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**Degrees**

* B.Sc. Tsinghua, '83
* M.Sc. Delft University of Technology, '85
* Ph.D. Delft University of Technology, '88

**Research Interests**

* Indoor and outdoor airflow modeling by computational fluid dynamics (CFD) and measurements
* Building ventilation systems
* Indoor air quality (IAQ)
* Energy analysis

**Research Area(s)**

* [Combustion, Energy Utilization, and Thermodynamics](https://engineering.purdue.edu/ME/People/Areas/?area=Combustion%2C%20Energy%20Utilization%2C%20and%20Thermodynamics)
* [Heating, Ventilating, Air Conditioning & Refrigeration](https://engineering.purdue.edu/ME/People/Areas/?area=Heating%2C%20Ventilating%2C%20Air%20Conditioning%20%26%20Refrigeration)

**Research Links**

* [Personal Web Site](https://engineering.purdue.edu/~yanchen/)
* [Faculty Research Presentation](https://engineering.purdue.edu/ME/Research/Presentations/ChenME%20Research.pdf)

**Ten Select Publications**

Gupta, J., Lin, C.-H., and Chen, Q. “Transport of expiratory droplets in an aircraft cabin,” Accepted by Indoor Air.  
  
Yin, Y., Gupta, J. K., Zhang, X., Liu, J., and Chen, Q. 2011. “Distributions of contaminant exhaled out by a patient with different postures and exhaling modes in a single-bed inpatient room,” Buildings and Environment, 46(1), 75-81.  
  
Zuo, W. and Chen, Q. 2010. “Simulations of air distribution in buildings by FFD on GPU,” HVAC&R Research,16(6), 785-798.  
  
Wang, L., Dols, W.S., and Chen, Q. 2010. “Using CFD capabilities of CONTAM 3.0 for simulating airflow and contaminant transport in and around buildings,” HVAC&R Research,16(6), 749-763.  
  
Wang, M. and Chen, Q. 2010. “On a hybrid RANS/LES approach for indoor airflow modeling,” HVAC&R Research,16(6), 731-747.   
  
Zuo, W., Hu, J., and Chen, Q. 2010 “Improvements on FFD modeling by using different numerical schemes,” Numerical Heat Transfer, Part B: Fundamentals, 58(1), 1-16.  
  
Wei, J., Zhao, J., and Chen, Q. 2010. “Optimal design for a dual-airflow window for different climate regions in China,” Energy and Buildings, 42, 2200-2205.  
  
Mazumdar, S., Yin, Y., Guity, A., Marmion, P., Gulick, B., Chen, Q. 2010. “Impact of moving objects on contaminant concentration distributions in an inpatient room with displacement ventilation,” HVAC&R Research, 16(5), 545-564.  
  
Poussou, S., Mazumdar, S., Plesniak, M.W., and Sojka, P. and Chen, Q. 2010. “Flow and contaminant transport in an airliner cabin induced by a moving body: Scale model experiments and CFD predictions,” Atmospheric Environment, 44(24), 2830-2839.  
  
Chen, X. and Chen, Q. 2010. “Comparison of different decontaminant delivery methods for sterilizing unoccupied commercial airliner cabins,” Building and Environment, 45(9), 2027-2034.