

Curriculum Vitae

Chun Chen, Ph.D.

Assistant Professor, Department of Mechanical and Automation Engineering
The Chinese University of Hong Kong, Hong Kong SAR, China
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EDUCATION

Ph.D. in Mechanical Engineering	Purdue University, USA	2012 – 2015
M.Eng. in Civil Engineering	Tsinghua University, China	2009 – 2012
B.Eng. in Building Science	Tsinghua University, China	2005 – 2009

RESEARCH INTERESTS

- Indoor air quality
- Aerosol dynamics
- Energy-efficient buildings
- Airborne infectious diseases transmission

EXPERIENCE

Assistant Professor	Department of Mechanical and Automation Engineering, The Chinese University of Hong Kong, China	08/2016 – present
Visiting Assistant Professor	School of Mechanical Engineering, Purdue University, USA	08/2015 – 07/2016
Research Assistant	School of Mechanical Engineering, Purdue University, USA	01/2012 – 05/2015
Research Assistant	Department of Building Science, Tsinghua University, China	08/2009 – 12/2011

HONORS & AWARDS

- Dean's Exemplary Teaching Award, The Chinese University of Hong Kong, 2017
- Best Student Paper Award (First author), the 13th International Conference on Indoor Air Quality and Climate (Indoor Air 2014), 2014
- Bilisland Dissertation Fellowship, Purdue University, 2014
- Grant-in-Aid Award, American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE), 2013
- Second Prize of Natural Science Award (4th Co-I), Ministry of Education, China, 2013
- Best Paper Award (First author), *Building and Environment* journal, 2012
- Boeing Scholarship, Boeing Company, 2012
- Best Master's Thesis Award, Tsinghua University, 2012

- First Prize Scholarship, Tsinghua University, 2011
- Xia Anshi Scholarship, Heatcraft Company, 2011
- Top 10 papers at Department of Building Science, Tsinghua University, 2009–2011
- “12.9” Scholarship, Tsinghua University, 2010
- Best Bachelor Thesis Award, Tsinghua University, 2009
- First Prize of Academic Speech Contest, Beijing Refrigeration Association, 2009
- First Prize of Student Research Training project, Tsinghua University, 2008
- Wang Shujing and Wang Wendou Scholarship, Xiamen Education Foundation, 2008
- Jinjiang Machinery Scholarship, Tsinghua University, 2008
- Zhan Zhaoqiang Scholarship, Tsinghua University, 2007
- Academic Excellence Scholarship, Tsinghua University, 2006

PUBLICATIONS

Peer Reviewed Journal Papers (*corresponding author)

Total Citations: 1360 (Google Scholar), 926 (ResearchID@Thomson Reuters)

- 45 Liu, W. *, You, R., Chen, C. * (2019). Modeling transient particle transport by fast fluid dynamics with the Markov chain method. *Building Simulation*, doi.org/10.1007/s12273-019-0513-9.
- 44 Lai, D. *, Chen, C. * (2019). Comparison of the linear regression, multinomial logit, and ordered probability models for predicting the distribution of thermal sensation. *Energy and Buildings*, 188–189, 269–277.
- 43 Pan, Y., Lin, C.-H., Wei, D., Chen, C. * (2019). Experimental measurements and large eddy simulation of particle deposition distribution around a multi-slot diffuser. *Building and Environment*, 150, 156–163.
- 42 Xia, T., Chen, C. * (2019). Differentiating between indoor exposure to PM_{2.5} of indoor and outdoor origin using time-resolved monitoring data. *Building and Environment*, 147, 528–539.
- 41 Cao, Q., Chen, C., Liu, S., Lin, C.-H., Wei, D., Chen, Q. (2018). Prediction of particle deposition around the cabin air supply nozzles of commercial airplanes using measured in-cabin particle emission rates. *Indoor Air*, 28, 852–865.
- 40 Chen, C. *, Zhao, B., Lai, D., Liu, W. (2018). A simple method for differentiating direct and indirect exposure to exhaled contaminants in mechanically ventilated rooms. *Building Simulation*, 11, 1039–1051. (Invited paper for the special issue of the 10-year anniversary of the journal)
- 39 Yao, C., Wang, Z., Wang, Q., Bian, Y., Chen, C., Zhang, L., Ren, W. (2018). Interband cascade laser absorption sensor for real-time monitoring of formaldehyde filtration by a nanofiber membrane. *Applied Optics*, 57, 8005–8010.
- 38 Bian, Y., Wang, R., Ting S.H., Chen, C. *, Zhang, L. * (2018). Electrospun SF/PVA nanofiber filters for highly-efficient PM_{2.5} capture. *IEEE Transactions on Nanotechnology*, 17, 934–939.
- 37 Liu, C. *, Yang, J., Ji, S., Lu, Y., Wu, P., Chen, C. * (2018). Influence of natural ventilation rate on indoor PM_{2.5} deposition. *Building and Environment*, 144, 357–364.
- 36 Bian, Y., Wang, R., Wang, S., Yao, C., Ren, W., Chen, C. *, Zhang, L. * (2018). Metal-organic frameworks-based nanofiber filters for effective indoor air quality control. *Journal of Materials Chemistry A*, 6, 15807–15814.
- 35 Bian, Y., Zhang, L. *, Chen, C. * (2018). Experimental and modeling study of pressure drop

