselberg, P. and Li Y: An experimental investigation of a solar chimney with uniform wall heat flux, **Building and Environment**, 38:893-906, 2003. (IF=0.852, SCI Citations = 26)
- J50. Dai, Y.J., Sumathy, K., Wang, R.Z. and Li Y: Enhancement of natural ventilation in a solar house with a solar chimney and a solid adsorption cooling cavity, **Solar Energy**, 74:65-75, 2003. (IF=1.607, SCI Citations = 8)
- J49. Li, Y., Shing, V. C. W., Chen. Z. D.: Fine bubble modelling of smoke flows. **Fire Safety Journal**, 38(3), 285-298, 2003. (IF=0.514, SCI Citations = 1)
- Li, Y. and Heiselberg, P: Analysis methods for natural and hybrid ventilation a critical literature review and recent developments, **International Journal of Ventilation**, 1, 3-20, Special Edition, 2003. (Impact Factor, N/A) (SCI Citations: NA)
- Yam, J., Li Y and Zheng, Z. H.: Nonlinear coupling between thermal mass and natural ventilation in buildings. **International Journal of Heat and Mass Transfer**, 46 (7):1251-1264 2003. (IF=1.894, SCI Citations = 16)
- J46. Ye, G., Yang, C., Chen, Y. and Li Y: A new approach for measuring predicted mean vote (PMV) and standard effective temperature (SET\*). **Building and Environment**, 38:34-35, 2003. (IF=1.192, SCI Citations = 7) (my contribution was minor in this paper)

## **2002 (4 papers)**

- J45. Deng, Q-H, Tang, G.-F., Li Y and Ha, M.Y.: Interaction between discrete heat sources in horizontal convection enclosures, **International Journal of Heat and Mass Transfer**, 45 (26):5117-5132, 2002. (IF=1.894, SCI Citations = 29)
- \*Li, Y.: Spurious numerical solutions in coupled natural ventilation and thermal analyses. **International Journal of Ventilation**, 1:1-12, 2002. (Impact Factor, N/A) (SCI Citations: NA)
- Deng, Q-H, Tang, G.-F. and Li Y: A Combined Temperature Scale for Analyzing Natural Convection in Rectangular Enclosures with Discrete Wall Heat Sources. **Int J of Heat and Mass Transfer**, 45:3437-3446, 2002. (IF=1.894, SCI Citations = 26)
- Chen, Z.D. and Li Y: Buoyancy-driven displacement natural ventilation in a single-zone building with three-level openings. **Building and Environment**, 37:295-303, 2002. (IF=0.852, SCI Citations = 12)

# **2001 (7 papers)**

Li, Y., Ho, E.C.W., Fracastoro, G. V. and Perino, M.: A short note on capture efficiency of kitchen range hoods in a confined space. **International Journal on Architectural Science**, 2(2):46-52, 2001. (Impact Factor, N/A) (SCI Citations: NA)

February 14, 2009

- J40\* Li, Y., A. Delsante, Z.D. Chen, M. Sandberg, Andersen, A., Bjerre, M. and Heiselber, P.: Some examples of solution multiplicity in natural ventilation, **Building and Environment**, 36:851-858, 2001. (IF=1.192, SCI Citations = 27)
- Prakash, M., Turan, Ö.F., Li Y, Mahoney, J., Thorpe, G. R.: Impinging round jet studies in a cylindrical enclosure with and without a porous layer: Part I-Flow visualisations and simulations. **Chemical Engineering Science**, 56:3855-3878, 2001. (IF=1.884, SCI Citations = 33)
- J38 Prakash, M., Turan, Ö.F., Li Y, Mahoney, J., Thorpe, G. R.: Impinging round jet studies in a cylindrical enclosure with and without a porous layer: Part II- LDV measurements and simulations. **Chemical Engineering Science**, 56:3855-3878, 2001. (IF=1.884, SCI Citations = 19)
- J37 Chen, Z. D., Li Y and Mahoney, J.: Natural ventilation in an enclosure induced by a heat source distributed uniformly over a vertical wall. **Building and Environment**, 36,:493-501, 2001. (**IF=1.192**, SCI Citations = 3)
- J36\* Li, Y. and Delsante, A.: Natural ventilation induced by combined wind and thermal forces. **Building and Environment**, 36:59-71, 2001. (IF=1.192, SCI Citations = 45)
- Chen, Z. D., J. Mahoney and Y. Li, Experimental modelling of buoyancy-driven flows in buildings using a fine-bubble technique. **Building and Environment**, 36:447-455, 2001. (IF=1.192, SCI Citations = 2)

