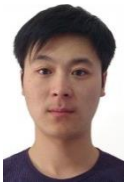

WANG Xin, John

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Brief Introduction

John is a building sustainability engineer with more than 7-year work and research experience, who has been focusing on building sustainability design, microclimate study, urban air ventilation assessment, building physics analysis, sustainable MEP system optimization and green building certification assessment (such as BEAM Plus, LEED, WELL etc). He has obtained cutting-edge techniques in numerical computation for built environment application in both theory and practice by using advanced finite volume method. He has ability to carry out CFD modelling on urban wind environment, indoor ventilation, heat dissipation, air pollutant dispersion and thermal comfort studies. In addition, he also has extensive experience on natural daylighting, solar heat gain and energy performance analysis with the state of art technology.

The representative projects that he has been involved in include:

- **West Kowloon Cultural District Development** – Building Sustainability Design and Green Building Certification Strategy
- **Third Runway Concourse Development of Hong Kong International Airport** - Building Sustainability Design and HVAC System Design Optimization
- **Taiwan Chinese Medical University Shuinan Campus Development** – Sustainability Master Planning
- **Choi Wing Road Development** – Microclimate Study
- **Cheung Sha Wan Site 3 & 5 Developments** – Indoor Ventilation Assessment
- **Proposed Vocational Training Council Campus Development** – Air Ventilation Assessment

Professional qualification

2020 Chartered Engineer, UK Engineering Council
2020 Member, Institute of Mechanical Engineer
2017 Member, China Green Building Council
2015 LEED AP (Building Design and Construction), USGBC

Work Experience

2018 – Present	Project Engineer, **AECOM Asia Company Limited**
2017 – 2018	Environmental Consultant, **CECEP Environmental Consulting Group Ltd.**
2013 – 2016	Building Sustainability Consultant, **Ove Arup & Partners Hong Kong Ltd**

Education Background

2016-Present **Doctor of Philosophy in Architecture and Civil Engineering,**
City University of Hong Kong, Hong Kong *(part-time)*

2012-2013 **Master of Science in Civil & Architectural Engineering**
City University of Hong Kong, Hong Kong

2008-2012 **Bachelor of Engineering in Building Services Engineering**
Hebei University of Science and Technology,
Hebei Province, Mainland China

Project Experience

West Kowloon Cultural District Development – Building Sustainability Design Consultancy

The development is located at West Kowloon District, Hong Kong, occupied about 42 hectares, consisting of cultural building, commercial building, residential building and the other auxiliary facilities. Hong Kong Government aims to form it into an international-grade arts and cultural hub. Wang Xin was responsible for building sustainability design and green building certification in this project. He had conducted wind environment simulation, solar radiation simulation, thermal comfort analysis, energy saving analysis, water saving analysis and waste management analysis etc and completed the preliminary design report with satisfaction of client.

Third Runway Concourse (TRC) of Hong Kong International Airport

In order to support the “green airport” design concept of HKIA and BEAM Plus Platinum rating certification, Wang Xin was responsible for a variety of aspects of sustainable design and green features, including daylighting design, natural ventilation design, installation of PV panels, reclaimed water utilization and high efficient MEP equipment utilization etc, with over 20% energy savings achieved.

Taiwan Chinese Medical University Shuinan Campus Development – Sustainability Master Planning

The development is located at Taichung City, occupied about 16 hectares. The campus would be developed in three stages, consisting of 15 buildings. Wang Xin is responsible for Sustainability Master Planning in the project. He proposed a systematic strategy for sustainable planning and design, including campus microclimate study, energy saving management, waste management, water resource management and green construction etc.