- across electrospun nanofiber air filters. *Building and Environment*, 142, 244–251.
- 34 Lai, D., Chen, C., Liu, W., Shi, Y., Chen, C.* (2018). An ordered probability model for predicting outdoor thermal comfort. *Energy and Buildings*, 168, 261–271.
 - 33 Xia, T., Bian, Y., Zhang, L., Chen, C.* (2018). Relationship between pressure drop and face velocity for electrospun nanofiber filters. *Energy and Buildings*, 158, 987–999.
 - 32 Shi, S., Bian, Y., Zhang, L., Chen, C.* (2017). A method for assessing the performance of nanofiber films coated on window screens in reducing residential exposures to PM_{2.5} of outdoor origin in Beijing. *Indoor Air*, 27, 1190–1200. (*The journal's top 20 most downloaded papers published between July 2016 and June 2018*)
 - 31 Chen, C., Lin, C.-H., Wei, D., Chen, Q. (2016). Modeling particle deposition on the surfaces around a multi-slot diffuser. *Building and Environment*, 107, 79–89.
 - 30 Shi, Z., Chen, J., You, R., Chen, C., Chen, Q. (2016). Modeling of gasper-induced jet flow and its impact on cabin air quality. *Energy and Buildings*, 127, 700–713.
 - 29 Chen, C., Zhang, X., Groll, E., McKibben, A., Long, N., Dexter, M., Chen, Q. (2016). A method of assessing the energy cost saving from using an effective door closer. *Energy and Buildings*, 118, 329–338.
 - 28 Liu, W., Jin, M., Chen, C., You, R., Chen, Q. (2016). Implementation of a fast fluid dynamics model in Open FORM for simulating indoor airflow. *Numerical Heat Transfer, Part A: Applications*, 69, 748–762.
 - 27 Liu, W., Jin, M., Chen, C., Chen, Q. (2016). Optimization of air supply location, size, and parameters in enclosed environments through using a CFD-based adjoint method. *Journal of Building Performance Simulation*, 9, 149–161.
 - 26 Chen, C., Liu, W., Lin, C.-H., Chen, Q. (2015). Comparing the Markov chain model with the Eulerian and Lagrangian models for indoor transient particle transport simulations. *Aerosol Science and Technology*, 49, 857–871.
 - 25 Liu, W., Duan, R., Chen, C., Lin, C.-H., Chen, Q. (2015) Inverse design of the thermal environment in an airliner cabin by use of the CFD-based adjoint method. *Energy and Buildings*, 104, 147–155.
 - 24 Chen, C., Liu, W., Lin, C.-H., Chen, Q. (2015). A Markov chain model for predicting transient particle transport in enclosed environments. *Building and Environment*, 90, 30–36.
 - 23 Chen, C., Liu, W., Lin, C.-H., Chen, Q. (2015). Accelerating the Lagrangian method for modeling transient particle transport in indoor environments. *Aerosol Science and Technology*, 49, 351–361.
 - 22 Chen, C., Lin, C.-H., Jiang, Z., Chen, Q. (2014). Simplified models for exhaled airflow from a cough with the mouth covered. *Indoor Air*, 24, 580–591. (*Best Student Paper Award, the 13th International Conference on Indoor Air Quality and Climate, 2014*)
 - 21 Chen, C., Zhu, J., Qu, Z., Lin, C.-H., Jiang, Z., Chen, Q. (2014). Systematic study of person-to-person contaminant transport in mechanically ventilated spaces (RP-1458). *HVAC&R Research*, 20, 80–91.
 - 20 Chen, C., Lin, C.-H., Long, Z., Chen, Q. (2014). Predicting transient particle transport in enclosed environments with the combined computational fluid dynamics and Markov chain method. *Indoor Air*, 24, 81–92.
 - 19 Li, Q., You, R., Chen, C., Yang, X. (2013). A field investigation and comparative study of indoor environmental quality in heritage Chinese rural buildings with thick rammed earth wall. *Energy and Buildings*, 62, 286–293.
 - 18 You, R., Cui, W., Chen, C., Zhao, B. (2013). Measuring the short-term emission rate of particles in the “personal cloud” with different clothes and activity intensities in a sealed