# **2000 (4 papers)**

- J34 Gao, M., Reid, C.N., Jahedi, M. and Li Y, Estimating equilibrium times and heating/cooling rates in heat treatment of work pieces with arbitrary geometry. **Journal of Materials Engineering and Performance**, 9(1):62-71, 2000. (IF=0.403, SCI Citations = 8)
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## IV Books and Editorships

- P8. Atkinson J, Chartier Y, Pessoa-Silva C, Jensen P, Li Y and Seto W-H (Edited): Natural Ventilation for Infection Control in Health-Care Settings- WHO Guidelines, World Health organization, June 2009. (Yuguo Li was the lead author) (http://www.who.int/water\_sanitation\_health/publications/natural\_ventilation.pdf)
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- P7. Li, Y. and Li, X. (Guest Editors): Indoor Air 2005 Special issue, ventilation for better Indoor Air Quality, International Journal of Ventilation, vol.5, no.3, 2006.
- P6. Li, Y., Airflow, heat and mass transfer in enclosures, Chapter 1. In Ventilation Systems: Design and Performance, Ed. H. Awbi, Spon Press, London, 2006. (Publication in process)
- P5. Li, Y., Qian, H., Yu, ITS and Wong, TW.: Probable Roles of Bio-Aerosol Dispersion in the SARS Outbreak in Amoy Gardens, Hong Kong. Chapter 16, Population Dynamics and Infectious Disease in the Asia-Pacific, World Scientific Publishing, Singapore, 2005. (Publication in process)
- P4. Li, Y.(Guest Editor): Special Issue on Engineering Control of Respiratory Infectious Diseases, Vol. 12, No. 1, March 2005, HKIE Transactions.
- P3. Li, Y.: Hybrid ventilation, in New Advances in Refrigeration and Air Conditioning, Academic Science Press, 2002 (In Chinese).
- P2 Li, Y.: Chapter 5 Analysis Tools for Hybrid Ventilation. In Hybrid Ventilation State-of-The-Art Review, Edited by A. Delsante and T. A. Vik, International Energy Agency, Annex 35, 2000.
- P1 Chen, Z., Delsante, A., Li Y and Rowe, D. (Editors): Hybrid ventilation in New and Retrofitted Office Buildings. The Proceedings of the 1<sup>st</sup> International Forum on Natural and Hybrid Ventilation, Sydney, Australia, 28 September, 1999.

#### V Other outputs – media coverage of his work and patents

- M7 可移动式智能型局部空调回风及杀菌装置,申请号: 03129308.0 发明人: 王如竹,李玉国,黄新华,郑晓红,吴静怡。2003.
- M6 In April 2005, Clinical Infectious Diseases published his co-authored paper on 8A ward SARS outbreak investigation. The joint research results on possible airborne transmission were reported by many international media in US, Canada, Singapore, China, India etc.
- M5 On 23 April 2004, New England Journal of Medicine published his co-authored paper on Amoy Gardens SARS outbreak investigation. The joint research results on possible airborne transmission were reported by many international and local media n US, Canada, Singapore, China, India, Japan, Russia etc, including CNN, Washington Post, New Scientists in different languages.
- M4 On 11 July 2003, The Hong Kong Institution of Engineers and the University of Hong Kong held a joint Media Release on the work on SARS ward air conditioning systems by his research team. Again, it was covered widely in the HK media. The half million dollars full-scale SARS Ward test room completed in four weeks time was visited by more than 300 people from EPD, ASD, EMSD, Hospital Authority, WHO experts, medical doctors, engineers etc.
- M3 On 17 April 2003, The Faculty of Engineering at the University of Hong Kong did a Media Release based on the HKU Engineering Faculty's Project Team on Amoy Gardens SARS Outbreak. There have been wide media coverage of my work in Hong Kong and also some coverage overseas until May 2003. Represented the team, Dr Li has made presentations to various HK government departments, US CDC former Chairman, WHO Amoy Gardens Investigation team etc.
- M2 In August 1999, CSIRO did a Media Release based on his work on hybrid ventilation and the First International Forum on Natural and Hybrid Ventilation (HybVent Forum 99). A wide media exposure was received. These included 12 radio interview and radio news, 12 newspaper (including the Australian and the Age) coverage and 2 features in industry magazines in Australia.

M1 His work on CFD in built environment and modelling of St James Theatre, Flemington Market, and Olympic Dam Smelters, natural ventilation modelling were featured in a number of industry magazines in Australia from 1995 to 2000.