Edward Y Y Ng

BA(Hons) Nott, BArch(Distinction) Manc, MBA(Distinction) Warwick, PhD Cantab RegArch (UK), RegArch (HK), RIBA, HKIA, IESNA, MSLL, FHKMetS, FRSA

Statement on Research/Design Leadership & Impact

As an academic architect, I intend to make my scholarly contribution to architecture on two fronts, which complement each other. For academic research, my focus has been on passive environmental studies under high density, compact city conditions. For design, my focus is on sustainable, ecological and appropriate architecture in deprived areas in Northwest China. I am trying to maximize the efficacy of the available resources for human comfort and utility.

Design

My designs are in line with and are making contributions towards an international quest for a sustainable design movement and paradigm shift. My design "Can-Can Pavilion - an exhibition of renewable energy" that makes use of waste materials to design architecture, had been publicly exhibited in Hong Kong and reported. Currently, I have been asked to design an organic farm visitor centre based on the same principle.

My Bridge2Far project is recipient of design awards including the prestigious RIBA International Awards 2006. The project has been exhibited in Hong Kong, Mainland China, Singapore, UK, France, Italy, Denmark and USA. A core group of us are setting up a charitable foundation to further the ideas; it has already received endorsement and official support from the central government of the PRC. I will chair this inter-university initiative and to advance the works of the foundation. We aim to build real bridges in Mainland China, as well as the human bridges (HK-Mainland) in China. Currently, with the international collaboration of research engineers in Switzerland, I am designing our next bridge near Tibet. We hope to take the opportunity to formulate a timber bridge prototype for the region.

My "Ecological Demonstration School" in Mainland China, just completed, is innovative and has been reported. We are currently monitoring its performance scientifically. We are writing a book to report our findings. Some 200,000 new schools will be needed in the region. The school illustrates a methodology for designing in a socially and environmentally responsible way. I am currently designing a few more schools in other climatic regions of China. With the experience gained, I am now an international advisor to an initiative in India to design and build twenty million eco-houses for the poor in the next ten years.

Research

Since arriving at CUHK in 1999, I have been leaders of research projects with grants of around HK$20 millions. In addition, I have also collaborated in projects with others of around HK$15 millions. During my 6 years in CUHK, I have published over 100 papers and reports. My recent papers have been given Best Paper Awards in the USA, Mainland China, Europe and Hong Kong.

The results of two pieces of recent researches that I was the leader of an international team have fundamentally charted a new agenda in professional practice in Hong Kong. The new Performance Based Building Regulations on Daylighting Requirements in Hong Kong issued under the government's PNAP278 is based entirely on my research. The method has been referenced

by authorities in Mainland China. A paper of the study has won a Best Paper and Presentation Award.

Furthermore, the new joint government bureau Technical Circular "Air Ventilation Assessment Method (AVA)", and the Hong Kong Planning Standards and Guidelines (HKPSG) – Chapter 11: City Ventilation, are based entirely on my research. The project won the Hong Kong Institute of Architects (HKIA) Research Award 2005; and the Professional Green Building Council (PGBC) Grand Award 2006 in the category of research and planning studies. A paper of the study has won a PLEA Best Paper Award in Geneva.

I am now leading an international team of scholars from Germany, Japan, UK, Singapore and USA to investigate a follow-up project. Results of the project will assist future environmental design policies of Hong Kong.

I set up and run one of the 15 Research Class International Daylight Monitoring Programme (IDMP) Station, under the Commission Internationale de l'Eclairage (CIE). This leads me to the participation of CIE TC3-37 on drafting a new international standard on daylight design. A follow up project with atmospheric researchers in Mainland China using satellite images to predict solar energy potentials is underway. This will assist mapping renewable sources of energy for the future of China. On daylighting study, I am also an international board member of International Journal of Lighting Research and Technology which is one of the 2 most important journals in the field.

Teaching

In CUHK, I have been teaching Architectural Design Studios, Lecturing on Environmental Design, and supervising Design and Research Theses. My teaching is rooted in his philosophy teaching architecture in a practical, technologically proven and creative manner. I am particularly keen on investigating the technologic and tactile quality of design. I call this Technics. This involves sensibility and an appreciation of the quality as well as the quantity of the environment, building dynamics, gravity, production and process; and, most importantly, the human experiential responses and needs. A motto to his students is: *To make a building energy efficient and technologically sound is not that difficult, to compose it beautifully and poetically at the same time requires a lifetime pursuit.*

I have single-handedly created, championed and, since its inception, directed the self funding MSc Environmental and Sustainable Design programmes.

2 of my design students have won design prizes in China with their studio projects. One of my MArch students won an international award with his thesis design. I have supervised more than 20 Postgraduate thesis students. All my postgraduate students finished on time and have done well. One MPhil student subsequently obtained a Prince Philip Graduate Scholarship to continue at Cambridge University.

I am honorary and visiting professor in universities in China. At Xian Jiaotong University, we have developed joint projects and joint courses. I have initiated an International Summer School with Cambridge U, CMU, NUS and Tokyo U and Xian Jiaotong with faculty and students meeting in Hong Kong for workshop and projects.

I initiated a General Education Programme in my university college on "Learning through Community Services" taking student development beyond the campus.