- chamber. *Aerosol and Air Quality Research*, 13, 911–921.
- 17 Chen, C., Liu, W., Li, F., Lin, C.-H., Liu, J., Pei, J., Chen, Q. (2013). A hybrid model for investigating transient particle transport in enclosed environments. *Building and Environment*, 62, 45–54.
 - 16 Chen, C., Zhao, B., Weschler, C.J. (2012). Indoor exposure to outdoor PM₁₀: assessing its influence on the relationship between PM₁₀ and short-term mortality in U.S. cities. *Epidemiology*, 23, 870–878.
 - 15 You, R., Zhao, B., Chen, C. (2012). Developing an empirical equation for modeling particle deposition velocity onto inclined surfaces in indoor environments. *Aerosol Science and Technology*, 46, 1090–1099.
 - 14 Li, Q., Sun, X., Chen, C., Yang, X. (2012). Characterizing the household energy consumption in heritage Nanjing Tulou buildings, China: A comparative field survey study. *Energy and Buildings*, 49, 317–326.
 - 13 Chen, C., Zhao, B., Weschler, C.J. (2012). Assessing the influence of indoor exposure to "outdoor ozone" on the relationship between ozone and short-term mortality in US communities. *Environmental Health Perspectives*, 120, 235–240.
 - 12 Chen, C., Zhao, B., Zhou, W., Jiang, X., Tan, Z. (2012). A methodology for predicting particle penetration factor through cracks of windows and doors for actual engineering application. *Building and Environment*, 47, 339–348. (***Best Paper Award, Building and Environment Journal, 2012***)
 - 11 Zhao, B., Chen, C., Lai, A.C.K. (2011). Lagrangian stochastic particle tracking: further discussion. *Aerosol Science and Technology*, 45, 901–902.
 - 10 Chen, C., Zhao, B., Yang, X., Li, Y. (2011). Role of two-way airflow owing to temperature difference in severe acute respiratory syndrome transmission: revisiting the largest nosocomial severe acute respiratory syndrome outbreak in Hong Kong. *Journal of the Royal Society Interface*, 8, 699–710.
 - 9 Chen, C., Zhao, B., Yang, X. (2011). Preventing the entry of outdoor particles with the indoor positive pressure control method: Analysis of influencing factors and cost. *Building and Environment*, 46, 1167–1173.
 - 8 Chen, C., Zhao, B., Yang, X. (2011). Impact of two-way air flow due to temperature difference on preventing the entry of outdoor particles using indoor positive pressure control method. *Journal of Hazardous Materials*, 186, 1290–1299.
 - 7 Chen, C., Zhao, B. (2011). Review of relationship between indoor and outdoor particles: I/O ratio, infiltration factor and penetration factor. *Atmospheric Environment*, 45, 275–288. (***Highly Cited Paper, Essential Science IndicatorsSM***)
 - 6 Wang, B., Zhao, B., Chen, C. (2010). A simplified methodology for the prediction of mean air velocity and particle concentration in isolation rooms with downward ventilation systems. *Building and Environment*, 45, 1847–1853.
 - 5 Chen, C., Zhao, B., Cui, W., Dong, L., An, N., Ouyang, X. (2010). The effectiveness of an air cleaner in controlling droplet/aerosol particle dispersion emitted from a patient's mouth in the indoor environment of dental clinics. *Journal of the Royal Society Interface*, 7, 1105–1118.
 - 4 Zhao, B., Chen, C., Yang, X., Lai, A.C.K. (2010). Comparison of three approaches to model particle penetration coefficient through a single straight crack in a building envelope. *Aerosol Science and Technology*, 44, 405–416.
 - 3 Chen, C., Zhao, B. (2010). Some questions on dispersion of human exhaled droplets in ventilation room: answers from numerical investigation. *Indoor Air*, 20, 95–111.
 - 2 Zhao, B., Yang, C., Chen, C., Feng, C., Yang, X., Sun, L., Gong, W., Yu, L. (2009). How