Hong Kong Housing Authority – Choi Wing Road Development

The Development consists of a residential tower and a sport center podium, located at Choi Wing Road, Kwun Tong. Wang Xin was involved in this project, providing Microclimate Study consultation services for Housing Authority. He used CFD

techniques to evaluate the wind environment of the project site and its surrounding area. He also carried out pollutant dispersion, indoor ventilation, daylighting, glare, solar radiation, sun shadowing and indoor & outdoor thermal comfort analyses to optimize the microclimate of the project

Proposed Vocational Training Council Campus Development

The Development is located at Wai Yip Street, Cha Kwo Ling with a site area of 4.2 hectare. It comprises of three blocks with building height ranging from 60mPD to 70mPD. John conducted Air Ventilation Assessment Study in this project not only for the technical support but also for project management. To fulfill the regulation of Planning Department of Hong Kong Special Administrative Region Government (HKSARG) and the requirement of client, three design schemes were formed and further investigated using CFD simulation. By providing the professional consultancy, the surrounding wind environment of the Development was optimized after adopting a series of wind enhancement features, such as effective building separation and free-podium design etc.

Hua Kai Land, Ningbo, China - Guohua Financial Tower Development

Guohua Financial Tower, a 45-story office high-rise and adjacent four-story mixed-use podium, is set to rise in Ningbo, China. Many building sustainability design measures have been integrated into this project, e.g. high efficient HVAC system, rainwater collection system etc. The target of the client is to achieve a China's Three Star certification. John is involved in this project as green building consultant, responsible for the green building assessment.

Hong Kong Housing Authority – Choi Wing Road Development

The Development consists of a residential tower and a sport center podium, located at Choi Wing Road, Kwun Tong. John was involved in this project, providing Microclimate Study consultation services for Housing Authority. He used CFD techniques to evaluate the wind environment of the project site and its surrounding area. He also carried out pollutant dispersion, indoor ventilation, daylighting, glare, solar radiation, sun shadowing and indoor & outdoor thermal comfort analyses to optimize the microclimate of the project. In addition, he conducted a study on temperature distribution affected by heat discharge from cooling towers to create a better living environment for the residents.

Hong Kong Housing Authority – Cheung Sha Wan Site 3 & 5 Developments

This Development consists of 7 residential towers with building heights ranged from 103 mPD to 125 mPD. John was involved in performing indoor ventilation study for the domestic flats equipped acoustic windows. As it is a new trial for Housing Authority to install acoustic windows in order to mitigating the noise implication, he participated in making the methodology used in this study. He also developed a series of computer scripts with respect to this project, speeding up the working process and meeting the client’s requirement on time. He was also responsible for the microclimate study in this project.

Research Project - Housing Authority

To attenuate the noise impact to an acceptable level in the urban environment, Housing Authority tried to introduce acoustic window or balcony design for residential flats. However, this kind of design may induce potential insufficient indoor ventilation rate. John was one of the pioneers in exploring the Indoor Ventilation Study for Flats with Acoustic Window or Balcony in Hong Kong since 2013. He involved in developing a new modified methodology of evaluating the indoor ventilation performance of a flat with acoustic window or balcony using CFD simulation (performance based approach) and an original calculation method of converting the effective opening area of an acoustic window into standard window (prescriptive based approach), which has been both accepted in the updated PNAP-APP130. Therefore, this new developed method has become a general practice for the entire Hong Kong now.

Other Project Experience Summary

Air Ventilation Assessment Study

- Horse Shoe Lane Development, Ngau Tau Kok
- Ma On Shan Development, Ma On Shan
- Tung Tau Estate Phase 8 Development, Kowloon City
- Junction of Lai Chi Kok Road and Cheung Shun Street Development, Cheung Sha Wan
- Tuen Mun Area 54 Development, Tuen Mun District
- Whitehead Development, Ma On Shan

Microclimate Study

- Tung Tau Estate Phase 8 Development, Kowloon City
- Tuen Mun Area 54 Site 1 & 1A Development, Tuen Mun
- Cheung Sha Wan Site 6 Development, Cheung Sha Wan
- Texaco Road Development, Tsuen Wan
- Choi Hing Road Development, Ping Shan
- Sheung Lok Street Development, Quarry Hill

Indoor Ventilation Study for Flats equipped with Acoustic Windows

- Choi Hing Road Development, Ping Shan
- Fat Tseung Street West Development, Cheung Sha Wan
- Shek Mun Development, Sha Tin
- East Harbour Crossing Site Phase 7 Development, Yau Tong
- Tung Tau Estate Phase 8 Development, Kowloon City