many airborne particles emitted from a nurse will reach the breathing zone/body surface of the patient in ISO Class-5 single-bed hospital protective environments? - A numerical analysis. *Aerosol Science and Technology*, 43, 990–1005.

- 1 Zhao, B., Chen, C., Tan, Z. (2009). Modeling of ultrafine particle dispersion in indoor environments with an improved drift flux model. *Journal of Aerosol Science*, 40, 29–43.

Referred Conference Papers (* corresponding author)

- 14 Cao, Q., Chen, C., Lin, C.-H., Wei, D., Chen, Q. (2018). Predict particle deposition around the cabin air supply nozzles of commercial airplanes. *Proceedings of the 15th Conference of the International Society of Indoor Air Quality & Climate (Indoor Air 2018)*, July 22–27, Philadelphia, PA, USA, Paper 244.
- 13 Xia, T., Shi, S., Chen, C.* (2018). Nanofiber filters with low air resistance and the potential applications in indoor environments. *Proceedings of the 15th Conference of the International Society of Indoor Air Quality & Climate (Indoor Air 2018)*, July 22–27, Philadelphia, PA, USA, Paper 175.
- 12 Lai, D.* , Chen, C., Liu, W., Shi, Y., Chen, C.* (2018). An outdoor thermal comfort model for predicting the probability distribution of thermal sensation. *Proceedings of the 15th Conference of the International Society of Indoor Air Quality & Climate (Indoor Air 2018)*, July 22–27, Philadelphia, PA, USA, Paper 126.
- 11 Xia, T., Chen, C.* (2018). Comparison of air resistance between electrospun nanofiber filters and conventional filters. *Proceedings of the 2018 American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE) Annual Conference*, June 23–27, Houston, TX, USA, Paper HO-18-C010.
- 10 Shi, S., Chen, C.* (2017). Assessment of reduction in indoor PM_{2.5} of outdoor origin by using nanofiber filters as window screens. *Proceedings of the 10th International Symposium on Heating, Ventilation and Air Conditioning (ISHVAC 2017)*, October 19–22, Jinan, China, Paper 1330.
- 9 Bian, Y., Chen, C., Zhang, L. (2017). Development of nanofiber filters with high PM_{2.5} removal efficiency and low air resistance. *Proceedings of the 17th IEEE International Conference on Nanotechnology (IEEE NANO 2017)*, July 25–28, Pittsburgh, PA, USA, Paper 200.
- 8 Shi, S., Bian, Y., Zhang, L., Chen, C.* (2017). Effectiveness of nanofiber window screens in reducing indoor exposure to outdoor PM_{2.5} in Beijing. *Proceedings of Healthy Buildings Europe 2017 (HB2017 Europe)*, July 2–5, Lublin, Poland, Paper 0123.
- 7 Chen, C.*, Lin, C.-H., Wei, D., Chen, Q. (2016). Modeling particle deposition on the surfaces around a diffuser in an indoor space. *Proceedings of the 14th International Conference of Indoor Air Quality and Climate (Indoor Air 2016)*, July 3–8, Ghent, Belgium, Paper 89.
- 6 Chen, C.*, Liu, W., Lin, C.-H., Chen, Q. (2015). A Markov chain model for predicting transient particle transport in enclosed environments. *Proceedings of the 9th International Symposium on Heating, Ventilation and Air Conditioning (ISHVAC) and the 3rd International Conference on Building Energy and Environment (COBEE)*, July 12–15, Tianjin, China, T6-612.
- 5 Chen, C.*, Liu, W., Lin, C.-H., Chen, Q. (2015). Accelerating the Lagrangian method for modeling transient particle transport in indoor environments. *Proceedings of the 9th International Symposium on Heating, Ventilation and Air Conditioning (ISHVAC) and the 3rd International Conference on Building Energy and Environment (COBEE)*, July 12–15, Tianjin, China, T6-611.

- 4 Chen, C.*, Lin, C.-H., Chen, Q. (2014). Developing simplified models for the exhaled airflow from a cough with the mouth covered. *Proceedings of the 13th International Conference on Indoor Air Quality and Climate (Indoor Air 2014)*, July 7–12, Hong Kong, China, HP0092.
- 3 Rai, A.C., Chen, C., Lin, C.-H., Chen, Q. (2014). Numerical modeling of ozone-initiated particle generations from reactions with clothing in an environmental chamber. *Proceedings of the 13th International Conference on Indoor Air Quality and Climate (Indoor Air 2014)*, July 7–12, Hong Kong, China, HP0108.
- 2 Chen, C., Lin, C.-H., Chen, Q. (2013). Predicting transient particle transport in enclosed environments based on Markov chain. *Proceedings of the 13th International Conference of the International Building Performance Simulation Association (Building Simulation 2013)*, August 26–28, Chambéry, France, pp. 559–566.
- 1 Chen, C., Zhao, B., Yang, X. (2011). Significance of two-way airflow effect due to temperature difference in indoor air quality. *Proceedings of the 12th International Conference on Indoor Air Quality and Climate (Indoor Air 2011)*, June 5–10, Austin, Texas, USA, Paper, a931-1.

Major Research Reports

- 4 Chen, C., Pan, Y., Ting, S.H. (2018) Developing a new nozzle for reducing particle deposition in aircraft cabins. *Final Report for Center for Boeing Project Agreement No. 2017-GT-105*, 37 pages, The Chinese University of Hong Kong, Hong Kong, China.
- 3 Chen, Q. and Chen, C. (2016) Modeling particle deposition onto surfaces near diffusers in aircraft cabins. *Final Report for Center for Air Cabin Reformative Environment (CARE) Project*, 41 pages, Purdue University, West Lafayette, IN, USA.
- 2 Jiang, Z, Chen, Q., Chen, C. (2013). Modeling person-to-person contaminant transport in a mechanical ventilation space. *Final Report for ASHRAE RP-1458*, 103 pages, Building Energy and Environment Engineering, Lafayette, IN, and Purdue University, West Lafayette, IN, USA.
- 1 Chen, Q., Chen, C. (2012). Investigation of person-to-person particle transfer and risk assessment for airborne infectious disease transmission in an aircraft cabin. *Final Report for Boeing Project Agreement No. 2012-074*, 64 pages, Purdue University, West Lafayette, IN, USA.

PRESENTATIONS

Invited Seminars

- 6 Chen, C. (2018). Green technology. *Presented in the 2018 “Green Energy” - Innovation & Technology Student Club (ITSC) Summer Camp*, July 18, Hong Kong, China.
- 5 Chen, C. (2017). Indoor air quality control in smart buildings, *Presented in the NSFC-CUHK Symposium: Theory and Application of Smart City Research*, September 25–29, Hong Kong, China.
- 4 Chen, C. (2017). Introduction to green building technologies. *Presented in the 2017 “Green Energy” - Innovation & Technology Student Club (ITSC) Summer Camp*, July 19, Hong Kong, China.
- 3 Chen, C. (2015). Indoor environment and energy-efficient buildings. *Presented at the Department of Mechanical and Energy Engineering, University of North Texas*, February 20, Denton, TX, USA.
- 2 Chen, C. (2015). Indoor environment and energy-efficient buildings. *Presented at the*

Department of Mechanical and Automation Engineering, The Chinese University of Hong Kong, February 11, Hong Kong, China.

- 1 Chen, C., Chen, Q., Zhu, J., Qu, Z., Lin, C.-H., Jiang, Z., (2015). Systematic study of person-to-person contaminant transport in mechanically ventilated spaces (RP-1458). *Presented in Seminar 43 of the 2015 American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE) Winter Conference, January 24–28, Chicago, IL, USA.*

Seminar, Workshop, and Presentations

- 8 Chen, C. (2017). Green building technologies. *Presented in the Student Forum of the 8th ACM International Conference on Future Energy Systems (ACM e-Energy), May 17–19, Hong Kong, China.*
- 7 Chen, C., Jiang, Z., Chen, Q. (2013). A simplified method for modeling a cough with mouth coverings (RP-1458). *Presented in TC 4.10 RP 1458 PMS of the 2013 American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE) Annual Conference, June 22–26, Denver, CO, USA.*
- 6 Chen, C., Chen, Q. (2013). Modeling expiratory particles transport in a mechanical ventilation space. *Presented in Seminar 39 of the 2013 American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE) Winter Conference, January 26–30, Dallas, TX, USA.*
- 5 Chen, C., Jiang, Z., Chen, Q. (2013). Systematic study of person-to-person contaminant transport in mechanical ventilated spaces (RP-1458). *Presented in TC 4.10 RP 1458 PMS of the 2013 American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE) Winter Conference, January 26–30, Dallas, TX, USA.*
- 4 Chen, C., Jiang, Z., Chen, Q. (2012). A hybrid model for investigating transient particle transport in enclosed environments (RP-1458). *Presented in TC 4.10 RP 1458 PMS of the 2012 American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE) Annual Conference, June 23–27, San Antonio, TX, USA.*
- 3 Chen, C., Zhao, B. (2011). Effect of outdoor inhalable particles on indoor air quality and its control strategies. *Presented in the 5th Asian Symposium on Urban Environment and Energy, August 2–9, Beijing, China.*
- 2 Chen, C., Zhao, B., Yang, X. (2010). Introduction of indoor air quality and rural energy group. *Presented in the 4th Asian Symposium on Urban Environment and Energy, August 2–9, Sendai, Japan.*
- 1 Chen, C., Zhao, B. (2010). Some questions on exhaled droplets dispersion in indoor environments. *Presented in the 4th Asian Symposium on Urban Environment and Energy, August 2–9, Sendai, Japan.*

GRANTS

Total Amount: HK\$5,102,000 (~US\$651,000)

- 7 Principle Investigator, HKD750,000, Investigation of the air resistance of nanofiber window screens for reducing indoor exposure to PM_{2.5} of outdoor origin. *Research Grant Council (RGC) of Hong Kong, Early Career Scheme (ECS), No. 24208518, 01/2019 to 12/2021.*
- 6 Principle Investigator, USD300,000 (~HKD2,351,000), Developing a new nozzle for reducing particle deposition in aircraft cabins – Phase II. *The Boeing Company, Research and Development Project, No. 2018-GT-131, 10/2018 to 12/2019.*

- 5 Principle Investigator, HKD756,000, Development of a novel cooling tower with free daytime radiative cooling for reducing energy consumption in buildings. *Shun Hing Institute of Advanced Engineering (SHIAE), RNE-p1-18, 07/2018 to 06/2020.*
- 4 Principle Investigator, RMB250,000 (~HKD293,000), A method for estimating indoor PM_{2.5} of both outdoor and indoor origin based on monitoring data. *National Natural Science Foundation of China (NSFC), Young Scientist Program, No. 51708474, 01/2018 to 12/2020.*
- 3 Co-Supervisor, HKD100,000, Project-based teaching and learning with hands-on experience on nanotechnology for innovation and design. *The Chinese University of Hong Kong, Teaching Development and Language Enhancement Grant (TDLEG), 11/2017 to 06/2019.*
- 2 Principle Investigator, USD90,000 (~HKD702,000), Developing a new nozzle for reducing particle deposition in aircraft cabins. *The Boeing Company, Research and Development Project, No. 2017-GT-105, 10/2017 to 09/2018.*
- 1 Principle Investigator, HKD150,000, Modeling residential infiltration of outdoor PM_{2.5} with combined physical and statistical models. *The Chinese University of Hong Kong, Direct Grant, No. 4055068, 10/2016 to 09/2018.*

SERVICES

Departmental, Faculty, College, and University Services

Departmental Committees and Services

- EEEN Coordinator, Undergraduate Admissions Committee, 08/2018 – present
- Coordinator, Seminar Coordinator, 08/2018 – present
- Member, Graduate Panel, 08/2017 – present
- Member, Space Allocation Committee, 08/2016 – present
- Member, EEEN Programme Task Force, 08/2016 – present
- Member, Undergraduate Admissions Committee, 08/2017 – 07/2018
- Member, Industrial Relation Committee, 08/2016 – 07/2018
- Member, Publicity Committee, 08/2016 – 07/2018

Faculty Committees and Services

- Member, HKPFS Workshop Organizing Committee, 08/2018 – present
- Member, ENGAGE Editorial Board, 08/2017 – 07/2018

College Committees and Services

- MAE Department Coordinator, New Asia College, 08/2018 – present

University Committees and Services

- Member, Run Run Shaw Building Management Committee, 01/2019 – present

Professional Committees and Services

Professional Societies

- Associate Member, American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE), since 08/2016.
- Member, International Society of Indoor Air Quality and Climate (ISIAQ), since 08/2016.

Professional Committees

- Corresponding Member, Technical Committee 4.10 Indoor Environmental Modeling, American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE), since 01/2012.

Conference Committees

- Session Chair/International Scientific Advisory Committee Member, The 15th International Conference of the International Society of Indoor Air Quality & Climate (Indoor Air 2018), Philadelphia, USA, July 22–27, 2018.
- International Technical Committee Member, The 3rd International Conference on Robotics, Control and Automation (ICRCA 2018), Chengdu, China, Aug 11–13, 2018.
- International Technical Committee Member, 2018 International Conference on Aerospace Engineering and Control Technologies (CAECT 2018), Athens, Greece, Apr 13–15, 2018.
- International Technical Committee Member, 2017 International Conference on Advanced Energy Systems and Technologies (ICAEST 2017), Ho Chi Minh City, Vietnam, Nov 8–11, 2017.
- International Technical Committee Member, The 2nd International Conference on Robotics, Control and Automation (ICRCA 2017), Kitakyushu, Japan, Sep 15–18, 2017.
- Organizing Committee Member/Student Activity and Outreach Chair, The 8th ACM International Conference on Future Energy Systems (ACM e-Energy 2017), Hong Kong, China, May 17–19, 2017.
- International Scientific Committee Member, The 14th International Conference of Indoor Air Quality and Climate (Indoor Air 2016), Ghent, Belgium, July 3–8, 2016.

Peer Reviewer

Funding Agency

- Environment and Conservation Fund (ECF), Hong Kong (4 proposals)
- Research Foundation – Flanders (FWO), Belgium (3 proposals)
- Netherlands Organisation of Scientific Research (NOW), Netherlands (1 proposal)

Journal

- Building and Environment (42 papers)
- Energy and Buildings (16 papers)
- Building Simulation (10 papers)
- International Journal of Environmental Research and Public Health (7 papers)
- Indoor Air (6 papers)
- Atmospheric Environment (4 papers)
- Indoor and Built Environment (3 papers)
- Science and Technology for the Built Environment (3 papers)
- Journal of the Royal Society Interface (2 papers)
- Sustainability (2 papers)
- ACS Applied Materials & Interfaces (1 paper)
- Advances in Mechanical Engineering (1 paper)
- Atmosphere (1 paper)

- Energies (1 paper)
- Environmental Science and Pollution Research (1 paper)
- Environmental Science: Processes & Impacts (1 paper)
- European Journal of Mechanics - B/Fluids (1 paper)
- International Journal of Nonlinear Sciences and Numerical Simulation (1 paper)
- Journal of Building Engineering (1 paper)
- Journal of Wind Engineering and Industrial Aerodynamics (1 paper)
- Journal of Zhejiang University-Science A (1 paper)
- Particuology (1 paper)
- Science China Technological Sciences (1 paper)
- Sensors (1 paper)
- Sustainable Cities and Society (1 paper)

Conference

- The 16th International Conference of International Building Performance Simulation Association (Building Simulation 2019), (4 papers)
- 2019 International Conference on Industrial Control Network And System Engineering Research (ICNSER2019), (1 paper)
- The 15th Conference of the International Society of Indoor Air Quality & Climate (Indoor Air 2018), (2 papers)
- The 15th International Conference of International Building Performance Simulation Association (Building Simulation 2017), (3 papers)
- The 4th International High Performance Buildings Conference, 2016 (6 papers)
- The 14th International Conference of Indoor Air Quality and Climate (Indoor Air 2016), (6 papers)
- ASHRAE/IBPSA-USA Building Simulation Conference, 2014 (2 papers)

Thesis Committees

- 2 Yu Wang, Fundamental understanding of oxygen evolution reaction in lithium-oxygen batteries, Ph.D. thesis, Supervisor: Prof. Yi-Chun Lu, The Chinese University of Hong Kong, China, 2019.
- 1 Guangtao Cong, Organic electrode materials for next-generation energy storage systems, Ph.D. thesis, Supervisor: Prof. Yi-Chun Lu, The Chinese University of Hong Kong, China, 2018.

TEACHING & SUPERVISING RECORD

Supervised Ph.D. Students ([#]Co-supervised)

- 4 Xinxian Yu, Energy-efficient cooling tower with radiative cooling materials, Ph.D. thesis, The Chinese University of Hong Kong, 08/2018 – present.
- 3 Tongling Xia, Indoor PM_{2.5} pollution control with passive measures, Ph.D. thesis, The Chinese University of Hong Kong, China, 08/2017 – present.
- 2 Yue Pan, Particle deposition around supply air diffusers in built environments, Ph.D. thesis, The Chinese University of Hong Kong, China, 08/2017 – present.
- 1 Ye Bian[#], Electrospun nanofiber filters for effective air quality control, Ph.D. thesis, The Chinese University of Hong Kong, China, 08/2015 – present.

Supervised Master Students (#Co-supervised)

- 1 Ho Kam (Kelvin) Dai, Modeling the performance of nanofiber filters with computational fluid dynamics, M.Phil. thesis, The Chinese University of Hong Kong, China, 08/2018 – present.

Supervised Research Staff

- 2 Haiqiang Zhang, Experimental and numerical study on household liquid desiccant dehumidifiers, The Chinese University of Hong Kong, China, 08/2018 – present.
- 1 Sin Hang (Charlie) Ting, Engineering methods for establishing testbeds for indoor air quality tests, The Chinese University of Hong Kong, China, 06/2017 – 05/2018.

Supervised Undergraduate Students

The Chinese University of Hong Kong, China

2018/19, EEEN (1 student): Hon Ting Lau

2018/19, ENER (2 students): Ka Leung Lo, Ho Ting Lam

2018/19, MAEG (5 students): Tung Lan Kwok, Man Yin Lam, Yu Yu Chan, Kin Ming Lai, Suet Man Wong

2017/18, ENER (2 students): Yuen Chit Cheng, Ho Kam Dai

2017/18, MAEG (4 students): Po Ming Tsui, Man Chun Chan, Wing Yin Tam, Man Hin Cheung

2016/17, ENER (3 students): Hoi Kit Tang, Hing Yip Leung, Sin Hang Ting

2016/17, MAEG (2 students): Chi Ching Cheung, Wing Ki Chow

Teaching Record

The Chinese University of Hong Kong, China

2018/19 Term 2, Co-Instructor, MAEG5150 Advanced Heat Transfer and Fluid Mechanics.

2018/19 Term 2, Instructor, EEEN2040 Building Service Engineering and Green Building.

2018/19 Term 1, Instructor, EEEN3010 Building Automation and Control.

2017/18 Term 3, Co-instructor, SIME1010 Sustainable Energy Future.

2017/18 Term 2, Instructor, EEEN2040 Building Service Engineering and Green Building.

2017/18 Term 1, Instructor, EEEN3010 Building Automation and Control.

2016/17 Term 2, Instructor, MAEG2030 Thermodynamics.

2016/17 Term 1, Instructor, EEEN3010 Building Automation and Control.

Purdue University, USA

2016 Spring, Guest lecturer, ME522 Indoor Environment Analysis and Design.

2015 Fall, Instructor, ME300 Thermodynamics II.

2014 Spring, Guest lecturer, ME522 Indoor Environment Analysis and Design.

Tsinghua University, China

2010 Spring, Guest lecturer, 80000752 Immunized Building Technology.

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